



Application for licence

Part V Division 3 of the *Environmental Protection Act 1986*

Licence number	L9187/2018/1
Applicant	A1 Waste Management Pty Ltd
ACN	148 910 481
DWER file number	DER2017/002127-1
Premises	Encore Recycling & Resource Recovery 9 Rogers Way LANDSDALE WA 6065 Legal description: Lot 64 on Diagram 57260 Certificate of Title Volume 1559 Folio 837
Date of report	29 October 2019
Decision	Licence Granted

Table of Contents

1.	Definitions	2
2.	Licence and amendment history	3
3.	Purpose and scope of assessment	3
4.	Application details	3
5.	Background	4
6.	Description of proposed activities	5
6.1	Overview	5
6.2	Waste acceptance and throughput.....	5
6.3	Primary sorting.....	6
6.4	Primary crushing and screening.....	6
6.5	Secondary sorting.....	6
6.6	Secondary crushing and screening.....	6
6.7	Site layout and proposed infrastructure	6
6.8	Legislative context and other approvals.....	8
7.	Location and siting	8
8.	Monitoring data	8
8.1	Applicant noise assessments	8
8.2	Technical review of noise assessments	9
8.3	Key Findings.....	10
9.	Emission sources, receptors and pathways	10
9.1	Emissions	10
9.2	Environmental receptors and aspects	11
9.3	Pathways.....	13
9.4	Applicant controls.....	15
10.	Risk assessment.....	16
11.	Consultation	19
12.	Conclusion	19

1. Definitions

Key terms relevant to this decision report and their associated definitions are listed in Table 1.

Table 1: Definitions

Term	Definition
Applicant	A1 Waste Management Pty Ltd
Category / categories	Categories of prescribed premises as set out in Schedule 1 of the EP Regulations.
Decision Report	refers to this document.
Delegated Officer	An officer delegated under section 20 of the EP Act.
Department	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.
DWER Asbestos Guideline	means the document titled <i>Guideline - asbestos in construction and demolition recycling</i> published by the then Department of Environment Conservation, as amended from time to time.
Emission	has the same meaning given to that term under the EP Act.
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Issued Licence	the licence issued as a result of this Decision Report.
Minister	the Minister responsible for the EP Act and associated regulations
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997 (WA)</i>
Occupier	has the same meaning given to that term under the EP Act.
Prescribed premises	This 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

Term	Definition
Primary Activities	as defined in Schedule 2 of the Issued Licence
Risk Event	As described in <i>Guidance Statement: Risk Assessment</i>

2. Licence and amendment history

Table 2 provides the licence and amendment history for L9187/2018/1.

Table 2: Licence and amendment history

Instrument	Issued	Nature and extent of works approval, licence or amendment
L9187/2018/1	29/10/2019	Issued Licence as a result of this Decision Report

3. Purpose and scope of assessment

A1 Waste Management Pty Ltd (the Applicant) submitted a Licence application to DWER on 5 December 2017 to operate a category 13: crushing of building material and category 62: solid waste depot and premises at 9 Rogers Way, Landsdale.

The Delegated Officer has assessed the operational impacts of these activities and these are documented through this Decision Report.

The Decision Report explains how DWER has assessed and determined the application and provides a record of DWER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this documented is limited to DWER's assessment and decision-making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the Applicant's responsibility to ensure that they have all relevant approvals for their Premises.

4. Application details

The application is for a Licence to operate a construction and demolition (C&D) waste recycling facility under Category 13 and Category 62, with an assessed throughput of 15,000 tonnes per annum and 78,000 tonnes per annum, respectively. No previous Licence applies to the premises for the proposed activities with the site being constructed under Works Approval W5409/2013/1.

Table 3 lists the documents submitted during the assessment process.

Table 3: Documents and information submitted during the assessment process

Document/information description	Date received
Licence application and supporting documentation (DWER Record: A1776222)	5 December 2017
Correspondence related to construction compliance documentation for W5409/2013/1 (DWER Record: A1589394)	5 January 2018

Encore Recycling and Resource Recovery Construction and Demolition Waste Recycling Plant Noise Assessment (O&EMMS) (DWER Record: A1759921)	5 December 2018
Correspondence related to a DWER request for further information #1 (DWER Record: A1796729)	13 June 2019
Correspondence related to a DWER request for further information #2 (DWER Record: A1802673)	27 June 2019
Encore Recycling and Resource Recovery Noise Assessment of Installed Plant Noise Controls (O&EMMS) (DWER Record: DWERDT184820)	31 July 2019

5. Background

The Applicant currently leases 9 Rogers Way, Landsdale, for the purpose of receiving and recycling construction and demolition waste. The premises has operated since 2011 in a small capacity.

In 2013 the Applicant submitted a Works Approval application to the Department to construct an inert waste transfer and recycling facility, to increase their waste processing capacity. This Works Approval (W5409/2013/1) was subsequently assessed and approved, subject to conditions, on 23 April 2013 for categories 13 and 62.

Works Approval W5409/2013/1 expired on 28 April 2016. A compliance inspection undertaken by DWER in May 2016 found that works had not been completed and were still progressing, also simple sorting operations had commenced on site below 500 tonnes per annum throughput associated with prescribed premises category 62 (DWER Reference ICMS40974). The Applicant was advised to submit a licence application and provide construction compliance and noise assessment information at completion to confirm works were undertaken as per Works Approval W5409/2013/1.

The Licence application was received on 5 December 2017 and was placed on 'stop the clock' during validation, pending the submission of a Noise Assessment which was received on 5 December 2018. Upon submission of the Noise Assessment, the Licence application was able to be assessed and was taken off 'stop the clock'.

Assessment of the Licence application revealed that further information was required in order to progress the assessment and to clarify noted departures from both the application document and the Works Approval. This information was requested on 15 February 2019 and was submitted to DWER on 31 July 2019 when the assessment recommenced.

Table 4: Classification of premises and assessed design capacity

Category	Description	Assessed production or design capacity or throughput
Category 13	Crushing of building material: premises on which waste building or demolition material (for example, bricks, stones or concrete) is crushed or cleaned	15,000 tonnes per annual period
Category 62	Solid waste depot: premises on which waste is stored, or sorted, pending final disposal or re-use.	78,000 tonnes per annual period

6. Description of proposed activities

6.1 Overview

The Applicant is a waste management organisation that operates a skip bin business, The Bin Guys, collecting co-mingled C&D waste from construction and demolition sites. The Encore Recycling and Resource Recovery Centre (ERRRC), being the Premises, aims to sort through these waste streams and recover the materials to reduce waste sent to landfill.

Waste proposed to be received is to include sand, masonry rubble, cardboard, paper, green waste, ferrous and non-ferrous materials and plastics generated during construction and demolition activities. Operations on the premises will include waste stockpiling, sorting, crushing and the sale of recycled products. Waste is processed by:

- Receiving of C&D waste through an associated skip bin business;
- Tipping onto a concrete tipping area;
- Manual removal and separation of unsuitable bulk items;
- Primary crushing of material;
- Material sorting and sand removal by screening system;
- Further manual separation by conveyor belt of larger materials and placement into receptacles;
- Overhead magnetic removal of residual metal material;
- Secondary crushing of clean building material to a maximum particle size of 20mm;
- Further screening for separation of suitable recyclable material;
- Storage of material in receptacles at the northern side of the premises for sale/reuse/disposal.

It is anticipated that approximately 33% of material received at the facility will be suitable for the crushing process. Waste is processed in primary and secondary stages which both involve sorting, crushing and screening. It is intended that up to 85% of material accepted at the premises will be recycled inclusive of separated material not required in the crushing process.

The Premises is comprised of a roadbase hardstand area with a concrete hardstand to the access road, carpark and tipping area. The area is fenced by a 1.8m fence with shade cloth to reduce the potential for dust emissions leaving the Premises boundary.

The Premises operates from 7am to 5pm Monday to Friday and 7.30am to 1pm Saturdays. The Premises is not open on Sundays or public holidays. These hours of operation are within 'day-time' hours which are afforded a higher assigned decibel level under the *Environmental Protection (Noise) Regulation 1997* (Noise Regulations).

6.2 Waste acceptance and throughput

The throughput assessed as part of this licence application is for up to 78,000 tonnes per annum of solid waste and 15,000 tonnes per annum for crushing activities. Recycled products generated from the crushing process will include aggregate for road base (from the crushing activities) and clean sand.

The Premises will adopt a strict policy for waste acceptance. Putrescible waste (other than co-mingled green waste), liquid waste, tyres and hazardous waste such as asbestos, are not accepted at the premises. These non-conforming materials will be partitioned out via:

- Visual inspection of the skip bins being collected to identify unacceptable materials;

- Removal of non-conforming materials prior to collection by drivers;
- Visual inspection of bins prior to emptying on the premises; and
- Isolation and containment of non-conforming waste identified on the premises, and removal to landfill.

Potential asbestos containing material will be managed through source documentation, inspection when waste is arriving at the Premises and testing of Final Product for asbestos content prior to sale. The Premises will operate under an Asbestos Management Plan, prepared in accordance with the DWER Asbestos Guideline, which details the inspection and testing protocols.

6.3 Primary sorting

Once material is received at the premises, it is tipped onto the concrete hardstand tipping area for the manual removal and storage of bulky items into separate receptacles (e.g. cardboard, green waste or metals). The remaining suitable material is then consolidated in a stockpile with other non-processed material. To reduce dust emissions a misting system is used for wetting down of material on the tipping floor.

6.4 Primary crushing and screening

On arrival at the conveyor, material is sprayed with a foam dust suppressant while being transported to a grizzly feeder pan. The feeder pan provides a continuous feed rate of material in to a 600mm single toggle jaw crusher. Following crushing, waste is sorted using a triple deck screen into small (sand/gravel) fractions and large fractions. Lightweight materials such as plastic or papers are further separated through the use of a light fraction blower which removes this component for collection and disposal. The large fractions continue on the conveyor to an enclosed manual picking station.

6.5 Secondary sorting

Materials (excluding metals) are manually picked out and placed in to openings located along the conveyor which lead to enclosed receptacles located beneath the picking station. Metals are removed by an overhead magnet at the terminal end of the picking station.

6.6 Secondary crushing and screening

At the end of the picking conveyor, clean building rubble is sprayed with a foam dust suppressant before entering a triple curtain impact crusher, where it is crushed into a maximum particle size of 20mm. This aggregate will be further segregated using a flip-flow screen to remove any large pieces and ensure a uniform product. Large pieces removed from this stage will be fed back through the impact crusher to reduce the particle size. Smaller particle sizes retained by the screening unit are suitable as recycled product. The final product is wetted down using a misting system to control dust and is stockpiled in the north-west corner of the Premises.

6.7 Site layout and proposed infrastructure

The proposed infrastructure and equipment are outlined in Table 5 below and the site layout is shown in Figure 1.

Table 5: Proposed infrastructure and equipment

Ref	Infrastructure or Equipment	Site Layout Plan reference (Figure 1)
Prescribed Activity Category 13 and 62		
1	Concrete hardstand tipping floor	Tipping floor
2	Generator and noise attenuating enclosure (Atlas Copco QA3425)	Generator and noise enclosure
3	Grizzly feeder pan <ul style="list-style-type: none"> Capacity: 40 tonnes/hr 	Feeder pan
4	Primary crusher (Pioneer single toggle jaw 600mm) <ul style="list-style-type: none"> Sound power level: 100 L_{WAdB} 	Primary crusher
5	Primary screen (Pioneer 3YZ triple deck screen)	Primary screen
6	Picking conveyor and overhead magnet	Picking station and waste receptacles
7	Secondary crusher (Pioneer triple curtain impact crusher) <ul style="list-style-type: none"> Sound power level: 99 L_{WAdB} 	Secondary crusher
8	Secondary screen (Hein Leham flip flow screen)	Secondary screen
9	Hino Euro 5 FM2630 for unloading	N/A
10	Front End Loader Hyundai HL757-7A for loading	N/A
11	Caterpillar 316D wheeled excavator with grab	N/A
12	Hyundai 760 loader	N/A
13	SWAT tornado dust misting system	N/A
14	Polo BDS foam dust suppressant system	N/A
15	Sound proof panel enclosure	N/A
16	2 x 80kL Water storage bladder <ul style="list-style-type: none"> Contained within sea containers 	N/A



Figure 1: Site layout plan

6.8 Legislative context and other approvals

Approvals relevant to the premises are outlined in Table 6 below.

Table 6: Summary of emissions and applicant controls

Legislation	Number	Approval
<i>Environmental Protection Act 1986</i>	W5409/2013/1	Works approval for activities causing a premises to become prescribed.
<i>Planning and Development Act 2005</i>	DA2012/1373	Local government planning approval.

7. Location and siting

The ERRRC is located within the 'General Industrial Zone' under the City of Wanneroo District Planning Scheme No. 2 (2012), and conforms to the land use approval issued by the City of Wanneroo. The Premises is surrounded to the north, east, south and west by industrial premises.

8. Monitoring data

8.1 Applicant noise assessments

The Applicant engaged a noise consultant to undertake noise monitoring during full operation of the Premises in October 2018 (O&EMMS 2018). The results of the noise assessment found that assigned noise levels for industrial premises were exceeded on the southern and western boundaries of the Premises. However, measurements calculated for the closest residential receptor were below the relevant levels (Table 7). All other boundaries were compliant with the assigned noise levels in the Noise Regulations. The assessment recommended that further screening and enclosure of the Premises' noise sources would be required.

Table 7: Summary of noise assessment (O&EMMS 2018)

Receptor	Assigned L_{A10} noise level (dB)	Distance to receptor (m)	Measured L_{A10} noise level (dB)
Residential property at 2 Eglinton Drive, Darch	53	450	39
Southern boundary adjacent generator	65	1.5	82
Southern boundary adjacent primary crusher		3	82
Western boundary adjacent secondary crusher		2.5	80
Northern boundary in sight of operating plant		60	69

Following the 2018 assessment the Applicant installed a sound attenuating enclosure around their generator unit. The primary and secondary crushers were also partially screened using sound attenuating cladding. A second noise assessment was conducted in 2019 to validate the effectiveness of the installed controls. The assessment found the enclosure around the generator to be effective at reducing noise emissions by 20 dB, achieving a measurement below the assigned levels for industrial premises (Table 8). Noise levels measured at the boundaries adjacent to the primary and secondary crushers were still in excess of assigned levels for industrial premises. The Applicant has indicated their intention to complete screening around the two crushers with attenuating cladding once the licence is granted.

Table 8: Summary of post control noise assessment (O&EMMS 2019)

Receptor	Assigned L_{A10} noise level (dB)	Distance to receptor (m)	Measured L_{A10} noise level (dB)	Post control noise reduction (dB)
Southern boundary adjacent generator	65	1.5	62	20
Southern boundary adjacent primary crusher		3	74	8
Southern boundary adjacent secondary crusher		2.5	68	-*
Western boundary adjacent secondary crusher		2.5	73	7

* No comparative measurement was taken in 2018 at the southern boundary adjacent to the secondary crusher.

The noise assessment conducted by the Applicant during full plant operation has shown that the L_{A10} noise level calculations at the nearest residential receptor were 14 dB below the assigned level inclusive of influencing factors.

8.2 Technical review of noise assessments

The noise monitoring and assessments conducted by the Applicant were assessed by the Environmental Noise Branch of DWER with the main issues summarised as follows:

- Noise monitoring data presented in O&EMMS 2018 appears to be from noise measurements previously provided to the Department in January 2018. The report does not detail how this data was analysed to obtain the results presented in the report and makes it difficult to assess for technical validity.
- Measured sound power levels are provided for six major noise sources on the Premises. Sound power level is a more complicated procedure than a regular noise level measurement and is calculated using noise measurements in combination with noise standards applicable to the siting of the Premises. Detail showing how the sound power levels were determined was not provided.
- Noise level measurements observed post installation of controls show a significant dB reduction. A reduction of noise levels to this degree generally requires more extensive mitigation than the use of noise attenuating cladding.
- Neighbouring industrial properties to the south and west use the area adjacent to the Applicant's Premises boundary for parking and storage of heavy equipment. There is no noise sensitive use of this area such as an office or caretaker residence and as a result the risk of unacceptable noise impact to the neighbouring properties is not high. Notwithstanding the Applicant must still demonstrate compliance with the EP Act Noise Regulations.
- The Applicant should further reduce noise emissions received at the neighbouring industrial properties by fully enclosing the primary and secondary crushing units and/or increasing the height of walls adjacent to the crushers.

8.3 Key Findings

The Delegated Officer has reviewed the noise assessment information and has found that:

1. The main source of noise emissions at the Premises are the crushing units.
2. The Premises is not currently compliant with the Noise Regulations due to operation of the crushing units.
3. The Applicant intends to complete installation of noise attenuating cladding around the main noise sources.
4. **The Delegated Officer is not able to licence an activity that is known to be non-compliant with legislation at the time of assessment.**
5. **The Delegated Officer can only issue a licence for a category 62: solid waste depot, at this time.**
6. **The Applicant should complete installation of the noise attenuating cladding and confirm compliance with the Noise Regulations through either modelling and/or modelling data.**
7. **Once compliance with the Noise Regulations is achieved DWER will undertake a department initiated licence amendment to include category 13: crushing of building material.**

9. Emission sources, receptors and pathways

9.1 Emissions

The potential for emissions to impact on sensitive receptors has been assessed in accordance with the Department's Risk Framework. A prescribed premises Category 13 and 62 licence under Part V of the EP Act will be required to authorise emissions associated with the

operation of the premises. A risk assessment for the operational phase has been included in this Decision Report. The key emissions considered during premises operation are **noise**, **dust** and **asbestos** from activities including crushing, screening, material handling and heavy machinery movement. Monitoring of noise emissions is discussed in detail in Section 8 above.

9.2 Environmental receptors and aspects

Risk is assessed as a combination of emission sources, the proximity and sensitivity of receptors to those emission sources and any pathways that can allow the emission to reach and potentially harm the receptor. Figure 2 and the table below provides a summary of human and environmental receptors in proximity to the premises which have a potential to be impacted from site activities and the risk assessment in Section 10 considers these receptors in the context of emissions and potential pathways.

9.2.1 Residential and sensitive receptors

The distances to residential and sensitive receptors are detailed in Table 9.

Table 9: Distance to receptors

Human receptors	Distance from activity or prescribed premises
Sensitive/Residential properties	400m from the southern boundary of the Premises to the zoned residential area in Darch. 440m from the southern boundary of the premises to the childcare facility located on Driver Road.
Industrial properties	Located to the east, west, south and north of the premises.



Figure 2: Nearest sensitive receptors in relation to the Premises

9.2.2 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 10. Table 10 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 10: Environmental values

Specified ecosystems	Distance from the Premises
Geomorphic Wetlands	The closest geomorphic wetland to the Premises is a resource enhancement sumpland located approximately 588m east and hydraulically upgradient on Finnegan Way, Landsdale. The wetland is situated within an industrial area, is highly modified and appears to be used for stormwater drainage.
Bush Forever Site 463	The closest regional open space area is Bush Forever Site 463, located on Ocean Reef Road approximately 1.3 km north east of the Premises and hydraulically upgradient.

9.2.3 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 11.

Table 11: Groundwater and water sources

Groundwater and water sources	Distance from Premises	Environmental value
Public drinking water source areas	Approximately 2 km east and up hydraulic gradient of the Premises.	Priority 3 Protection Area.
Major watercourses/waterbodies	The closest major waterbody is located approximately 2.1 km east and hydraulically upgradient of the Premises.	Gnangara Lake - conservation category basin lake.
Groundwater	Depth to groundwater ranges from 5-9 mbgl across the Premises.	Groundwater salinity is in the range of 500-1000 mg/L total dissolved solids, indicating that water is fresh. A number of private abstraction bores are located in the area for non-potable purposes. The closest down-hydraulic abstraction bore is located approximately 610m from the Premises. The inferred groundwater flow direction is southwest.

9.2.4 Soil type

Table 12 details soil types and characteristics relevant to the assessment.

Table 12: Soil and sub-soil characteristics

Characteristic	Environmental Value
Soil type	Broadscale soil mapping describes the area as containing Karrakatta sand yellow phase over limestone at 1-2m. This soil phase is considered permeable with good drainage. Lithology data from WIN bore 61604143 located approximately 115m northeast of the premises describes soil conditions as yellow sand at 0-4m, grey sand at 4-12m, clay at 12-14m and grey sand at 14-21m.

Characteristic	Environmental Value
Acid sulfate soil (ASS) risk	The premises does not have a known ASS risk and the nearest high risk area is located approximately 315m south west of the premises.

9.3 Pathways

As noise, dust and asbestos are considered potential emissions, the prevailing wind direction has been considered. Using information available on the Bureau of Meteorology's website, the closest available weather station for wind frequency data is Perth Airport site 009021. Based on this data, the prevailing wind direction is east and north east in the mornings, and west and south west in the afternoon. These pathways have been considered in the risk assessment table in Section 10.

9.3.1 Meteorology

Wind direction and strength

The closest weather station for wind frequency data is Perth Airport. Prevailing winds are from the east and north east in the mornings, and from the west and south west in the afternoons (Figure 3).

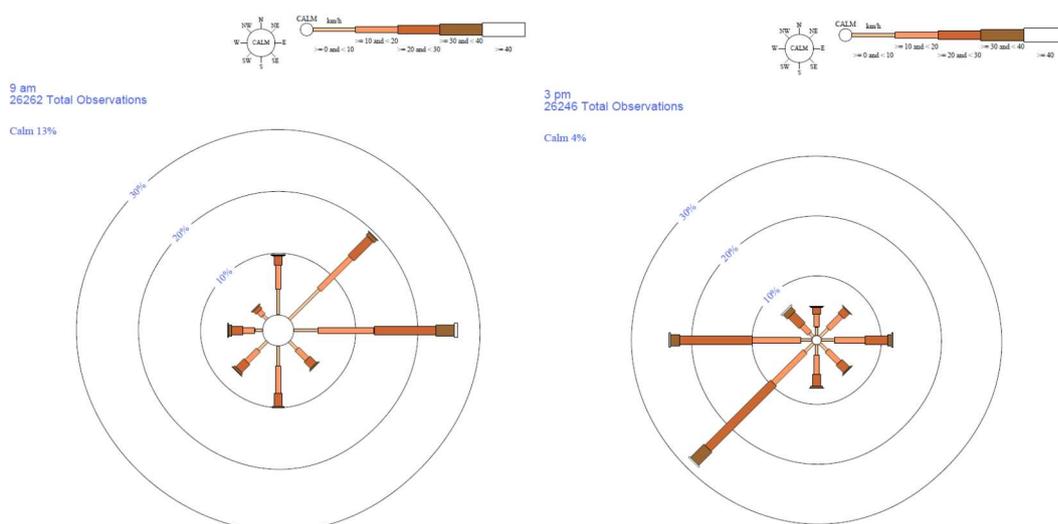


Figure 3: Annual wind rose for 9am and 3pm at Perth Airport

Source: Bureau of Meteorology website www.bom.wa.gov.au

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

Rainfall and temperature

The closest weather station for rainfall data is the Whiteman Park site 009263. Maximum average rainfall is received in July and August annually. Minimum average rainfall is received from December to April annually (Table 13).

Table 13: Average annual rainfall (mm) for Whiteman Park site 009263**Summary statistics for all years**

Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean	23.4	17.4	18.5	38.5	90.3	122.1	137.5	130.1	91.6	30.5	25.4	15.3	778.4
Lowest	0.0	0.0	0.0	0.0	45.4	31.6	64.3	26.8	34.4	6.0	1.4	0.0	693.2
5th %ile	0.0	0.0	0.6	5.9	45.9	35.4	79.0	46.0	38.2	6.2	1.8	0.3	698.8
10th %ile	0.0	0.2	1.2	10.1	48.8	39.6	91.6	65.8	42.0	6.6	2.4	0.6	704.3
Median	9.8	2.1	11.9	25.4	80.2	123.5	135.9	128.4	86.9	32.1	16.9	11.7	795.2
90th %ile	53.1	40.8	37.4	73.6	142.2	207.4	198.6	181.6	127.1	48.3	57.0	32.8	851.0
95th %ile	77.8	63.3	52.9	95.5	150.3	227.6	202.2	197.6	159.1	53.6	64.9	38.6	854.0
Highest	120.6	102.8	74.4	125.4	152.7	241.7	203.4	221.1	191.0	59.6	73.2	44.2	857.0

Source: Bureau of Meteorology website www.bom.gov.au

The closest weather station for temperature data is Hillarys Boat Harbour site 009265. Highest average temperatures are experienced in January to March annually. Lowest average temperatures are experienced in July to September annually (Table 14).

Table 14: Average annual temperature (°C) for Hillarys Boat Harbour site 009265**Summary statistics for all years**

Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Lowest	26.2	26.1	24.9	23.3	19.7	18.0	17.0	16.8	16.7	19.0	20.7	24.4	21.9
Highest	29.1	29.5	27.1	25.3	23.0	20.4	18.4	20.3	20.6	22.4	25.8	25.6	23.1

9.4 Applicant controls

The Applicant has proposed the following management measures and controls as part of the application:

Table 15: Summary of emissions and applicant controls

Emission (as identified above)	Source	Proposed controls
Dust	<p>Movement of construction and demolition waste material on to and within the site.</p> <p>Crushing and screening of material.</p> <p>Lift-off from stockpiles and stored product.</p>	<p>Misting and foaming systems installed on the tipping area, screen decks, primary crusher, secondary crusher and product stockpile.</p> <p>Onsite speed limit of 10 km/hr.</p> <p>Installation of a steel cover over the waste material tipping area.</p> <p>Storage of separated wastes in covered receptacles.</p> <p>90% block shade cloth installed around boundary fencing.</p> <p>General sprinkler system installed throughout the site for dampening of materials.</p> <p>Product stockpile heights limited to 4m.</p>
Asbestos	<p>Lift-off from demolition waste and final product stockpiles contaminated with asbestos containing materials and/or asbestos fibres.</p> <p>Crushing and screening of demolition material contaminated with asbestos containing materials and/or asbestos fibres.</p>	<p>Dust controls as listed above.</p> <p>Notification to waste suppliers and visible signs at the Premises entry that asbestos is not accepted at the site.</p> <p>Visual inspection of loads at collection and acceptance onto the Premises to determine presence of asbestos and likely construction date for the source material.</p> <p>Detailed visual inspection of loads after spreading across the tipping pad.</p> <p>Suspected asbestos material contained within hazi-bags and stored in a dedicated location for disposal.</p> <p>Segregation of unprocessed and end product material using retaining walls.</p> <p>Sampling and testing of final products in accordance with the DWER Guideline <i>Asbestos in construction and demolition recycling</i>.</p>

Emission (as identified above)	Source	Proposed controls
Noise	Screening operation Crushing operation Generator operation Unloading, loading and storage of material Vehicle movements	Receipt of waste material and operation of crusher/screener only to be between “day-time” hours (7am to 5pm, Mon – Fri and 7:30am to 1pm, Sat); Noise attenuating cladding installed/to be installed around noise generating equipment.

10. Risk assessment

The identification of the sources, pathways and receptors to determine Risk Events are set out in Table 16 below. Risk ratings have been assessed for each key emission source and take into account potential source-pathway-receptor linkages. The mitigation measures and controls proposed by the Applicant have been considered in determining the risk rating.

The conditions in the issued Licence, as outlined in Table 16, have been determined in accordance with the *Guidance Statement: Setting Conditions*.

Table 16: Identification of emissions, pathway and receptors during full operation

Risk Event				Consequence rating ¹	Likelihood rating ¹	Risk ¹	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
<p>Movement of construction and demolition waste material on to and within the site.</p> <p>Crushing and screening of material.</p> <p>Lift-off from stockpiles and stored product.</p>	Dust	<p>Air/windborne pathway causing health and amenity impacts to human receptors:</p> <ul style="list-style-type: none"> - Residential area located approximately 400m to the south. - Adjacent industrial premises 	<p>Misting systems installed on the tipping area, screen decks and product stockpile.</p> <p>Foaming systems installed on the primary crusher and secondary crusher.</p> <p>Onsite speed limit of 10 km/hr.</p> <p>Installation of a steel cover over the waste material tipping area.</p> <p>Storage of separated wastes in covered receptacles.</p> <p>90% block shade cloth installed around boundary fencing.</p> <p>Dust curtains to be installed around the tipping area and screen when tipping is occurring.</p> <p>General sprinkler system installed throughout the site for dampening of materials.</p> <p>Product stockpile heights limited to 4m.</p>	Minor – Low level impact to amenity	Unlikely	Medium	<p>The main sources of dust emissions at the Premises are from the crushing and screening process and the storage of product material which is present in a small particle size.</p> <p>The Applicant's proposed controls are likely to be sufficient at mitigating dust emissions as the controls will keep material moistened and bound by foam during the process stages (crushing and screening). Product material will then be kept moist and stored in height limited stockpiles.</p> <p>The Applicant's proposed controls should be included in the Licence as regulatory controls.</p>	<p>Conditions 1-2: <i>Waste acceptance</i></p> <p>Condition 12: <i>Waste processing requirements</i></p> <p>Condition 13: <i>Infrastructure and equipment controls</i></p> <p>Conditions 19-20: <i>Stockpile management</i></p> <p>Conditions 21-26: <i>Dust controls</i></p>
<p>Lift-off from demolition waste and final product stockpiles contaminated with asbestos containing materials and/or asbestos fibres.</p> <p>Crushing and screening of demolition material contaminated with asbestos containing materials and/or asbestos fibres.</p>	Asbestos	<p>Air/windborne pathway causing health impacts to human receptors:</p> <ul style="list-style-type: none"> - Residential area located approximately 400m to the south. - Adjacent industrial premises 	<p>Dust controls as listed above.</p> <p>Notification to waste suppliers and visible signs at the Premises entry that asbestos is not accepted at the site.</p> <p>Visual inspection of loads at collection and acceptance onto the Premises to determine presence of asbestos and likely construction date for the source material.</p> <p>Detailed visual inspection of loads after spreading across the tipping pad.</p> <p>Suspected asbestos material contained within hazi-bags and stored in a dedicated location for disposal.</p> <p>Segregation of unprocessed and end product material using retaining walls.</p> <p>Sampling and testing of final products in accordance with Department of Health guidance.</p>	Severe – ongoing medical treatment or loss of life	Rare	High	<p>Given the nature of materials previously used in the construction industry, the presence of asbestos in construction and demolition waste is a reasonably foreseeable risk event.</p> <p>The Applicant has proposed controls which relate to detection and sampling of asbestos material in accepted wastes and end products. In combination with the dust controls previously proposed, these should be sufficient in the control of any potential asbestos emissions.</p> <p>The Applicant specified controls should be included in the Licence as regulatory controls along with other controls considered required by the Delegated Officer which are specified in the DWER Asbestos Guideline.</p>	<p>Conditions 1-5: <i>Waste acceptance</i></p> <p>Conditions 6-11: <i>Load inspection</i></p> <p>Condition 12: <i>Waste processing requirements</i></p> <p>Condition 13: <i>Infrastructure and equipment controls</i></p> <p>Conditions 19-20: <i>Stockpile management</i></p> <p>Conditions 21-26: <i>Dust controls</i></p> <p>Conditions 28-32: <i>Product testing</i></p>

Risk Event				Consequence rating ¹	Likelihood rating ¹	Risk ¹	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
Screening operation Crushing operation Generator operation Unloading, loading and storage of material Vehicle movements	Noise	Air/windborne pathway causing impacts to health and amenity of closest human receptor: - Adjacent industrial premises	Receipt of waste material and operation of crusher/screener only to be between "day-time" hours (7am to 5pm, Mon – Fri and 7:30am to 1pm, Sat); Noise attenuating cladding installed/to be installed around noise generating equipment.	Minor – low level impact to amenity	Likely	Medium	Noise monitoring conducted by the Applicant shows that Premises operations are not currently compliant with the requirements of the EP Act Noise Regulations. Installation of noise attenuating cladding around the generator has shown the potential for the Applicants' proposed controls to reduce noise emissions received at the adjacent industrial premises. The Applicant has indicated their intent to complete installation of the noise attenuating cladding when the Licence is granted. Full installation of the noise attenuating cladding should be included as a Licence condition with a specified completion timeframe. An assessment of noise emissions against the levels specified for industrial premises in the Noise Regulations should be undertaken following full completion of the noise attenuating cladding. Operation of the crushing units will not be included in the issued Licence, as the equipment is not currently able to comply with the Noise Regulations.	Condition 12: <i>Waste processing requirements</i> Condition 13: <i>Infrastructure and equipment controls</i> Conditions 14-18: <i>Specified actions</i> Condition 27: <i>Operating hours</i>
		Air/windborne pathway causing impacts to health and amenity of closest sensitive human receptor: - Residential area located approximately 400m to the south.		Minor – low level impact to amenity	Rare	Low	Noise monitoring conducted by the Applicant shows that Premises operations are compliant with the sensitive premises noise level requirements of the Noise Regulations. Measured daytime levels at the nearest noise sensitive premises were more than 10dB below the assigned L _{A10} level. Exceedance of the assigned daytime noise levels is considered a low risk and will not be subject to regulatory controls, other than limiting operation of the Premises to within the daytime hours listed in the Noise Regulations.	Condition 27: <i>Operating hours</i>

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)

11. Consultation

Table 17: Summary of consultation

Method	Comments received	DWER response
Application advertised on DWER website (09/01/2019)	None received	N/A
Local Government Authority advised of proposal (17 January 2019)	The City of Wanneroo replied on 5 February 2019 confirming that a Change of Use application was submitted and approved (DA2012/1373) for the Premises in 2013 and noted that no further applications had been received to date.	Noted. The Licence application relates to the same business and operation specified in planning approval DA2012/1373.
Applicant referred draft documents (18 October 2019)	<p>The Applicant replied on 23 October 2019 confirming manufacturer rated capacity for the process train, which is limited by the grizzly feeding pan.</p> <p>The Applicant requested clarification on the amendment process to include category 13 on the proposed licence.</p>	<p>DWER will amend the Licence to include category 13 activities once compliance with the Noise Regulations is demonstrated.</p> <p>Condition 12 <i>waste processing</i> was added to the Licence to indicate that category 13 processes are not authorised under the Licence. A sub-condition was added to Condition 13 Table 4 that specifies the crusher can only be operated for the noise validation required by Condition 16.</p>

12. Conclusion

Based on the assessment in this decision report, the Delegated Officer has determined that at this stage a licence can only be granted for a category 62: solid waste facility, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Once further installation of noise controls are completed at the Premises, specifically surrounding the primary and secondary crushers, the Applicant should submit a noise assessment report that demonstrates compliance with the Noise Regulations. Once this is received, DWER will undertake a technical review of the report and if appropriate may amend the issued Licence for the inclusion of category 13.

A/MANAGER WASTE INDUSTRIES REGULATORY SERVICES

An officer delegated by the CEO under section 20 of the EP Act

Appendix 1: Key documents

Document title	Availability
Licence (L9187/2018/1) application form and supporting documentation (December, 2017).	DWER records (A1776222)
Applicant correspondence received during assessment.	DWER records (A1589394, A1796729, A1802673)
O&EMMS, 2018. <i>Encore Construction & Demolition Waste Recycling Plant Noise Assessment</i> . Occupational & Environmental Monitoring & Management Services, Perth.	DWER records (A1759921)
O&EMMS, 2019. <i>Encore Construction & Demolition Waste Recycling Plant Noise Assessment of Installed Plant Noise Controls</i> . Occupational & Environmental Monitoring & Management Services, Perth.	DWER records (DWERDT184820)
DWER Environmental Noise Branch Technical Advice Memorandum, September 2019	DWER records (A1825962)
DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	accessed at www.dwer.wa.gov.au
DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	
DER, August 2016. <i>Guidance Statement: Licence duration</i> . Department of Environment Regulation, Perth.	
DER, February 2017 <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	
DWER, June 2019. <i>Guideline: Decision Making</i> . Department of Water and Environmental Regulation, Perth.	