



Application for Licence Amendment

Division 3, Part V *Environmental Protection Act 1986*

Licence Number	L6561/1995/11
Applicant	Malatesta Investments Pty Ltd
ACN	009 052 608
File Number	DER2015/002207-1
Premises	Malatesta Road Paving and Hot Mix and Green Organic Recycling Contractors South Western Highway DAVENPORT WA 6230 Legal description - Lot 2 on Plan 17617
Date of Report	19 June 2019
Status of Report	Final

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1. Definitions of terms and acronyms

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

Table 1: Definitions

Term	Definition
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AER	Annual Environment Report
agl	above ground level
AHD	Australian Height Datum
Amended Licence	the amended Licence issued under Part V, Division 3 of the EP Act following the finalisation of this amendment.
AMP	asphalt manufacturing plant
AS 4323.1	means the current version of Australian Standard AS 4323.1 <i>Stationary source emissions method 1: Selection of sampling positions</i>
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CO	carbon monoxide
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
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
EP Unauthorised Discharges Regulations	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004</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
GIS	Geographical Information System
ICMS	refers to DWERs Incident and Complaints Management System
Licence Holder	Malatesta Investments Pty Ltd
m ³	cubic metres
mbgl	metres below ground level
NEPM	National Environmental Protection Measure
NO _x	nitrogen oxides
PM	Particulate Matter
PM ₁₀	used to describe particulate matter that is smaller than 10 microns (µm) in diameter
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Primary Activities	as defined in Schedule 2 of the Amended Licence
RAP	reclaimed asphalt pavement
Risk Event	As described in <i>Guidance Statement: Risk Assessment</i>
SO ₂	sulfur dioxide
UDR	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)</i>
µg/m ³	micrograms per cubic metre
VOC	volatile organic compounds

2. Purpose and scope of assessment

An application was received from Malatesta Investments Pty Ltd (the Licence Holder) on 7 December 2018 to amend the Malatesta Road Paving and Hot Mix and Green Organic Recycling Contractors (the premises) operating Licence L6561/1995/11 to allow for operation of a new asphalt manufacturing plant, constructed under Works Approval W6135/2018/1. This new plant will replace the current plant and increase production from 48,000 tonnes to 70,000 tonnes of asphalt manufactured per year.

This Decision report reviews emissions and discharges from the new asphalt manufacturing plant at the premises. The Amended Licence issued as a result of this review consolidates and supersedes all previously authorised licences and Amendment Notices previously issued in relation to the premises. The Amended Licence has been issued in a new format with existing conditions being transferred, but not reassessed, to the new format.

2.1 Application details

Table 2 lists the documents submitted during the assessment process.

Table 2: Documents and information submitted during the assessment process

Document/information description	Date received
Application Form (Licence amendment), L6561, Malatesta Road Paving and Hot Mix, Malatesta Investments Pty Ltd (7 December 2018)	7 December 2019
Resubmitted application form and supporting information: E-mail from Licence Holder to DWER including attachments, 11 January 2019	11 January 2019
Supporting information: E-mail from Licence Holder to DWER including attachment, 5 February 2019.	5 February 2019

3. Background

The Licence Holder has been operating a road paving and hot-mix asphalt manufacturing plant since 1995 on the southern section of the premises and a composting facility on the northern section of the premises for the past 18 years. The existing asphalt manufacturing plant has been operating under the Existing Licence L6561/1995/11 and the existing composting facility was previously operating under licence L7401/1998/9 until February 2016 when the two licences were amalgamated.

Works Approval, W6135/2018/1, was granted on 19 June 2018 for the construction of a new asphalt manufacturing plant. Works Approval compliance certification, outlined in condition 3 of the Works Approval, was received in November 2018, January and February 2019. A site visit on 3 October 2018 was also conducted to determine compliance with the Works Approval.

Table 3 lists the prescribed premises categories in the Existing Licence with the throughput of the current asphalt manufacturing plant (to be decommissioned) and the proposed asphalt manufacturing plant.

Table 3: Prescribed Premises Categories in the Existing Licence

Classification of Premises	Description	Approved Premises production or design capacity or throughput	
		Current	Proposed
Category 35	Asphalt manufacturing: premises on which hot or cold mix asphalt is produced using crushed or ground rock aggregates mixed with bituminous or asphaltic materials for use at places or premises other than those premises.	48,000 tonnes per annum	≤70,000 tonnes of asphalt produced per annual period

Classification of Premises	Description	Approved Premises production or design capacity or throughput	
		Current	Proposed
Category 67A	Compost manufacturing and soil blending: premises on which organic material (excluding silage) or waste is stored pending processing, mixing, drying or composting to produce commercial quantities of compost or blended soils.	50,000 tonnes per annual period	≤50,000 tonnes of compost produced per annual period

4. Overview of Premises

4.1 Operational aspects

4.1.1 Asphalt manufacturing

Current asphalt manufacturing plant

The existing asphalt manufacturing plant was operated approximately six hours a day, five days a week with occasional Saturday work.

Exhaust gases from the drum mixer were passed through a wet scrubber prior to release through a stack. Discharge from the wet scrubber was put into two lined sedimentation ponds. The waste water was recycled back through a silt removal unit and returned to the system.

This asphalt plant ceased operation in November 2018 with the liquid petroleum gas (LPG) tank for the fuel supply of the drum burner removed in March 2019 and the sludge storage ponds containing overflow being removed. Other infrastructure, including the scrubber ponds, bitumen tank, hopper, cold feed bins and drum are still in place with currently no timeframe on when the items will be removed; however, they are not intended to be operated.

New asphalt manufacturing plant (AMP)

The new asphalt plant will manufacture up to 70,000 tonnes of asphalt per year typically operating five days per week (Monday to Friday) between 5am and 12pm. The plant has a maximum design capacity of 240 tonnes per hour (maximum temporary capacity) or 160 tonnes per hour (with variable rates) which, based on operating 24 hours, 7 days a week, equates to a maximum design capacity of approximately 1,921,920 tonnes per year.

The Asphalt Manufacturing Plant Benninghoven ECO3000 consists of:

- 6 cold feed bins;
- dryer drum / burner;
- two, banded 60,000 L vertical, insulated, heated bitumen tanks;
- dust collection system (baghouse and associated stack);
- mixing tower (consisting of a screen, hot aggregate bins, weighing and mixing section);
- granulate and oxide feeder;
- air compressor system (not for baghouse cleaning);
- reclaimed asphalt pavement (RAP) cold feed system;
- mixing material silo;
- filler feed system;
- diesel generator (including storage of diesel); and
- control cabin.

The Licence Holder has a total of 12 tip trucks and 3 primes movers on the premises (used for both asphalt manufacturing and composting operational requirements), of which, some of these will be used to transport raw materials for the new asphalt manufacturing operations to the

premises. Raw materials will be stockpiled on the ground in concrete storage bays. Each of the seven (approximately 4 m x 7 m) concrete storage bays have a concrete base, three concrete walls (3.5 m high, open towards the AMP) and a sheet metal roof. Raw materials include 5mm, 7mm, 10mm and 14mm basalt rock, gravel and sand.

The raw materials are transported from the stockpiles to the cold feed bins (open at the top) using a front end loader. The raw materials are then fed into a drum dryer via an enclosed conveyor for moisture removal. Bitumen is added and the materials are transferred to the mixing tower via another enclosed conveyor. The mixing tower consists of a screen section, hot aggregate bins, weighing and mixing section and bypass bin allowing coloured mix to be produced at any time. Once mixed, the asphalt is transferred, via an open top skip bucket, to mixed material insulated silos where the product can be weighed and loaded into trucks.

The plant also allows the Licence Holder to produce stone mastic asphalt (SMA) and red asphalt through the addition of a granulate and oxide feeder that is attached to the plant. A RAP cold feed system is also attached to the plant allowing the Licence Holder to use up to 30% reclaimed asphalt in the product.

A reverse pulse baghouse dust extraction system is attached to the drum dryer to remove any combustion gases, moisture and fine particles. Any fines collected by the baghouse are reused in the asphalt manufacturing process. The filtered air is released to atmosphere through a 12 m agl stack.

Bitumen is stored in two, banded 60,000 L vertical, insulated, heated bitumen tanks. Reclaimed asphalt for use in the integrated RAP system is stored on an existing hardstand within a shed located on the premises (approximately 110 m NE of the asphalt operations).

The whole operational area has an existing asphalt hardstand area sloped towards the existing stormwater Pond A (approximate capacity 2,475 m³ and unknown integrity). A sediment detention trench captures any sediment and directs filtered stormwater into Pond A. Two speedbumps (water deflectors) are located near the pond to ensure that any stormwater that falls on the hardstand operational area is directed to the sediment detention trench.

A process flow diagram is shown below in Figure 1.

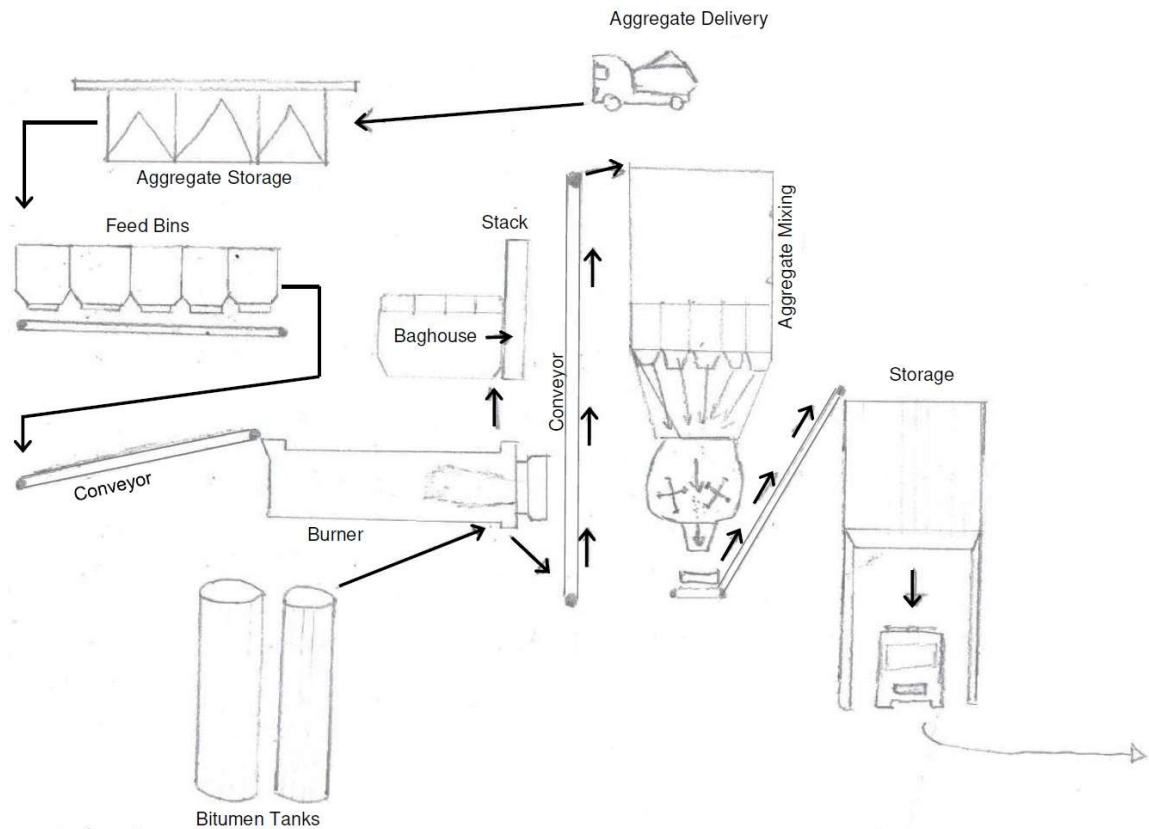


Figure 1: Process flow chart of asphalt manufacturing plant operation

4.1.2 Composting activities

Compost manufacturing and soil blending operation utilises green waste (including tree trunks up to 300 mm diameter) and paunch waste to produce compost and soil blends for commercial sale.

Organic wastes and compost are stored in windrow stockpiles up to 500 m³ and less than three metres in height. A minimum of five metre firebreak is maintained around the compost area.

Temperature of the compost windrows and wind direction (using a wind sock located on the premises) are recorded on a daily basis.

Any leachate from the composting activities is directed to a HDPE lined retention pond with wastewater being reused in the composting process. A water truck is used to dampen roads on the premises and mobile sprinklers are utilised for the wetting of compost windrows as required.

The Licence Holder has produced approximately 20,000 tonnes of compost per year over the last three reporting periods (based on information provided in Annual Audit Compliance Reports (AACR)).

4.2 Infrastructure

The Malatesta Road Paving and Hot Mix and Green Organic Recycling Contractors facility infrastructure, as it relates to Category 35 and 67A activities, is detailed in Table 4 and with reference to the Site Plan (attached in the Amended Licence).

Table 4: Malatesta Road Paving and Hot Mix and Green Organic Recycling Contractors Category 35 and 67A infrastructure

	Infrastructure	Site Plan Reference
Prescribed Activity Category 35		
A Benninghoven ECO 3000 asphalt manufacturing plant will produce up to 70,000 tonnes per annum of asphalt. The plant has a maximum design capacity of 240 tonnes per hour (maximum temporary capacity) or 160 tonnes per hour (with variable rates).		
1.	Asphalt manufacturing plant operational area (on an approximate 5,100 m ² hardstand area and includes the Asphalt Manufacturing Plant Benninghoven ECO3000 and reverse flow baghouse dust extraction system)	Schedule 1, Maps – Premises Map in the Amended Licence
2.	Raw materials storage area (concrete storage bays)	
3.	Hydrocarbon bunded areas	
4.	Sediment detention trench and speedbumps (water deflectors)	
5.	Stormwater Pond A (approximate capacity of 2,475 m ³ and unknown integrity)	
Prescribed Activity Category 67A		
Compost manufacturing and soil blending operation utilises green waste and paunch waste to produce compost and soil blends for commercial sale.		
6.	Waste and compost storage and composting area (hot mix and concrete base)	Schedule 1, Maps – Premises Map in the Amended Licence
7.	HDPE lined retention pond	
8.	Stormwater storage pond	

5. Legislative context

Table 5 summarises approvals relevant to the assessment.

Table 5: Relevant approvals and tenure

Legislation	Number	Subsidiary	Approval
<i>Rights in Water and Irrigation Act 1914</i>	GWL60385	Malatesta Investments Pty Ltd	Groundwater licence to take up to 3,000 kL per year from the Yarragadee aquifer until May 2025 for industrial purposes.
<i>Dangerous Goods Safety Act 2004</i>	DGS013703	Malatesta Investments Pty Ltd	Authorises the Licence Holder to store dangerous goods, such as petrol, kerosene, diesel, liquefied petroleum, gas and bitumen in accordance with the conditions of the licence. The Licence expires on 19 July 2021 and includes the two new 60,000 L bitumen storage tanks, with the existing 100,000 L bitumen storage tank being removed.

5.1 Contaminated sites

The Premises is not classified as a contaminated site; however, the adjacent lot (Lot 3 on Plan 17617) to the east is classified as “Possibly contaminated – investigation required” from former landfill activities.

5.2 Other relevant approvals

Development approval for the AMP, subject to conditions, was granted on 7 June 2017 by the City of Bunbury. Conditions include that a Stormwater and Drainage Management Plan, prepared in accordance with the Department of Water and Environmental Regulation’s Stormwater Management Manual to be submitted for the approval of the City of Bunbury.

The Application for licence amendment was referred to the City of Bunbury on 21 February 2019. No comments were received.

The Works Approval application for the new AMP was referred internally to Water Services (South West) on 5 April 2018. The following is a summary of comments received on 12 April 2018:

- the premises is located within palusplain and riparian areas managed under the *Rights in Water and Irrigation Act 1914*, specifically the proclaimed Bunbury Groundwater and Preston River Surface Water Management Areas.
- The premises is also located within a declared management area under the *Waterways Conservation Act 1976*.
- The premises is likely to contain a high ground water table and contain pathways for surface water runoff to enter the Preston River environment.
- There is potential for the new AMP to have an impact on water quality of the local ground and surface water environments if sediment, degreasers, detergents, hydrocarbons, petroleum products and chemicals used are not adequately contained;
- clean stormwater should not be allowed to mix with potentially contaminated surface stormwater from hardstand and process areas; and
- potentially contaminated stormwater should be contained and treated for removal of solids and chemical residues.

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 listed in Appendix 1.

5.3.2 Works approval and licence history

Table 6 summarises the works approval and licence history for the premises in the last 7 years.

Table 6: Works approval and licence history

Instrument	Issued	Nature and extent of works approval, licence or amendment
L7401/1998/8	30/12/2010	Licence reissue – Composting facility
L6561/1995/10	15/03/2011	Licence reissue – Asphalt Manufacturing Plant
L6561/1995/10	26/07/2013	Licence amendment to convert Asphalt Manufacturing Plant Licence into REFIRE licence format
L7401/1998/9	12/12/2013	Licence reissue – Composting facility
L6561/1995/11	06/03/2014	Licence reissue – Asphalt manufacturing facility
L6561/1995/11	04/02/2016	Licence amendment to transfer conditions of the composting licence, L7401/1998/9, onto licence L6561/1995/11
L6561/1995/11	29/04/2016	Amendment by notice – DWER initiated amendment to extend licence duration
L6561/1995/11	13/02/2017	Amendment by notice – DWER initiated amendment to remove completed improvement condition (requirement to submit a Dust and Odour Management Plan)
L6561/1995/11	03/05/2017	Amendment by notice – DWER initiated amendment to specify waste types received at the premises for the composting facility and include a broader wind direction area for when composting activities cannot occur.
W6135/2018/1	19/06/2018	Works Approval for construction of a new asphalt manufacturing plant and associated infrastructure, containment sump and upgrades to existing

Instrument	Issued	Nature and extent of works approval, licence or amendment
		stormwater pond.
L6561/1995/11	19/06/2019	Licence Amendment application to include the operation of the new asphalt manufacturing plant, decommission the old asphalt manufacturing plant and increase the approved capacity of Category 35.

5.3.3 Works Approval compliance

Works Approval, W6135/2018/1, was granted on 19 June 2018 for the construction of a new asphalt manufacturing plant. Works Approval compliance certification documentation, outlined in condition 3 of the Works Approval, was received in September and November 2018, January and February 2019. A site visit on 3 October 2018 was also conducted to determine compliance with the Works Approval.

A minor departures from Table 2 of W6135/2018/1 include:

- that the reclaimed asphalt storage area is not within the hardstand of the asphalt manufacturing plant and is instead stored on a hardstand within a shed located approximately 110 m NE of the asphalt manufacturing plant, within the premises; and
- the baghouse stack has been measured to be 12.24 m above the concrete plinth rather than 12 agl. The concrete plinth is approximately 21.5 cm above ground level.

All other infrastructure has been constructed according to the Works Approval conditions.

A stack emissions report was submitted following commissioning of the new asphalt manufacturing plant that showed a total particulate matter concentration of 4 mg/m³ during commissioning (production rate of 62 tonnes per hour); less than the 50 mg/m³ as per Works Approval Table 2 (o).

5.3.4 Compliance inspections

The most recent inspection was conducted by DWER in November 2017 where several non-compliances and issues were identified relating to hydrocarbon spills, wastewater spills from the old asphalt manufacturing plant and non-compliance with licence conditions relating to composting activities onsite (ICMS 47522). The Licence Holder was issued with an Environmental Field Notice (on 6 December 2017) and an Infringement Notice (on 11 December 2017). Some non-compliances have been remedied with DWER seeking evidence (March 2018) that the Licence Holder has rectified the remaining non-compliances.

An unannounced site inspection on 12 April 2018 determined that all corrective actions had been completed except for the removal of a stockpile of contaminated sediment from the wet scrubber overflow. This stockpile has since been removed.

5.3.5 Complaints and incidents history

Since March 2016 there have been 27 odour complaints reported to DWER of which the Licence Holder was substantiated to be the source of 5 of the complaints. These 5 complaints were related to one incident, the overwatering of compost windrows and turning mulch in adverse weather conditions. DWER issued a letter of warning in regards to this activity on 13 February 2017.

Five of the odour complaints, dated between December 2018 and April 2019 are still under investigation by DWER.

One other complaint was reported to DWER since March 2016 and is related to sediment blocking a stormwater drain. The source of this complaint was not substantiated with the City of Bunbury taking remedial action.

5.3.6 Annual Environmental Reports and Annual Audit Compliance Reports

DWER received the 2016-2017 Annual Environmental Report (AER) on 31 July 2017. DWER has reviewed the AER and notes the following:

- (a) Stack emissions testing, on 18 November 2016, of the old asphalt manufacturing plant stack showed that total particulate matter (PM) was 120 mg/m³, which is below the licence limit of 250 mg/m³.
- (b) The Licence Holder did not compare stack emissions monitoring to previous years; however, DWER has compared the monitoring to data provided in previous AERs and found that nitrogen oxides (NO_x), carbon monoxide (CO) and sulfur dioxide (SO₂) were similar to previous years with PM slightly higher than previous years.
- (c) The Licence Holder reported that 15,000 tonnes of compost and 44,000 tonnes of compost and asphalt were manufactured respectively.

DWER received the 2017-2018 AER on 31 July 2018 with an amended Annual Audit Compliance Report (AACR) received on 9 August 2018. DWER has reviewed the AER and amended AACR and notes the following:

- (a) Stack emissions testing, on 31 October 2017, of the old asphalt manufacturing plant stack showed that PM was 52 mg/m³, which is below the licence limit of 250 mg/m³.
- (b) The Licence Holder did not compare stack emissions monitoring to previous years; however, DWER has compared the monitoring to data provided in previous AERs and found that CO and SO₂ were similar to previous year, PM is slightly lower than previous years and NO_x is higher than previous years and similar to a result in 2014.
- (c) The Licence Holder reported that 19,200 tonnes of compost and 45,000 tonnes of compost and asphalt were manufactured respectively.

6. Monitoring data

6.1 Monitoring of point source emissions to air

The Licence Holder has been annually monitoring air emissions from the old AMP stack (exhaust gases from the old drum mixer were passed through a wet scrubber prior to release through a stack) as a requirement of their Existing Licence for at least the last eight years. The Existing Licence requires the annual monitoring of PM, SO₂, NO_x and CO. Stack emissions from the new AMP were monitored as part of commissioning. The summary of this monitoring of both the old and new AMP is in Table 7 below.

Table 7: Summary of stack emissions monitoring of existing and new stack

Pollutant:	Total particulate matter	Sulfur dioxide	Nitrogen oxides	Carbon monoxide
Units:	mg/m ³	mg/m ³	mg/m ³	mg/m ³
Old AMP				
23/11/2011	20	-	180	18
15/11/2012	51	-	150	31
25/11/2013	53	<5.7	150	20
13/11/2014	120	<5.7	210	110
25/11/2015	71	<4.6	140	46
18/11/2016	120	<2	160	36

Pollutant:	Total particulate matter	Sulfur dioxide	Nitrogen oxides	Carbon monoxide
Units:	mg/m ³	mg/m ³	mg/m ³	mg/m ³
31/10/2018	52	<5	230	38
New AMP				
18/12/2018	4	<4	64	150

Monitoring results in Table 7 above show that for the old AMP PM and CO was higher from 2014 to 2017 compared to previous years, NO_x has been relatively consistent with higher results in 2014 and 2017 and SO₂ has been relatively consistent over the six years except for a decrease in 2016. However, it is noted that this is based on annual monitoring and may not be representative of the stack emissions throughout the year or with different products being manufactured due to monitoring not being conducted on a more regular basis. It is also noted that the existing AMP is at least 14 years old and of a different design to the proposed AMP.

The monitoring results from the one monitoring event of the new AMP stack shows that PM and NO_x are significantly less than the old AMP; SO₂ is approximately the same and CO is significantly higher. However, it is noted that this is based on one monitoring event and may not be representative of the new stack emissions.

Key finding:

1. Stack emissions monitoring are only conducted on an annual basis and may not be representative of actual stack emissions throughout the year; particularly as different products are manufactured and reclaimed asphalt will be used occasionally with the new asphalt manufacturing plant.
2. The old AMP is at least 14 years old and of a different design (wet scrubber compared to a baghouse) to the new AMP; therefore, past monitoring will not be representative of the new AMP.

7. Location and siting

7.1 Siting context

The premises is located on the Swan Coastal Plain approximately 5.3 km southeast of Bunbury's central business district. The land is zoned industrial under the City of Bunbury's Town Planning Scheme (TPS) No. 7. Surrounding land uses include industrial (including concrete manufacturing located 80 m NW of the new asphalt manufacturing plant), special use (including an abattoir located 380 m SE of the new asphalt manufacturing plant) and parks and recreation located 50 m south of the proposed asphalt manufacturing plant. The Preston River is located 500 m north and the closest residential area is located 930 m northwest of the new asphalt manufacturing plant.

7.2 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 premises	800 m north of the new asphalt manufacturing plant and zoned industrial under the City of Bunbury's town planning scheme No. 7.

Sensitive Land Uses	Distance from Prescribed Activity
Residential area	770 m northwest of the premises boundary (930 m from new asphalt manufacturing plant)
Residential area	2 km WNW of the new asphalt manufacturing plant
Industrial premises	Metal fabrication industry located immediately adjacent to the premises, closest office building location 80 m NW of the new asphalt manufacturing plant area. Concrete manufacturing industry located immediately adjacent to the premises, closest office building located approximately 130 m NNW of the new asphalt manufacturing plant area.
Industrial area (including concrete manufacturing, scaffolding hire, machinery hire, storage yard, automotive paint shop and dance studio)	80 m NW of the new asphalt manufacturing plant
Industrial premises (abattoir)	380 m SE of the new asphalt manufacturing plant
Industrial area (including safety equipment supplied, electrical equipment supplier, car and truck hire, building materials supplier and a gym)	170 m SW of new asphalt manufacturing plant

7.3 Specified ecosystems

Specified ecosystems are areas of high conservation value and special significance that may be impacted as a result of activities at or Emissions and Discharges from the premises. The distances to specified ecosystems are shown in Table 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
Geomorphic Wetlands	Swan Coastal Plain – Semeniuk, Palusplain, flat multiple use, wetland management category modified to reflect values – goes over the very NW corner of the premises (near the composting area and approximately 200 m N of the new asphalt manufacturing plant) and located 200 m south of the new asphalt manufacturing plant. Swan Coastal Plain – Semeniuk, Dampland, basin, multiple use – 100 m south of the new asphalt manufacturing plant. Swan Coastal Plain – Semeniuk, Palusplain, flat, Conservation (Preston River area) – 400 m north of new asphalt manufacturing plant.
Parks and Wildlife Managed Lands and Waters	A Department of Biodiversity, Conservation and Attractions regional office is located 350 m west and Crown Land (timber reserve) is located 1.8 km east of the new asphalt manufacturing plant.
Western Ringtail Possum Habitat	Areas that are medium to highly suited as Western Ringtail Possum Habitat are located immediately adjacent south, east and north of the premises.
Waterways Conservation Areas	The whole of the Premises is located within the Leschenault Management Area, gazetted under the <i>Waterways Conservation Act 1976</i> .
Threatened Ecological Communities and Priority Ecological Communities	Within buffer area of the Federal Government Threatened Ecological Community <i>Banksia Woodlands of the Swan Coastal Plain</i> (BanksiaWld13899 (boundary ID 116616), BanksiaWld14129 (boundary ID 116846), BanksiaWld14024 (boundary ID 116741), BanksiaWld14123 (boundary ID 116840) and BanksiaWld14127 (boundary ID 116844)) with numerous other Banksia Woodlands areas located within a 1 km radius.
Biological component	Distance from the Premises
Threatened/Priority	Priority 4 Flora located 970 m NE and 1.1 km W of the new asphalt manufacturing plant

Flora	
Threatened/Priority Fauna	Schedule 1 – Fauna that is rare or likely to become extinct as critically endangered fauna (mammals) located 250 m (one opportunistic siting) and approximately 380 m (two opportunistic sitings and two surveys) WNW of the new asphalt manufacturing plant. Schedule 2 – Fauna that is rare or is likely to become extinct as endangered fauna (birds) located 400 m (one opportunistic siting) WNW of the new asphalt manufacturing plant.

7.4 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
Surface water – Preston River (major perennial watercourse) and perennial lakes	The Preston River is located 230 m north of the Premises boundary (500 m north of the new asphalt manufacturing plant). Perennial lakes are located 750 m NW and 540 m NE of the new asphalt manufacturing plant. The premises is located within the Preston River Surface Water Management Area (palusplain and riparian areas) managed under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act). The premises is also within a declared management area under the <i>Waterways Conservation Act 1976</i> .	The Preston River terminates in the Leschenault Estuary approximately 4.9 km downstream.
Groundwater	The premises is located within the Bunbury Groundwater Area proclaimed under the RIWI Act. No groundwater monitoring is conducted onsite; however, monitoring bores located approximately 770 m to 1.2 km SE of the new asphalt manufacturing plant show that the depth to groundwater ranges from 0.7 mbgl in winter to 2.9 mbgl in summer.	Groundwater salinity is marginal (500 – 1,000 mg/L) and has beneficial use for industrial purposes, domestic/household use and irrigation.

7.5 Soil type

The topography of the premises is generally flat with an elevation of approximately 20 m AHD in the centre of the premises and sloping to approximately 15 m AHD towards the SW and NE corners of the premises. Table 11 details soil types and characteristics relevant to the assessment.

Table 11: Soil and sub-soil characteristics

Soil and sub-soil characteristics	Details
DWER's GIS details that the soil at the premises is soil classification type Cb38.	Sandy dunes with intervening sandy and clayey swamp flats: chief soils are leached sands sometimes with a clay horizon below 1.5 m on the dunes and sandy swamps.
Acid sulfate soil risk	Moderate to low risk

7.6 Meteorology

7.6.1 Wind direction and strength

Figure 2 shows the wind direction and strength for 9am and 3pm at Bunbury.

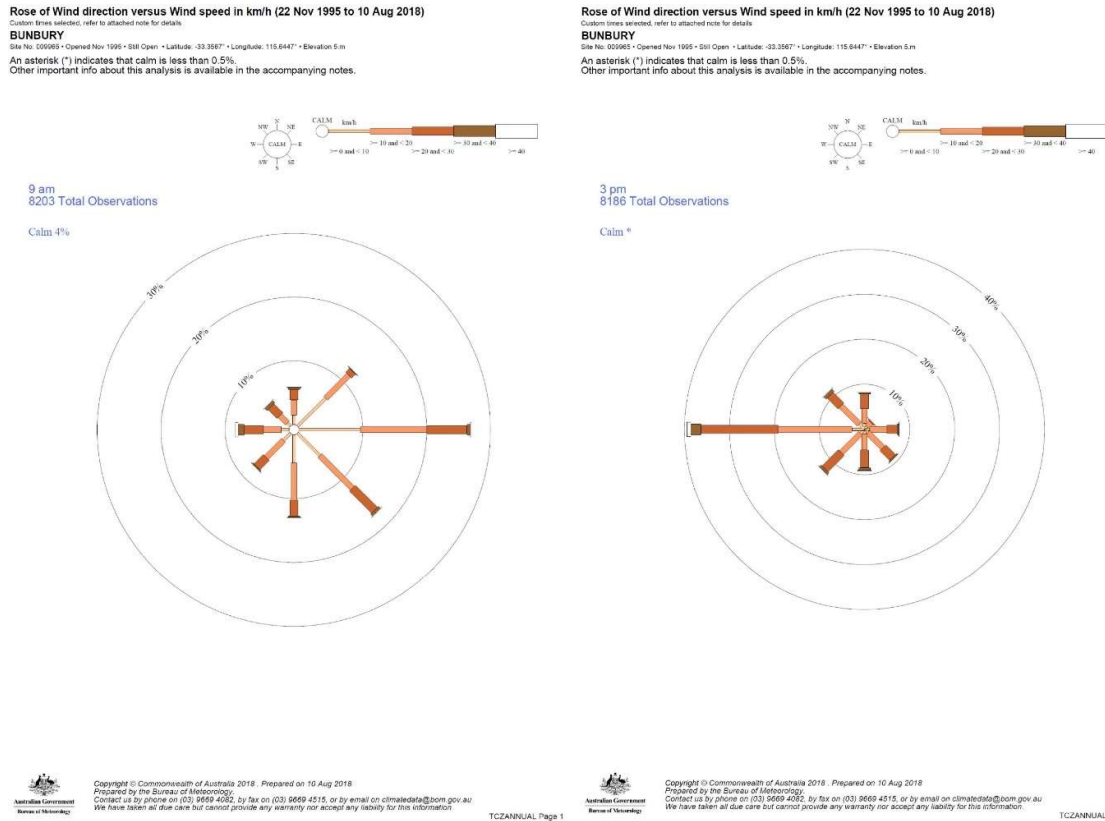


Figure 2: Wind direction and strength for 9am and 3pm at Bunbury (site no. 009965)

It is important to note that these wind roses show historical wind speed and wind direction data (22 November 1995 to 10 August 2018) for Bunbury weather station and should not be used to predict future data.

7.6.2 Regional climatic aspects

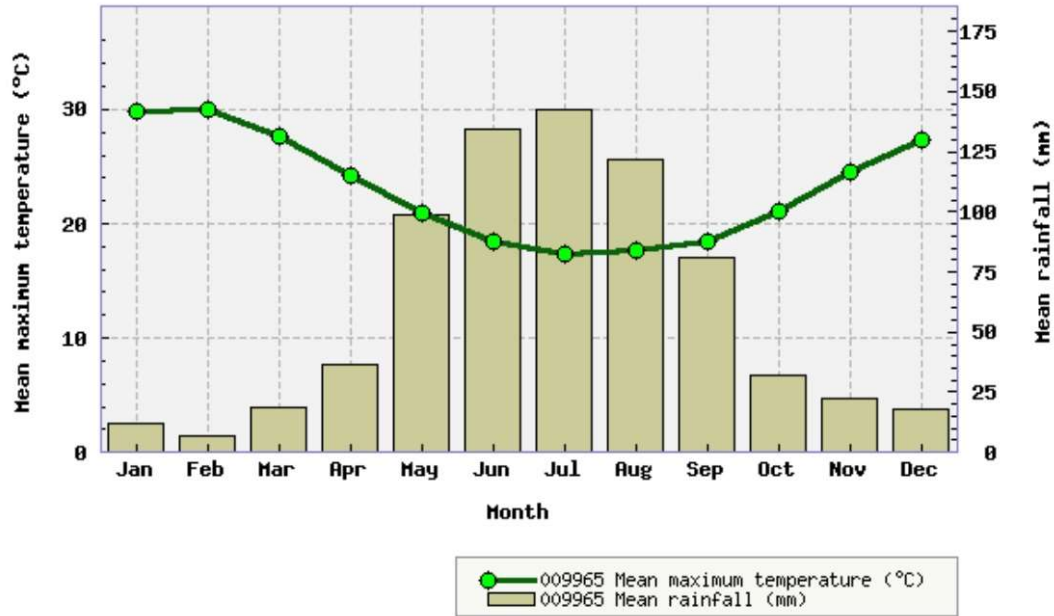
The region experiences cool, wet winters and warm to hot, dry summers. The nearest Bureau of Meteorology site is 3.5 km north-west of the Premises within Bunbury (number 009965).

7.6.3 Rainfall and temperature

Figure 3 shows the average monthly maximum temperature and the average monthly rainfall for Bunbury (site number 009965) and is based on data from 1995 to 2019.

Average minimum temperatures range between 7.1°C and 15.8°C while the average maximum temperatures range between 17.3°C and 30.0°C. The total annual average rainfall is 726.1 mm.

Location: 009965 BUNBURY



Australian Government
Bureau of Meteorology

Created on Thu 2 May 2019 12:45 PM AEST

Figure 3: Average monthly maximum temperature and average monthly rainfall

8. Risk assessment

8.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER will identify all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment, in regards to the new asphalt manufacturing plant.

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 12.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Table 12 below.

Table 12. 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			
Delivery and storage of raw materials	Vehicle movements	Noise	Closest residential premises located 800 m north and closest residential area location 930 m NW of new asphalt manufacturing plant. Commercial / industrial area located 80 m NW of new asphalt manufacturing plant.	Air / wind dispersion	Potential amenity impacts	No	With the increase in throughput for asphalt manufacturing there will be an increase in vehicle movements which will result in marginal increase in noise emissions. The Delegated Officer considers that the separation distance between the source and potential receptors is sufficient and the activity will be carried out in an industrial area; therefore, noise emissions are unlikely to cause any amenity impacts. The EP Noise Regulations apply to noise emissions.
	Storage of aggregates and sand in stockpiles	Fugitive dust			Potential amenity and health impacts	Yes	

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts			
Storage of bitumen in two, banded 60,000 L tanks	Leaks or spills of hazardous liquids (fuel and bitumen outside of containment)	Land	Direct discharge to land. Discharge to land via stormwater.	Land and soil contamination	No	The storage of bitumen in two 60,000 L banded tanks will be regulated under the Applicant's Dangerous Goods Licence, DGS013703. The concrete bund surrounding the tanks will be capable of holding 120% of the net capacity of the largest tank. See section 5.	
	Fill point for the 60,000 L bitumen tanks. Storage of diesel in self banded, category 3 tank and diesel within generator	Groundwater beneath the premises ranging from approximately 0.7 mbgl to 2.9 mbgl.	Infiltration to groundwater	Groundwater contamination	Yes	See section 8.8.	
Blending of raw materials	Transfer of raw materials from stockpiles to drum dryer via cold feed bins and conveyor. Transfer of materials from drum dryer to mixing tower via conveyor.	Noise	Closest residential premises located 800 m north and closest residential area location 930 m NW of new asphalt manufacturing plant. Commercial / industrial area located 80 m NW of new asphalt manufacturing plant.	Air / wind dispersion	Potential amenity impacts	No	With the increase in throughput for asphalt manufacturing there will be a marginal increase in noise emissions associated with the transfer of raw materials. The Delegated Officer considers that the separation distance between the source and potential receptors is sufficient and the activity will be carried out in an industrial area; therefore, noise emissions are unlikely to cause any amenity impact. The EP Noise Regulations apply to noise emissions.
		Fugitive dust			Potential amenity and health impacts	Yes	See section 8.4.

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts			
Addition of oxide to the mixing process	Fugitive dust	Closest residential premises located 800 m north and closest residential area location 930 m NW of new asphalt manufacturing plant. Commercial / industrial area located 80 m NW of new asphalt manufacturing plant.	Air / wind dispersion	Potential amenity and health impacts	Yes	See section 8.4.	
	Mixing of materials in drum dryer and mixing tower (including reclaimed asphalt)	Odour emissions from baghouse stack (point source)	Closest residential premises located 800 m north and closest residential area location 930 m NW of new asphalt manufacturing plant. Commercial / industrial area located 80 m NW of new asphalt manufacturing plant.	Air / wind dispersion	Potential amenity impacts	Yes	See section 8.7.
		Fugitive odour emissions from mixing of materials in mixing tower (including addition of reclaimed asphalt through the RAP system)				Yes	See section 8.5.
	Point source emission from baghouse (attached to drum dryer) stack (VOC, particulates, SO ₂ , CO and NO _x).			Potential amenity and health impacts	Yes	See section 8.6.	

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts			
		Noise			Potential amenity impacts	No	<p>With the increase in throughput and change to the mixing process (addition of the mixing tower) for asphalt manufacturing there will be a marginal increase in noise emissions.</p> <p>The Delegated Officer considers that the separation distance between the source and potential receptors is sufficient and the activity will be carried out in an industrial area; therefore, noise emissions are unlikely to cause any amenity impact.</p> <p>The EP Noise Regulations apply to noise emissions.</p>
		Fugitive dust emissions from mixing of materials in mixing tower.			Potential amenity and health impacts	Yes	
Dispatch of asphalt	Transfer of asphalt on conveyor, storage of asphalt and dispatch of asphalt into trucks.	Fugitive odour	Closest residential premises located 800 m north and closest residential area location 930 m NW of new asphalt manufacturing plant. Commercial / industrial area located 80 m NW of new asphalt manufacturing plant.	Air / wind dispersion	Potential amenity impacts.	Yes	See section 8.5.
Reclaimed asphalt	Storage of reclaimed asphalt within shed on hardstand area	Hydrocarbons from the reclaimed asphalt potentially contaminating stormwater	Land	Discharge to land via stormwater	Land and soil contamination	Yes	See section 8.8.
			Groundwater beneath the premises ranging from approximately 0.7 mbgl to 2.9 mbgl.	Infiltration to groundwater from potentially contaminated stormwater	Groundwater contamination		
Stormwater management	Stormwater management	Stormwater coming into contact with sediments or	Land	Discharge to land or surface water via stormwater	Land, soil and surface water contamination.	Yes	See section 8.8.

Risk Events					Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway		
		hydrocarbons within the operational area	Groundwater beneath the premises ranging from approximately 0.7 mbgl to 2.9 mbgl.	Infiltration to groundwater	Groundwater contamination	

8.2 Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 13 below.

Table 13: 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 14 below.

Table 14: Risk criteria table

Likelihood		Consequence		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		The following criteria has been used to determine the consequences of a Risk Event occurring:		
			Environment	Public health* and amenity (such as air and water quality, noise, and odour)
Almost Certain	The risk event is expected to occur in most circumstances	Severe	<ul style="list-style-type: none"> onsite impacts: catastrophic offsite impacts local scale: high level or above offsite impacts wider scale: mid-level or above Mid to long-term or permanent impact to an area of high conservation value or special significance[^] Specific Consequence Criteria (for environment) are significantly exceeded 	<ul style="list-style-type: none"> Loss of life Adverse health effects: high level or ongoing medical treatment Specific Consequence Criteria (for public health) are significantly exceeded Local scale impacts: permanent loss of amenity
Likely	The risk event will probably occur in most circumstances	Major	<ul style="list-style-type: none"> onsite impacts: high level offsite impacts local scale: mid-level offsite impacts wider scale: low level Short-term impact to an area of high conservation value or special significance[^] Specific Consequence Criteria (for environment) are exceeded 	<ul style="list-style-type: none"> Adverse health effects: mid-level or frequent medical treatment Specific Consequence Criteria (for public health) are exceeded Local scale impacts: high level impact to amenity
Possible	The risk event could occur at some time	Moderate	<ul style="list-style-type: none"> onsite impacts: mid-level offsite impacts local scale: low level offsite impacts wider scale: minimal Specific Consequence Criteria (for environment) are at risk of not being met 	<ul style="list-style-type: none"> Adverse health effects: low level or occasional medical treatment Specific Consequence Criteria (for public health) are at risk of not being met Local scale impacts: mid-level impact to amenity
Unlikely	The risk event will probably not occur in most circumstances	Minor	<ul style="list-style-type: none"> onsite impacts: low level offsite impacts local scale: minimal offsite impacts wider scale: not detectable Specific Consequence Criteria (for environment) likely to be met 	<ul style="list-style-type: none"> Specific Consequence Criteria (for public health) are likely to be met Local scale impacts: low level impact to amenity
Rare	The risk event may only occur in exceptional circumstances	Slight	<ul style="list-style-type: none"> onsite impact: minimal Specific Consequence Criteria (for environment) met 	<ul style="list-style-type: none"> Local scale: minimal to amenity Specific Consequence Criteria (for public health) met

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

* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines*.

"onsite" means within the Prescribed Premises boundary.

8.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment Table 15 below:

Table 15: Risk treatment table

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

8.4 Risk Assessment – Fugitive Dust

8.4.1 Description of risk event

Fugitive dust emissions from storage and processing of materials impacting on the amenity and health of receptors.

8.4.2 Identification and general characterisation of emission

Fugitive dust generated by operations onsite including storage of raw materials (sand and aggregates) in stockpiles, transfer of raw materials from stockpiles to the drum dryer via cold feed bins, transfer of materials from drum dryer to mixing tower, addition of oxide to the mixing process and mixing of materials in the mixing tower.

8.4.3 Description of potential adverse impact from the emission

Potential impacts from fugitive dust emissions include decreased local air quality. Nuisance, health and amenity impacts on residential receptors located 800 m north, a residential area located 930 m NW and commercial and industrial receptors located 80 m NW of the proposed AMP.

8.4.4 Criteria for assessment

General provisions of the EP Act make it an offence to cause or allow pollution. National Environmental Protection (Ambient Air Quality) Measure (NEPM) recommends that PM₁₀ does not exceed 50 µg/m³ over a 24 hour averaging period. Ambient monitoring at receptors has not, however, been undertaken to determine current air quality.

The assessment criteria for ambient air quality particulate standards in the NEPM are shown in Table 16.

Table 16: NEPM standards for particulates

Pollutant	Averaging period	Maximum concentration
Particulates as PM ₁₀	1 day	50 µg/m ³
	1 year	25 µg/m ³

8.4.5 Licence Holder controls

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

Table 17: Licence Holder controls for fugitive dust

Site infrastructure	Description
Asphalt manufacturing plant operational area	The Asphalt Manufacturing Plant, including the storage bays are positioned on an asphalt hardstand.
Asphalt manufacturing plant	Side walls on the cold feed bins. Sand and aggregates from the cold feed bins are conveyed to the drum dryer by an enclosed conveyor system. Dried aggregates are transferred to the mixing tower by an enclosed conveyor system. Enclosed production process from the cold feed bins to the asphalt produced. Oxide (in pellet form) added to the mixing process (from storage containers to the mixing tower) through an enclosed system.
Raw materials storage area (concrete storage bays)	All sand and aggregate stockpile bays have concrete side and back walls and sheet metal roofs. Sprinkler system located above the sand and aggregate stockpiles, periodically wetting the materials.
Management	Controls as per the Dust and Odour Management Plan (Malatesta Group, version 2, 17 June 2019), including: <ul style="list-style-type: none"> - aggregates are sampled in the onsite laboratory and given particle size density (PSD) tests to determine the amount of fine particles. They should contain a minimal amount of fine particles; and - the loader driver ensures sand and aggregates are loaded into the cold feed bins in such a way as to minimise dust.

8.4.6 Key findings

The Delegated Officer has reviewed the information regarding fugitive dust impacts from the new AMP and has found:

Applicant infrastructure may be conditioned as regulatory controls and additional controls may be included in the Amended Licence.

8.4.7 Consequence

The Delegated Officer has had regard to the nature and scale of the fugitive dust emissions from the new asphalt manufacturing plant process and has determined that low level impacts to amenity of residential receptors located 800 m N and 930 m NW of the new AMP and nearby commercial / industrial properties may be experienced. Therefore the Delegated Officer considers the consequence to be Minor.

8.4.8 Likelihood of risk event

Based upon the Licence Holder's controls, the Delegated Officer has determined that the likelihood of low level impact to amenity could occur at some time. Therefore, the Delegated Officer considers the likelihood of fugitive dust emissions causing impacts to amenity to be Possible.

8.4.9 Overall rating of fugitive dust

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 fugitive dust emissions on residential receptors and commercial / industrial properties is Medium.

8.5 Risk Assessment – Fugitive Odour

8.5.1 Description of Risk Event

Fugitive odour emissions from processing of materials and transfer of asphalt on the amenity of receptors.

8.5.2 Identification and general characterisation of emission

Fugitive odour generated by asphalt manufacturing operations onsite including mixing of materials in the mixing tower, addition of reclaimed asphalt through the RAP system, transfer of asphalt in a skip bucket on a conveyor, storage of asphalt in silos and dispatch of asphalt into trucks.

8.5.3 Description of potential adverse impact from the emission

Potential impacts from fugitive odour emissions include decreased local air quality. Nuisance and amenity impacts on residential receptors located 800 m north, a residential area located 930 m NW and commercial and industrial receptors located 80 m NW of the proposed AMP.

8.5.4 Criteria for assessment

General provisions of the EP Act make it an offence to cause or allow pollution, including odour that unreasonably interferes with the health, welfare, convenience, comfort or amenity of any person.

8.5.5 Licence Holder controls

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

Table 18: Licence Holder controls for fugitive odour

Site infrastructure	Description
Asphalt manufacturing plant	Enclosed production process from the cold feed bins to the asphalt produced (including enclosed mixing tower). RAP cold feed system attached to the asphalt manufacturing plant allowing up to 30% of reclaimed asphalt in the product. Storage of asphalt product in enclosed silos.
Management	Dispatch of asphalt into trucks from either below the mixing tower or below the asphalt storage silos controlled from the control cabin.

8.5.6 Key findings

The Delegated Officer has reviewed the information regarding fugitive odour impacts from the new AMP and has found:

Applicant infrastructure may be conditioned as regulatory controls and additional controls may be included in the Amended Licence.

8.5.7 Consequence

The Delegated Officer has had regard to the nature and scale of the fugitive odour emissions from the new asphalt manufacturing plant and has determined that minimal impacts to amenity of residential receptors located 800 m N and 930 m NW of the AMP and nearby commercial / industrial properties may be experienced. Therefore the Delegated Officer considers the consequence to the Slight.

8.5.8 Likelihood of Risk Event

Based upon the Licence Holder's controls, proximity to receptors, compliance history in regards to odour from the asphalt manufacturing plant operations, the Delegated Officer has determined that the likelihood of minimal impacts to amenity could occur at some time. Therefore, the Delegated Officer considers the likelihood of fugitive odour emissions causing impacts to amenity to be Possible.

8.5.9 Overall rating of fugitive odour

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 fugitive odour emissions on residential receptors and commercial / industrial properties is Low.

8.6 Risk Assessment – Point source stack emissions

8.6.1 Description of Risk Event

Stack emissions being generated from the AMP baghouse stack during operation impacting on the amenity and health of receptors.

8.6.2 Identification and general characterisation of emission

The Licence Holder provided information that showed that expected emissions from the baghouse stack of the AMP will include CO, particulates, organics, SO₂ and nitrogen dioxide (NO₂). The main emissions of concern for asphalt manufacturing plants are particulates (PM₁₀) and volatile organic compounds (VOC).

There is also potential for increased emissions if the dust filtration equipment (baghouse) were to fail.

8.6.3 Description of potential adverse impact from the emission

Potential impacts from stack emissions include reduced local air quality, nuisance, health and amenity impacts on residential receptors located 800 m N and 930 m NW and commercial and industrial receptors located 80 m NW of the AMP. Stack emissions, particularly particulates, has the potential to impact public health and affects the respiratory and cardiovascular systems following both long and short term exposure.

8.6.4 Criteria for assessment

General provisions of the EP Act make it an offence to cause or allow pollution. The assessment criteria for ambient air quality standards are detailed in the NEPM and are shown in Table 19.

Table 19: NEPM standards

Pollutant	Averaging Period	Maximum concentration
Carbon monoxide	8 hours	9 ppm
Nitrogen dioxide	1 hour	0.12 ppm
	1 year	0.03 ppm
Sulfur dioxide	1 hour	0.20 ppm
	1 day	0.08 ppm
	1 year	0.02 ppm
Lead	1 year	0.50 µg/m ³
Particulates as PM ₁₀	1 day	50 µg/m ³
	1 year	25 µg/m ³

Other similar asphalt manufacturing plants licensed by DWER have a PM limit of 50 mg/m³ from the dust extraction system stack. The Existing Licence has a limit of 250 mg/m³ for the old AMP, most likely due to the old AMP being older technology.

The Licence Holder provided information for the Works Approval (W6135/2018/1) application on the expected baghouse stack emissions from the new AMP. During commissioning, under W6135/2018/1, the Licence Holder tested the actual stack emissions from the new AMP. These are shown in Table 20 below and show that the measured stack emissions are less than the expected emissions. However, it is noted that this is based on one monitoring event when no reclaimed asphalt was in use and may not be representative of the stack emissions throughout the year or with different products being manufactured.

Table 20: Expected and measured baghouse stack emissions for the new AMP

Pollutant	Expected emissions (Volume and frequency)	Measured emissions (Production rate: 62 tonnes/hour Product: 14 mm No reclaimed asphalt in use 60 minute stack test)
Carbon monoxide	500 mg/m ³ / 30 minutes	150 mg/m ³
Particulates	20 mg/m ³ / 30 minutes	4 mg/m ³
Organics	50 mg/m ³ / 30 minutes	not tested
Sulfur Dioxide	350 mg/m ³ / 30 minutes	<4 mg/m ³
Nitrogen Dioxide	350 mg/m ³ / 30 minutes	64 mg/m ³

8.6.5 Licence Holder controls

This assessment has reviewed the controls set out in Table 21 below.

Table 21: Licence Holder controls for point source stack emissions

Site infrastructure	Description
Asphalt manufacturing plant	Reverse flow baghouse dust extraction system attached to the drum dryer to remove combustion gases, moisture and fine particles. Filtered air (from the baghouse) is released to atmosphere through at least a 12 m agl stack. Any fines collected by the baghouse are transported to the filler silo via enclosed pipe screw conveyors and reintroduced to the mixing process.
Management	The control system for the baghouse is integrated into the overall control system of the AMP.

8.6.6 Key findings

The Delegated Officer has reviewed the information regarding point source stack emission impacts from the proposed AMP and has found:

1. Licence Holder infrastructure may be conditioned as regulatory controls in the Amended Licence subject to risk assessment outcomes.
2. Measured stack emissions (for the one monitoring event) are less than the expected emissions from the new asphalt manufacturing plant stack.

8.6.7 Consequence

The Delegated Officer has had regard to the nature and scale of potential stack emissions and has determined that low level impacts to amenity of residential receptors located 800 m N and 930 m NW of the proposed AMP and nearby commercial / industrial properties may be experienced. Therefore, the Delegated Officer considers the consequence to be Minor.

8.6.8 Likelihood of Risk Event

Based upon the Licence Holder's controls, the Delegated Officer has determined that the likelihood of low level impact to amenity could occur at some time. Therefore, the Delegated Officer considers the likelihood to be Possible.

8.6.9 Overall rating of fugitive odour

The Delegated Officer has compared the consequence and likelihood rating described above with the risk rating matrix (Table 13) and determined that overall rating for the risk of stack emissions during normal operations on residential receptors and commercial / industrial properties is Medium.

8.7 Risk Assessment – Point source odour emissions

8.7.1 Description of Risk Event

Point source odour emissions being generated from operations of the new AMP baghouse stack impacting on the amenity and health of receptors.

8.7.2 Identification and general characterisation of emission

There is potential for point source odour emissions from the baghouse stack. Bitumen has a characteristic odour which some people may find offensive. The odour is caused by volatile organic compounds emitted from heated bitumen. The heated bitumen is added with the dried materials inside the drying drum. A reverse pulse baghouse dust extraction system is attached to the drying drum to remove combustion gases (including VOC), moisture and fine particles. Increased odour emissions may occur through failure of the dust filtration equipment (baghouse).

8.7.3 Description of potential adverse impact from the emission

Potential impacts from odour emissions include decreased local air quality. Nuisance and amenity impacts on residential receptors located 800 m north, a residential area located 930 m NW and commercial and industrial receptors located 80 m NW of the proposed AMP.

8.7.4 Criteria for assessment

General provisions of the EP Act make it an offence to cause or allow pollution, including odour that unreasonably interferes with the health, welfare, convenience, comfort or amenity of any person.

8.7.5 Licence Holder controls

This assessment has reviewed the controls set out in Table 22 below.

Table 22: Licence Holder controls for point source odour emissions

Site infrastructure	Description
Asphalt manufacturing plant	Reverse flow baghouse dust extraction system attached to the drum dryer to remove combustion gases, moisture and fine particles. Filtered air (from the baghouse) is released to atmosphere through at least a 12 m agl stack. Any fines collected by the baghouse are transported to the filler silo via enclosed pipe screw conveyors and reintroduced to the mixing process.
Management	The control system for the baghouse is integrated into the overall control system of the AMP.

8.7.6 Key findings

The Delegated Officer has reviewed the information regarding point source odour impacts from the new AMP and has found:

Licence Holder infrastructure may be conditioned as regulatory controls in the Amended Licence subject to risk assessment outcomes.

8.7.7 Consequence

The Delegated Officer has had regard to the scale, operational controls and proximity of receptors and has determined that low level impacts to amenity of residential receptors located 800 m N and 930 m NW of the new AMP and nearby commercial / industrial properties may be experienced. Therefore, the Delegated Officer considers the consequence to be Minor.

8.7.8 Likelihood of Risk Event

Based upon the Licence Holder's controls, the Delegated Officer has determined that the likelihood of low level impacts to amenity could occur at some time. Therefore, the Delegated Officer considers the likelihood to be Possible.

8.7.9 Overall rating of fugitive odour

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 point source emissions on residential receptors and commercial / industrial properties is Medium.

8.8 Risk Assessment – Potentially contaminated stormwater

8.8.1 Description of Risk Event

Potentially contaminated stormwater causing land, soil and groundwater contamination affecting ecosystem health.

8.8.2 Identification and general characterisation of emission

There is potential for stormwater to become contaminated if it comes into contact with sediments or hydrocarbons from the asphalt manufacturing process including the storage of raw materials, storage of reclaimed asphalt, storage of diesel, filling of bitumen tanks and any leaks or spills within the operational area.

8.8.3 Description of potential adverse impact from the emission

Stormwater that is contaminated with hydrocarbons or sediments and that is not contained or treated appropriately, could lead to contamination of land, soil and groundwater.

8.8.4 Criteria for assessment

General provisions of the EP Act make it an offence to cause or allow pollution. Additionally it is an offence to discharge petrol, diesel or other hydrocarbon into the environment under regulation 3 of the EP Unauthorised Discharges Regulations.

8.8.5 Licence Holder controls

This assessment has reviewed the controls set out in Table 23 below.

Table 23: Licence Holder controls for the containment or prevention of potentially contaminated stormwater

Site infrastructure	Description
Infrastructure	<p>Whole AMP operational area is located on a hardstand (asphalt) area.</p> <p>Tree and grass area that acts as a retention for stormwater and drainage around the southern areas (concrete storage bays).</p> <p>Stormwater flows from the east to the west and towards the existing, vegetated Pond A that has an overall current depth of approximately 2 m, surface area of 1,650 m² and therefore, an approximate capacity of 2,475 m³.</p> <p>Diesel generator (capacity 600 L) is bunded (barrier kerb) to contain any potential hydrocarbon spills.</p> <p>Diesel tank is a self-bunded category 3 tank.</p> <p>The fill point for the 60,000 L bitumen tanks is outside the bitumen tank's bunded area; however, a concrete lip is positioned directly under the loading pipe to capture any drips or spills.</p> <p>Enclosed asphalt manufacturing process.</p> <p>Any contaminated wastewater flows to a sediment detention trench located in front of Pond A to ensure any contaminated sediment is contained.</p> <p>The sediment detention trench includes a 120 mm deep, fine filter layer (5 mm aggregate)</p>

Site infrastructure	Description
	<p>and an underneath, 30 mm deep, coarse aggregate layer (14 mm aggregate) with the base of the trench sealed with asphalt to allow for filtered stormwater to be directed into Pond A.</p> <p>Two speedbumps divert water (that has the potential to bypass the sediment detention trench) towards the sediment detention trench before it enters Pond A.</p> <p>Reclaimed asphalt for use in the integrated reclaimed asphalt pavement system is stored on a hardstand within a shed, approximately 110 m NE of the asphalt plant operations.</p>
Management	<p>Small amounts of reclaimed asphalt is stored on a hardstand within a shed and used within the process within a short timeframe.</p> <p>The operational area is kept as free of hydrocarbons as reasonably possible.</p> <p>The sediment detention trench will be excavated once sediment has built up and renewed with fresh aggregate.</p> <p>Spill kits are located within the operational area for removing any hydrocarbon spills that may occur outside the bunded area.</p> <p>Any spills will be immediately reported and cleaned as soon as they occur.</p> <p>Staff will be regularly provided with spill response training and will be made aware of the correct procedures for hydrocarbon removal.</p>

8.8.6 Key findings

The Delegated Officer has reviewed the information regarding potentially contaminated stormwater impacts and has found:

Licence holder infrastructure may be conditioned as regulatory controls and additional controls may be included in the Amended Licence subject to risk assessment outcomes.

8.8.7 Consequence

Based upon the asphalt manufacturing process being enclosed, hydrocarbon sources, such as diesel and bitumen storage, being within separate bunded areas and potentially contaminated stormwater will be filtered for sediments prior to entering stormwater Pond A, the Delegated Officer has determined that the impact of potentially contaminated stormwater on land, soils and groundwater will have a minimal off-site impact at a local scale. Therefore, the Delegated Officer considers the consequence to be Minor.

8.8.8 Likelihood of Risk Event

Groundwater at the premises ranges from 0.7 to 2.9 mbgl and the design of the operational area is such that the asphalt hardstand slopes towards stormwater Pond A (of unknown integrity). It is unknown if the capacity of Pond A is adequate for storm events and the sediment detention trench that has been constructed is designed to capture sediment but not hydrocarbons. Therefore, the Delegated Officer has determined that the likelihood of impacts from potentially contaminated stormwater could occur at some time. Therefore, the Delegated Officer considers the likelihood to be Possible.

8.8.9 Overall rating of fugitive odour

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 13) and determined that the overall risk of leaks and spills of hazardous liquids impacting on land, soils and groundwater during operation is Medium.

8.9 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 24 below. Controls are described further in section 0.

Table 24: Risk assessment summary

	Description of Risk Event			Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
	Emission	Source	Pathway/ Receptor (Impact)			
1.	Fugitive dust	Storage of raw materials (sand and aggregates) in stockpiles. Transfer of raw materials. Addition of oxide to the mixing process. Mixing of materials in the mixing tower.	Air/wind dispersion Closest residential premises located 800 m N and closest residential area located 930 m NW of proposed asphalt manufacturing plant. Commercial / industrial area located 80 m NW of asphalt manufacturing plant.	Infrastructure (hardstand, enclosed conveyors and production process and walls and roofs for stockpile storage bays) and Management (sprinkler system) controls.	Minor consequence Possible Medium risk	Acceptable subject to Licence Holder controls conditioned and additional regulatory controls.
2.	Fugitive odour	Mixing of materials in mixing tower. Transfer of asphalt in open skip bucket. Storage of asphalt in silos. Dispatch of asphalt into trucks.	Air / wind dispersion. Closest residential premises located 800 m N and closest residential area located 930 m NW of proposed asphalt manufacturing plant. Commercial / industrial area located 80 m NW of asphalt manufacturing plant.	Infrastructure (enclosed production process, enclosed silos) and Management (control cabin) controls.	Slight consequence Possible Low risk	Acceptable subject to Licence Holder controls conditioned and additional regulatory controls.
3.	Point source stack emissions	Baghouse stack	Air / wind dispersion. Closest residential premises located 800 m N and closest residential area located 930 m NW of proposed asphalt manufacturing plant. Commercial / industrial area located 80 m NW of asphalt manufacturing plant.	Infrastructure (reverse flow baghouse dust extraction system) and Management (integrated controls cabin).	Minor consequence Possible Medium risk	Acceptable subject to Licence Holder controls conditioned and additional regulatory controls.

	Description of Risk Event			Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
	Emission	Source	Pathway/ Receptor (Impact)			
4.	Point source odour emissions	Baghouse stack	Air / wind dispersion. Closest residential premises located 800 m N and closest residential area located 930 m NW of proposed asphalt manufacturing plant. Commercial / industrial area located 80 m NW of asphalt manufacturing plant.	Infrastructure (reverse flow baghouse dust extraction system) and Management (integrated controls cabin).	Minor consequence Possible Medium risk	Acceptable subject to Licence Holder controls conditioned and additional regulatory controls.
5.	Potentially contaminated stormwater	Sediments and hydrocarbons from the asphalt manufacturing process coming into contact with stormwater	If potentially contaminated stormwater is not contained and/or treated / filtered appropriately: Direct discharge to land. Discharge to land or surface water via stormwater. Infiltration to groundwater	Infrastructure (sloped hardstand area, sediment detention trench, Pond A) and Management (regular removal of captured sediment and staff spill response training) controls.	Minor consequence Possible Medium	Acceptable subject to Licence Holder controls conditioned and additional regulatory controls.

9. Regulatory controls

9.1.1 Management of fugitive dust

The following infrastructure and equipment must be maintained in good working order and operated in accordance with corresponding requirements as shown in Table 25 for onsite fugitive dust emissions management in relation to the new asphalt manufacturing plant.

Table 25: Fugitive dust management infrastructure and operational requirements

Site infrastructure and equipment / general location or process	Operational requirements
Derived from Licence Holder controls as described in section 8.4	
Asphalt Manufacturing Plant – Benninghoven ECO3000	Asphalt manufacturing plant to be position on an asphalt hardstand. Side walls on cold feed bins. Dried aggregates transferred to the mixing tower by an enclosed conveyor system. Oxide (in pellet form) added to the mixing process (from storage containers) to the mixing tower through an enclosed system. Enclosed production process from the cold feed bins to the asphalt produced.

Site infrastructure and equipment / general location or process	Operational requirements
Raw materials storage area (concrete storage bays)	To be positioned on an asphalt hardstand. Three sided concrete walls and sheet metal roof for each sand and aggregate storage bay. Sprinkler system located above the sand and aggregate stockpiles for the wetting of raw materials (sand and aggregates) as required.
Additional regulatory controls	
Raw materials storage area (concrete storage bays)	Raw material (sand and aggregate) stockpiles will be stored within each bay and not exceed the height of the concrete side or back walls for each bay.

Grounds: Operations of the asphalt manufacturing plant includes fugitive dust emissions where there is a risk to the health and amenity of nearby residential and commercial / industrial receptors if not managed appropriately. The approved infrastructure and equipment and corresponding operational requirements will suitably minimise the risk of fugitive dust emissions leaving the Premises. The requirement for the raw material stockpiles not to exceed the height or width of the storage bays is to ensure fugitive dust emissions are minimised.

9.1.2 Management of fugitive odour

The following infrastructure and equipment must be maintained in good working order and operated in accordance with corresponding requirements as shown in Table 26 for onsite fugitive odour emissions management in relation to the new asphalt manufacturing plant. The requirements are derived from Licence Holder controls as described in section 8.5.

Table 26: Fugitive odour management infrastructure and operational requirements

Site infrastructure and equipment / general location or process	Operational requirements
Asphalt Manufacturing Plant – Benninghoven ECO3000	Enclosed production process from the cold feed bins to the asphalt produced. Storage of asphalt products in enclosed silos. RAP cold feed system attached to the asphalt manufacturing plant allowing up to 30% of reclaimed asphalt in the product.

Grounds: The approved infrastructure and equipment and corresponding operational requirements will suitably minimise the risk of fugitive odour emissions leaving the Premises.

9.1.3 Management of point source stack emissions, including odour

The following infrastructure and equipment must be maintained in good working order and operated in accordance with corresponding requirements as shown in Table 27 for onsite fugitive odour emissions management in relation to the new asphalt manufacturing plant.

Table 27: Point source stack emissions (including odour) management infrastructure and operational requirements

Site infrastructure and equipment / general location or process	Operational requirements
Derived from Licence Holder controls as described in sections 8.6 and 8.7	
Asphalt Manufacturing Plant – Benninghoven ECO3000	Reverse flow baghouse dust extraction system attached to the drum dryer to remove combustion gases, moisture and fine particles. Filtered air (from the baghouse) is to be released to atmosphere through at least a 12 m agl stack. Any fines collected by the baghouse are to be transported to the filler silo via enclosed pipe screw conveyors and available for reintroduction to the mixing process.
Existing Licence conditions	

Site infrastructure and equipment / general location or process	Operational requirements
1.3.8	The Licence Holder shall ensure that automatic safeguards are incorporated within the asphalt manufacturing process to prevent the ignition of bitumen within the drum.
Additional regulatory controls	
Asphalt Manufacturing Plant – Benninghoven ECO3000	<p>Baghouse stack is required to have a stack sampling port that is compliant with AS4323.1.</p> <p>The baghouse is operational prior to start-up of the drum dryer and operated continuously whilst the drum dryer is operating.</p> <p>Stack emissions from the baghouse will have a total particulate matter limit of 50 mg/m³ (STP dry) during normal operating conditions.</p>

Grounds: Operations of the AMP include stack emissions (including odour) where there is a risk to the health and amenity of nearby residential and commercial / industrial receptors if not managed appropriately.

The approved infrastructure and equipment and corresponding operational requirements will suitably minimise the risk of stack particulate and odour (point source) emissions leaving the Premises.

The Delegated Officer considers that the monitoring of stack emissions will be required for the new asphalt manufacturing plant on an annual basis to ensure the baghouse is being maintained and emissions minimised. To be able to take an accurate sample of the stack emissions the Delegated Officer requires that the sampling port in the baghouse stack is compliant with AS4323.1.

The requirement to ensure the baghouse is operational prior to start-up of the drum dryer is to ensure that any air that is discharged has been filtered prior to release to atmosphere. This will replace Existing Licence Condition 1.3.9 which relates to the current pollution control equipment, the wet scrubber.

The limit of 50 mg/m³ (STP dry) for total particulate matter is to ensure impacts to residential and industrial receptors are minimised and is in line with other asphalt manufacturing plants licensed by DWER. This will replace Existing Licence Condition 2.2.2 that has a limit of 250 mg/m³ for total particulate matter for the old asphalt manufacturing plant.

Existing Licence Condition 2.2.1, which specifies the current emission point to air (stack receiving scrubbed gases from the drum dryer with the emissions point 12 m agl from the old asphalt manufacturing plant) will be replaced and will refer to the stack of the new asphalt manufacturing plant.

9.1.4 Potentially contaminated stormwater management, infrastructure and equipment

The following infrastructure and equipment must be maintained in good working order and operated in accordance with corresponding requirements as shown in Table 28 for onsite fugitive odour emissions management in relation to the new asphalt manufacturing plant.

Table 28: Potentially contaminated stormwater management, infrastructure and operational requirements

Site infrastructure and equipment / general location or process	Operational requirements
Derived from Licence Holder controls as described in section 8.8	
Asphalt manufacturing plant operational area (including raw materials storage area (concrete storage bays))	<p>The Asphalt manufacturing plant, including concrete storage bays, to be positioned on an asphalt hardstand.</p> <p>Asphalt hardstand area bunded and sloped such that potentially contaminated stormwater, captured within the bunded hardstand</p>

Site infrastructure and equipment / general location or process	Operational requirements
	area, is directed to an impervious sediment detention trench prior to entering Pond A.
Sediment detention trench	Impervious base, sloped towards Pond A, and to have a fine and coarse layer of aggregate to capture sediment.
Hydrocarbon bunded areas	Diesel generator to be fully bunded (barrier kerb). Diesel tank to be self bunded. Fill point for the two 60,000 L bitumen tanks to be located such that any drips or spills are captured within a concrete bunded area.
Existing Licence conditions	
1.2.3	The Licence Holder shall ensure that uncontaminated stormwater is kept separate from contaminated or potentially contaminated stormwater. Where stormwater has come into contact with a possible source of contamination, it shall be treated as contaminated.
Additional regulatory controls	
Asphalt manufacturing plant operational area (including raw materials storage area (concrete storage bays))	Asphalt hardstand area bunded and sloped such that uncontaminated stormwater flows are prevented from entering the operational area.
Acceptance and storage of reclaimed asphalt	No more than 300 tonnes of reclaimed asphalt stored on the premises at any one time. To be stored on a hardstand within shed B.

Grounds: There is potential for stormwater to become contaminated if it comes into contact with sediments or hydrocarbons during operation of the new asphalt manufacturing plant including the storage of raw materials, storage of reclaimed asphalt and any leaks or spills within the operational area. Stormwater that is not filtered appropriately could lead to contamination of land, soil and groundwater affecting ecosystem health.

Existing Licence condition 1.2.3 has been transferred to Table 3, condition 2 of the Amended Licence.

No water balance has been provided to demonstrate if Pond A is of adequate size for storm events. Therefore, the Delegated Officer has included the requirement for clean stormwater to be excluded from the asphalt manufacturing plant operational area.

Works Approval, W6135/2018/1, required an asphalt hardstand to be constructed for the asphalt manufacturing plant operational area (including the concrete storage bays and the reclaimed asphalt storage area). The hardstand was constructed; however, the reclaimed asphalt is to be stored on a hardstand within a shed approximately 110 m NE of the asphalt manufacturing plant (see section 5.3.3). Condition 3, Table 4, of the Amended Licence will require the Licence Holder to store the reclaimed asphalt on a hardstand within the shed and limit the amount of reclaimed asphalt that can be received at the Premises (to ensure the reclaimed asphalt is able to be stored appropriately). Condition 4, Table 5, of the Amended Licence will require the Licence Holder to record the total amount of reclaimed asphalt accepted at the premises, to ensure compliance with Condition 3.

Additionally, it is an offence to discharge sediment, petrol, diesel or other hydrocarbon into the environment under regulation 3 of the EP Unauthorised Discharges Regulations.

9.1.5 Monitoring requirements – stack emissions

Stack emissions, during normal operations, will continue to be monitored for particulates, sulfur dioxide, nitrogen oxides and carbon monoxide on an annual basis. Additionally the Licence Holder will be required to monitor total volatile organic compounds on an annual basis.

Grounds: The Existing Licence requires the Licence Holder to monitor the old asphalt plant

stack emissions on an annual basis. As the old plant was decommissioned in November 2018 monitoring of the old asphalt plant is not required. Monitoring of the baghouse stack of the new asphalt manufacturing plant will be required to ensure that the new asphalt manufacturing plant and associated baghouse are being maintained and emissions minimised. Additionally, VOC emissions are required to be monitored due to the potential for odour from the stack.

9.1.6 Monitoring requirements – outputs

The Existing Licence requires the Licence Holder to monitor the amount of compost leaving the Premises. Similarly, the Licence Holder will be required to monitor the amount of asphalt leaving the Premises.

Grounds: The Delegated Officer requires the monitoring of outputs from the asphalt manufacturing plant to ensure that the amount of asphalt produced at the Premises does not exceed the approved throughput.

9.1.7 Increase in capacity for Category 35

The approved capacity of category 35: asphalt manufacturing will be amended from 48,000 tonnes to less than or equal to 70,000 tonnes per annual period.

Grounds: This Decision Report has assessed the new asphalt manufacturing plant at a capacity of 70,000 tonnes of asphalt produced per annual period. The Delegated Officer considers that the above regulatory controls are sufficient to manage the risk of discharges and emissions from the new asphalt manufacturing plant at 70,000 tonnes of asphalt produced per annual period. The amended approved capacity is in Schedule 2: Primary Activities of the Amended Licence.

10. Consolidation of Amendment Notices and Transfer to New Format Licence

For this Licence amendment, DWER has consolidated past Amendment Notices such that the amended Licence will include the changes that were authorised under the Notice of Amendment to extend the expiry date of the Licence (April 2016), Amendment Notice 1 and Amendment Notice 2. The Amended Licence has been issued in a new format with existing conditions being transferred, but not reassessed, to the new format. Therefore, the numbering, wording and format of existing conditions may have changed, but the intent remains the same. Additional changes, as proposed by the Licence Holder for this licence amendment, are detailed within this Decision Report, but not included in Table 29 below.

Table 29: Conditions map

Existing Licence condition	Licence Amendment Condition	Description
Expiry date: 18 March 2017	18 March 2036	On 29 April 2016, a Notice of Amendment to extend the expiry date of Licences was issued. The Malatesta licence, L6561/1995/11, was extended from 18 March 2017 to 18 March 2036.
1.1.1 and 1.1.2		Interpretation and definitions The definition for organic waste was removed and the definitions for green waste and paunch waste were added in Amendment Notice 2. Other administrative conditions have been updated.
1.1.3	-	Reference to Australian or other standards This condition has been removed from the licence as it is not required. USEPA and Australian Standards are specified within the monitoring conditions and defined within the definitions of the licence.
1.1.4	-	Reference to guideline or code of practice This condition has been removed from the licence as it is not required. No guides or codes of practices are referenced within the licence.
1.1.5	1, Table 2	Authorised emissions This condition has been removed from the licence as it is not required. Emissions are authorised within Condition 1 of the Amended Licence.

Existing Licence condition	Licence Amendment Condition	Description
1.2.1	-	Pollution control and monitoring equipment This condition has been removed from the licence as it is not required. Condition 2 of the Amended Licence specifies infrastructure and equipment that must be maintained in good working order and operated in accordance with the corresponding operational requirements.
1.2.2	-	Recovery of spills of environmentally hazardous materials This condition has been removed from the licence as it is not required. Spills can be managed under the general provisions of the EP Act and associated regulations.
1.3.1	3, Table 4	Acceptance of waste This condition has been transferred to condition 3 of the Amended Licence. Organic waste was replaced by paunch waste in Amendment Notice 2.
1.3.2	5, Table 6	Processing of accepted waste This condition has been transferred to condition 5 of the Amended Licence.
1.3.3 and 1.3.4	2, Table 3	Waste containment and security measures These conditions have been incorporated into Condition 2, Table 3 of the Amended Licence.
1.3.5 and 1.3.6	6 and 7	Burning of greenwaste and fires These conditions have been transferred to Conditions 6 and 7 respectively of the Amended Licence.
1.3.7	8	Operations with wind directions This condition has been transferred to Condition 8 of the Amended Licence. Reference to organic was removed and the wind directions were amended in Amendment Notice 2.
2.1.1	-	Investigation of exceedances This condition has been removed as it is not required. Condition 17 of the Amended Licence requires the Licence Holder to report on the exceedance of limits within the Licence.
2.2.1	1, Table 2	Point source emissions to air This condition is no longer required as it relates to the decommissioned asphalt manufacturing plant. Emissions are authorised through condition 1, Table 2 of the Amended Licence.
2.2.2	2, Table 3	Point source emission limits to air This condition is no longer required as it relates to the decommissioned asphalt manufacturing plant. Emission limits to air for the new asphalt manufacturing plant are incorporated into Condition 2, Table 3 of the Amended Licence.
3.1.1 and 3.2.3	12	Samples to be analysed by NATA accredited laboratory NATA accreditation is required by condition 12 of the Amended Licence.
3.1.2	13	Monitoring frequency This condition have been transferred to condition 13 of the Amended Licence.
3.1.3	-	Recording of process parameters This condition has been removed from the licence as it is not required. The Licence Holder is required to report on throughputs for each Category in the AACR and condition 9 of the Amended Licence. All monitoring data is required to be reported in the AER.
3.1.4 and 3.1.5		Calibration of monitoring equipment These conditions have been removed as they are not required nor enforceable.
3.2.2	11	Sampling in accordance with Australian Standard This condition has been transferred to condition 11 of the Amended Licence.
3.3.1	4, Table 5 and 9, Table 7	Monitoring of inputs and outputs The monitoring of inputs has been transferred to condition 4, Table 5 and the monitoring of outputs has been transferred to condition 9, Table 7 of the Amended Licence.
4.1.1	-	Improvement program This condition was removed in Amendment Notice 1.
5.1.1	14	Records and Information This condition has been transferred to condition 14 of the Amended Licence.
5.1.2	-	Awareness of Licence and conditions This condition has been removed from the Licence as it is not required.
5.1.3	16	Annual Audit Compliance Report

Existing Licence condition	Licence Amendment Condition	Description
		This condition has been transferred to condition 16 of the Amended Licence.
5.1.4	15	Complaints Management System This condition has been transferred to condition 15 of the Amended Licence.
5.2.1 and 5.2.2	17	Annual Environmental Report These conditions have been transferred to condition 17 of the Amended Licence.
5.3.1	18, Table 10	Notification requirements This condition has been transferred to condition 18, Table 10 of the Amended Licence.
Schedule 1: Maps – Premises Map	Schedule 1, Maps	This map has been updated in the Amended Licence.
Schedule 2: Reporting and Notification forms – AACR	-	This form has been removed from the Licence as it is not required.
Forms AR1 and N1	-	These forms have been removed from the Licence as they are not required.

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

11. Licence Holder's comments

The Licence Holder was provided with the draft Decision Report and draft Amended Licence on 30 May 2019. The Licence Holder provided comments on 17 June 2019 which are summarised, along with DWER's response, in Appendix 2.

12. Conclusion

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

This assessment was also informed by a site visit by DWER officers on 3 October 2018.

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

Caron Goodbourn

Delegated Officer

under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Licence – L6561/1995/11 – Malatesta Road Paving and Hot Mix and Green Organic Recycling Contractors	Existing Licence	accessed at www.dwer.wa.gov.au
2.	Amendment Notice 1 – L6561/1995/11 – Malatesta Road Paving and Hot Mix and Green Organic Recycling Contractors	Amendment Notice 1	accessed at www.dwer.wa.gov.au
3.	Amendment Notice 2 – L6561/1995/11 – Malatesta Road Paving and Hot Mix and Green Organic Recycling Contractors	Amendment Notice 2	accessed at www.dwer.wa.gov.au
4.	<i>Notice of Amendment of Licence expiry dates</i> , Section 59B(9) and Section 59(1)(k) <i>Environmental Protection Act 1986</i> , Licensed Prescribed Premises, 29 April 2016	April 2016	accessed at www.dwer.wa.gov.au
5.	Licence Amendment application form and supporting documentation		DWER records (DWERDT114816)
6.	E-mail from Licence Holder to DWER, Partial submission of information (including resubmitted application form) in response to request for information, including three attachments, dated 11 January 2019		DWER records (DWERDT125854)
7.	E-mail from Licence Holder to DWER, partial submission of information in response to request for information, including one attachment, dated 5 February 2019		DWER records (DWERDT132117)
8.	Malatesta L6561/1995/11 2017-2018 Annual Environmental Report		DWER records (DWERDT80242)
9.	Works Approval Compliance information submitted via emails from Licence Holder to DWER, dated 19 September 2018, 25 September 2018, 2 November 2018, 11 January 2019 and 5 February 2019.		DWER records (DWERDT96081, DWERDT96663, DWERDT105984, DWERDT125854, DWERDT132117)
10.	Dust and Odour Management Plan, Malatesta Group, Version 2, 17 June 2019		DWER records (DWERDT168648)
11.	Annual Environmental Reports (including stack emissions reports prepared for Malatesta Investments Pty Ltd by Ektimo (EML Air and Annual Audit Compliance Reports)), Malatesta Investments Pty Ltd, 2016-2017 and 2017-2018.		DWER records (A1494834, DWERDT80242 and DWERDT84424)
12.	Response to internal referral of Works Approval application from Water Services, dated 12 April 2018.		DWER records (A1652077)
13.	DWER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Water and Environmental Regulation, Perth.		accessed at www.dwer.wa.gov.au
14.	DWER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Water and Environmental Regulation, Perth.		
15.	DWER, February 2017. <i>Guidance Statement: Risk Assessments</i> . Department of Water and Environmental Regulation, Perth.		
16.	DWER, February 2017. <i>Guidance Statement: Decision Making</i> . Department of Water and Environmental Regulation, Perth.		
17.	DWER, November 2016. <i>Guidance Statement: Environmental Siting</i> . Department of Water and Environmental Regulation, Perth.		

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

Summary of Licence Holder comments	DWER response
Licence Holder comments provided on 17 June 2019 via email	
<p>The Licence Holder provided clarification and additional information regarding:</p> <ul style="list-style-type: none"> - location of the waste and compost storage areas; - location of the composting area; - amount of RAP that can be stored onsite; - decommissioning of the old asphalt plant; - Dangerous Goods Licence; - height of the concrete plinth for the baghouse stack; - updated Dust and Odour Management Plan; and - photos showing the stockpile of contaminated sediment from the wet scrubber overflow. 	<p>The Amended Licence and Decision Report have been updated with the information provided.</p>
Phone call with Licence Holder on 18 June 2019	
<p>Clarification that the waste and composting area (associated with category 67A) is all on a hardstand. One third of the area is hot mix (bitumen) and the rest has a concrete base.</p>	<p>Existing condition 1.3.3 distinguishes between a waste and compost storage area (compacted soil area) and a composting area (bitumen covered area).</p> <p>Following the phone conversation with the Licence Holder, these two areas have been classified as one area, waste and compost storage and composting area, as the whole area is on a hardstand (bitumen and concrete). Water from this area drains into the retention pond. Condition 2, Table 3 has been amended to reflect this.</p>