Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence Number	L8417/2010/2
Licence Holder	West Tip Waste Control Pty Ltd
ACN	ACN 088 277 123
Registered business address	311-313 Hay Street SUBIACO WA 6008
File Number	DER2015/001638
Duration	29/11/2013 to 28/11/2033
Date of amendment	25 August 2017
Prescribed Premises	Category 62
Premises	Redoak Corporation and West Bins 394 Victoria Road, Malaga WA 6090 Legal description - Lot 73 on Diagram 97213 and Part of Lot 72 on Diagram 97213, Strata Lot 2 on Strata Plan 40768 Certificate of Title Volume 2161 Folio 619 As defined by the coordinates in Schedule 1

This Licence is granted to the Licence Holder, subject to the following conditions, on 25 August 2017, by:

Date signed: 25 August 2017

Ruth Dowd

Senior Manager Industry Regulation (Waste Industries)

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Explanatory notes

These explanatory notes do not form part of this Licence.

Defined terms

Definition of terms used in this Licence can be found at the start of this Licence. Terms which are defined have the first letter of each word capitalised throughout this Licence.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986* (WA) (EP Act). The Department also monitors and audits compliance with licences, takes enforcement action and develops and implements licensing and industry regulation policy.

Licence

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased, or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered, or permitted to be altered, from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987* (WA) (EP Regulations).

This Licence does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007;*
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Licence Holder to ensure that any action or activity referred to in this Licence is permitted by, and is carried out in compliance with, other statutory requirements.

The Licence Holder must comply with the Licence. Contravening a Licence Condition is an offence under s.58 of the EP Act.

Responsibilities of a Licence Holder

Separate to the requirements of this Licence, general obligations of Licence Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Licence Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under section 61; and
- restrictions on making certain changes to Prescribed Premises unless the changes are in accordance with a works approval, Licence, closure notice or environmental protection notice (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Licence Holder has a duty to report to DWER all discharges of waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences, including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA).*
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA).*

Section 53 of the EP Act provides that a Licence Holder commits an offence if Emissions are caused, or altered from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a Closure Notice or an Environmental Protection Notice.

Defences to certain offences may be available to a Licence Holder and these are set out in the EP Act. Section 74A(b)(iv) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Licence Holder can prove that an Emission or Discharge occurred in accordance with a Licence.

This Licence specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of Specified Emissions and Discharges, in order for the defence to offence provision to be available.

Authorised Emissions and Discharges

The Specified and General Emissions and Discharges from Primary Activities conducted on the Prescribed Premises are authorised to be conducted in accordance with the Conditions of this Licence.

Emissions and Discharges caused from other activities not related to the Primary Activities at the Premises have not been Conditioned in this Licence. Emissions and Discharges from other activities at the Premises are subject to the general provisions of the EP Act.

Amendment of licence

The Licence Holder can apply to amend the Conditions of this Licence under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Licence at any time on the initiative of the CEO without an application being made.

Amendment Notices constitute written notice of the amendment in accordance with s.59B(9) of the EP Act.

Duration of Licence

The Licence will remain in force for the duration set out on the first page of this Licence or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

Suspension or revocation

The CEO may suspend or revoke this Licence in accordance with s.59A of the EP Act.

Fees

The Licence Holder must pay an annual licence fee. Late payment of annual licence fees may result in the licence ceasing to have effect. A licence that has ceased to have effect due to non-payment of annual licence fees continues to exist; however, it ceases to provide a defence to an offence under s.74A of the EP Act.

Late fees are a component of annual licence fees and should a Licence Holder fail to pay late fees within the time specified the licence will similarly cease to have effect.

Definitions and interpretation

Definitions

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

Table 1: Definitions

Term	Definition
ACM	means Asbestos containing material and has the meaning defined in the *Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia* (DOH, 2009)
ACN	Australian Company Number
Amendment Notice	means an amendment granted under s.59 of the EP Act in accordance with the procedure set out in s.59B of the EP Act.
Annual Period	means a 12 months period commencing from 6 December until 5 December the following year.
AS/NZS 3580.1.1:2016	Australian / New Zealand Standard Method for sampling and analysis of ambient air. Guide to siting air monitoring equipment.
AS/NZS 3580.14:2014	Australian / New Zealand Standard Method for sampling and analysis of ambient air. Meteorological monitoring for ambient air quality monitoring applications.
AS/NZS 3580.10.1:2016	Australian / New Zealand Standard Methods for sampling and analysis of ambient air. Determination of particulate matter – Deposited matter – Gravimetric method.
Books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the *Environmental Protection Act 1986* Locked Bag 33 Cloisters Square PERTH WA 6850 info-der@dwer.wa.gov.au
Classified Load	means the classification of waste loads during acceptance and post acceptance based on the risk of waste material containing Asbestos or ACM and through visual inspection.
Clean Fill	has the meaning defined in the Landfill Definitions
Compliance Report	means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO (guidelines and

	templates may be available on the Department's website).
Condition	means a condition to which this Licence is subject under s.62 of the EP Act.
Damp	means moist to the touch.
Amendment Notice	means an amendment granted under s.59 of the EP Act in accordance with the procedure set out in s.59B of the EP Act.
Dedicated Load	asbestos wrapped material for consolidation.
Department	means the department established under s.35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Licence Holder in writing and sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to: (a) compliance with the EP Act or this Licence; (b) the Books or other sources of information maintained in accordance with this Licence; or (c) the Books or other sources of information relating to Emissions from the Premises.
DWER Asbestos Guidelines	means the document titled "Guidelines for managing asbestos at construction and demolition waste recycling facilities", published by the Department of Environment and Conservation, as amended from time to time.
Discharge	has the same meaning given to that term under the EP Act.
Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.
EP Act	means the *Environmental Protection Act 1986* (WA).
EP Regulations	means the *Environmental Protection Regulations 1987* (WA).
High Risk Loads	refers to loads classified as "high risk" in accordance with the DWER Asbestos Guidelines section 3.3 '*Risk Classification Matrix'.*
Inert Waste Type 1	has the meaning defined in the Landfill Guidelines.
Inert Waste Type 2	has the meaning defined in the Landfill Guideline.
Implementation	has the same meaning given to that term under the EP Act.

Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
Landfill Guidelines	refers to the Department of Environment and Conservation's Landfill Waste Classification and Waste Definitions, 1996
Licence	refers to this document, which evidences the grant of a Licence by the CEO under s.57 of the EP Act, subject to the Conditions.
Licence Holder	refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence.
Low Risk Loads	refers to loads classified as "low risk" in the DER Asbestos Guidelines, section 3.3 '*Risk Classification Matrix'.*
Material Environmental Harm	has the same meaning given to that term under the EP Act.
Mixed Waste Loads	Construction and Demolition Waste accepted to the Premises including Clean Fill, Inert Waste Type 1, Inert Waste Type 2 and Putrescible Waste.
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Primary Activities	refers to the Prescribed Premises activities listed on the front of this Licence as described in Schedule 2, at the locations shown in Schedule 1.
Products	refers to Wastes which have undergone processing or screening to create a useable recycled product and which has been tested and conforms with the specifications of this Licence.
Reportable Event/Action Criterion	means a dust concentration level that when exceeded requires management actions and triggers reporting as specified in Column 6 of Table 10, in Schedule 3.
Sediment	means any naturally occurring material (e.g. sand, mud, soil, silt) or processed waste-derived material that has the potential to be transported by the action of wind, water or through vehicular movement.
Serious Environmental Harm	has the same meaning given to that term under the EP Act.

Special Waste Type 1	has the meaning defined in the Landfill Guidelines.
Sprays	water droplet clouds emitted from the sprinklers
Sprinklers	infrastructure that delivers water in form of water droplets
Stockpile Base	refers to the toe of a stockpile, being the furthest point at the base of the stockpile that the material extends to.
TSP	total particles entrained/suspended in the atmosphere and includes the fine particles (PM_{10} and $PM_{2.5}$) and larger particles that may settle out of the air causing nuisance impacts, usually measured as those particles having an equivalent aerodynamic diameter of 50 micrometres or less.
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.

Interpretation

In this Licence:

(a) the words ‘including’, ‘includes’ and ‘include’ will be read as if followed by the words ‘without limitation’;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a Condition, each row in a table constitutes a separate Condition;

(d) any reference to an Australian or other standard, guideline or code of practice in this Licence means the version of the standard, guideline or code of practice in force at the time of granting of this Licence and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Licence; and

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Emissions

1. The Licence Holder must not cause any Emissions from the Primary Activities on the Premises except for specified Emissions and general Emissions described in Column 1 of Table 2 subject to the exclusions, limitations or requirements specified in Column 2 of Table 2.

Table 2: Authorised Emissions table

Column 1	**Column 2**
Emission type	**Exclusions/Limitations/Requirements**
Specified Emissions	
Fugitive dust	Subject to compliance with Conditions 23 To 27, and Conditions 32 to 36.
Odour	Subject to compliance with Conditions 3, 5 6, 14, 21 and 26, Table 5
Leachate	Subject to compliance with Conditions 3, 5, 6, 14, 21 and 26, Table 5.
General Emissions (excluding Specified Emissions)	
Emissions which: • arise from the Primary Activities set out in Schedule 2.	Emissions excluded from General Emissions are: • Unreasonable Emissions; or • Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or • Discharges of Waste in circumstances likely to cause Pollution; or • Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or • Emissions or Discharges which do not comply with an Approved Policy; or • Emissions or Discharges which do not comply with a prescribed standard; or

Column 1	Column 2
Emission type	**Exclusions/Limitations/Requirements**
	• Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or • Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the Environmental *Protection (Unauthorised Discharges) Regulations 2004*.

Throughput restrictions

2. The Licence Holder must not accept more than 80,000 tonnes of Waste in total per Annual Period.
3. The Licence Holder must not accept more than 8,000 tonnes of Putrescible Waste per Annual Period.
4. The Licence Holder must not accept more than 500 tonnes of Special Waste Type 1 (Asbestos) per Annual Period.
5. The Licence Holder must monitor and record the volumes of incoming and outgoing Waste and outgoing Products at the Premises for the parameters stipulated in Column 1 of Table 3, using the units specified in Column 2 of Table 3 at the frequency specified in Column 3 of Table 3.

Table 3: Monitoring of inputs and outputs

Column 1	Column 2	Column 3
Parameter	**Units**	**Frequency**
Waste inputs: Clean Fill Inert Waste Type 1 Inert Waste Type 2	Tonnes – as measured by certified load scales on wheel loaders. OR m^3 and calculated tonnes – a conversion factor of 1.3 tonnes in every m^3 must be used to calculate tonnage.	Each load arriving at the Premises.
Putrescible Waste (green-waste, paper and cardboard only)		Each load arriving at the Premises.
Special Waste Type 1 (Asbestos)		Each load arriving at the Premises.
Waste outputs : Waste type as defined in the		Each load leaving or rejected from the

Column 1	Column 2	Column 3
Parameter	**Units**	**Frequency**
Landfill Definitions		Premises.
Product outputs: Product type		Each load leaving the Premises.

Waste type restrictions and waste classification

Mixed Waste Loads

6. The Licence Holder must only accept mixed waste loads consisting of the following types of Waste onto the Premises for storage and sorting and screening.
   (a) Clean Fill;
   (b) Inert Waste Type 1;
   (c) Inert Waste Type 2; and
   (d) Putrescible Waste (green-waste, cardboard and paper only).
7. Mixed Waste loads must not be accepted onto the Premises when:
   (a) the load contains visible Asbestos or ACM, inspected and classified in accordance with Condition 9; or
   (b) the Licence Holder has not obtained a signed declaration from the supplier of the source material with each delivery that:
      (i) sets out the details of the Waste source, carrier, registration number of the vehicle and the date of delivery;
      (ii) sets out the Waste type and volume being delivered; and
      (iii) warrants that the load does not contain any Asbestos or ACM.
8. The Licence Holder must maintain clearly visible sign on all waste bins operated by West Tip stating “No Asbestos”.
9. The Licence Holder must visually inspect all loads of Waste when they arrive at the Premises, prior to unloading, to determine the risk of a load containing Asbestos or ACM and each load shall be classified in accordance with the risk classification procedure outlined in section 3.3 of DWER Asbestos Guideline.
10. Where the visual inspection identifies that Waste is not permitted by the Licence, the Licence Holder must:
    (a) reject the Waste for acceptance;
    (b) record the details of the Waste source, waste carrier, registration number of the vehicle and the date of rejection; and
    (c) maintain accurate and auditable records of all rejected loads on the Premises.

Dedicated Loads

11. The Licence Holder must only accept Special Waste Type 1 (Asbestos) as a Dedicated Load onto the Premises for storage and consolidation and only if the load is appropriately wrapped and labelled 'Caution Asbestos'.

12. The Licence Holder must maintain a clearly visible sign specifying "Asbestos is only accepted at the facility in a Dedicated Load and appropriately wrapped".

13. The Licence Holder must store all Dedicated Loads (Asbestos) within a secure area that is clearly marked and delineated.

Waste processing restrictions

14. Subject to the Waste Type restrictions in Condition 6, the Licence Holder must ensure that all Wastes specified in Column 1 of Table 4 are only subject to the processes stipulated in Column 2 of Table 4 and in accordance with any process limits specified in Column 3 of Table 4.

Table 4: Waste processing restrictions

Column 1	**Column 2**	**Column 3**
Waste Type	**Processes**	**Process limits**
Solid Waste: Clean Fill Inert Waste Type 1 Inert Waste Type 2	Receipt, handling, associated storage and processing by mechanical sorting (screening).	Subject to compliance with: • Throughput restrictions and Waste type and waste classification requirements as specified in Conditions 2 to 10. • Waste acceptance and load inspection requirements as specified in Conditions 15 to 20. • Stockpile management requirements as specified in Conditions 22 to 23. • Dust Emission controls as specified in Conditions 24 to 27 and Conditions 32 to 36. • Product testing and supply requirements as specified in Conditions 29 to 31.
Putrescible Waste	Receipt, handling and storage prior to removal off-site to an appropriate facility for disposal.	Subject to compliance with Conditions 2 to 6, Condition 21 and Condition 26, Table 5

Special Waste Type 1 (Asbestos)	Receipt, handling and storage prior to removal off-site to an appropriate facility for disposal.	Subject to compliance with Conditions 11 to 13.

Waste acceptance and load inspection

15. Upon acceptance of Waste, the Licence Holder must direct each Classified Load to the an unloading area within the Waste receival shed for further inspection. The unloading area must be appropriately designed and constructed to ensure the Classified Load will not mix with other Waste prior to inspection.

16. At the unloading area, the Licence Holder must keep all Waste damp throughout the inspection process using the infrastructure specified in Row 4 of Table 5 set out in Condition 26. The Licence Holder must visually inspect loads classified as Low Risk Loads, while the material is being unloaded to determine whether any Asbestos can be identified.

17. If Asbestos is suspected or identified, the load must be reclassified as a High Risk Load and the Licence Holder must implement the High Risk Load procedure set out in section 3.4 of DWER Asbestos Guidelines (attached).

18. High Risk Loads must be visually inspected and handled in accordance with the procedure set out in section 3.4 of DWER Asbestos Guidelines (attached).

19. The Licence Holder must maintain accurate and auditable records of all loads that have been inspected and suspected or found to contain Asbestos. Those records must show the source and originating site and actions taken to address the issue with the source customer.

20. The Licence Holder must visually inspect Waste on the Premises at all stages of the storage, sorting and screening process. Suspected Asbestos identified at any stage of the process must be handled in accordance with the procedure set out in section 3.4 of DWER Asbestos Guidelines (attached) and records maintained in accordance with Condition 19.

21. The Licence Holder must ensure that putrescible wastes are removed from site within 48 hours of acceptance.

Stockpile / bunker management

22. The Licence Holder must ensure that:

    (a) material on the Premises is maintained in at least three separate stockpile areas for unprocessed Waste, Products awaiting testing for Asbestos or ACM and Products tested for Asbestos or ACM; and

    (b) unprocessed Waste and Product stockpiles are kept clearly separated at a minimum three metre distance from the stockpile base;

    (c) Products tested for Asbestos or ACM and Products awaiting testing for Asbestos or ACM are clearly separated by a minimum three metre distance from the stockpile base;

    (d) Clearly visible and legible signage is erected on individual stockpiles to clearly identify and delineate unprocessed Waste, untested Product and tested Products; and

(e) Where Asbestos is identified through product testing, the Licence Holder must follow the procedure set out in Appendix A of DWER Asbestos Guidelines (attached Appendix C).

23. The Licence Holder must ensure that the heights of all outdoor Waste and Product stockpiles do not exceed 3m in height.

Infrastructure and equipment

24. Dust monitors that meet the requirements of Rows 7 and 8 of Table 5 must be installed and monitoring dust emissions from the Premises prior to outdoor waste storage and processing activities becoming operational subject to the requirements of Condition 32.

25. By four months from the issued Licence, a shed that meets the requirements of Row 3 of Table 5 must be installed.

26. The Licence Holder must ensure that the infrastructure and equipment specified in Column 1 of Table 5 is maintained in good working order and operated in accordance with the requirements specified in Column 2 of Table 5.

Table 5: Infrastructure and equipment controls table

	Column 1	**Column 2**
	Site infrastructure and equipment	**Operational requirements**
	Dust and Asbestos controls	
1.	Covers / fencing	The existing solid sheet steel fencing must be maintained along the Premises boundary to aid in reducing dust impacts to neighbouring properties.
2.	Waste receival shed	All waste arriving at the Premises must be unloaded within the waste receival shed for initial inspection and to prevent plumes of dust on its deposit. Roller doors (at entrance and exit of loadout bay) must be kept closed when waste receival, sorting and processing activities are taking place within the shed, except when vehicles are entering/leaving the shed.
3.	Waste processing shed	The waste processing shed be constructed to enclose all dust producing operations – including all waste processing and storage activities - as shown in Schedule 1. The shed must be sealed to prevent dust escaping. Vehicle access opening to the shed is to be designed and constructed to minimise dust emissions by: • keeping the size as small as possible

	Column 1	Column 2
	Site infrastructure and equipment	**Operational requirements**
		• cladding to extend at least 2 metres downward from the roof • installing and operating sprinklers so that a "misting curtain" forms that prevents dust from leaving the shed
4.	Sprinklers running along all or on top of conveyors, screens, stockpiles, vibrating screens, and density separators. Ceiling sprinklers within the waste receival shed and exit loadout bay.	Series of sprinklers that are attached to or on top of all Product and Waste conveyors, screens, stockpiles, vibrating screens and density separators and within the existing shed and in the loadout bay that are capable of wetting down the entire surface of all Waste and Product evenly to maintain the Waste and Product in a Damp state. Sprays need to effectively wet the surface and suppress airborne dust particles. The positioning and setup of sprays must effectively deliver water sprays. Sprinklers are to be maintained in good working order to ensure availability during operation of equipment. Sprays must be operational at all times when equipment is operating.
5.	Water cart with a capacity of 12,000L with sprays and cannon	Roadways and all Product and Waste stockpiles must remain in a damp state at all times to prevent dust lift off. Targeted wetting must occur when material handling such as reclaiming from the stockpiles has the potential to generate fugitive dust.
6.	Dust monitor	The Licence Holder must engage the services of a person competent in ambient air quality monitoring and assessment to install and maintain a dust monitoring unit with light backscatter technology. The dust monitor must be installed in a location as specified in Condition 33(a). The dust monitor must be capable of working with alerts and capable of monitoring TSP at a minimum, for use in dust management. The Licence Holder shall also install an anemometer as part of the dust monitoring equipment to record wind speed and direction data.
7.	Dust deposition gauge	The Licence Holder must engage the services of a person competent in ambient air quality monitoring and assessment to install and maintain a dust deposition gauge at a location, as specified in

	Column 1	Column 2
	Site infrastructure and equipment	**Operational requirements**
		Condition 33(a) Sampling and analysis of the dust deposition gauge must be undertaken by a suitably qualified air quality expert and done in accordance with AS/NZS 3580.10.1:2016
	Noise Controls	
8.	Fencing	The combination of solid sheet steel fencing and concrete 4m high barriers between West Tip Waste Control Pty Ltd and immediately adjacent to the south and east of the Premises, as detailed in Schedule 1.
9.	Barriers	All screeners and conveyors must have barriers constructed with a combination of concrete and anticon to limit noise emissions. Barriers are to be maintained in good working order to ensure availability during operation of equipment.
	Leachate and sediment controls	
10.	Putrescible waste bins	All putrescible wastes must be stored in sealed bins that are undercover or covered with tarpaulin.
11.	Leachate containment	All potentially contaminated storm water and leachate within the waste receival shed must be contained on site and discharged to sewer via a solids arrestor. The leachate containment must be designed to contain all storm water runoff from sealed areas prior to sewer.
12.	Sediment traps at storm water drains	All storm water drains must have a sediment retention facility to prevent sediment from leaving the Premises.

Dust emission controls

27. The Licence Holder must ensure that all vehicles operate at speeds of less than 15km/hr through the Premises.

Noise emission controls

28. The Licence Holder must ensure that the Premises only operate between the hours of 07:00 to 17:00 Monday to Friday and 07:00 to 13:00 on Saturdays.

Product testing and supply

29. The Licence Holder must ensure that testing of all Products is undertaken in accordance with the Product testing procedures specified in section 4.3 of DWER Asbestos Guidelines (attached).

30. The Licence Holder must ensure that Products are only supplied to customers where they have been tested in accordance with Condition 29 and shown to conform with the product specification of 0.001% Asbestos weight for weight (w/w) for Asbestos content (in any form) within any recycled Products.

31. The Licence Holder must maintain accurate and auditable records of all Asbestos Product testing undertaken in accordance with Condition 29. These records must include:

    (a) details of sample size;

    (b) a statement of limit of detection of the analysis;

    (c) results in relation to Asbestos detected (positive result exceeding the 0.001% w/w limit) or not;

    (d) description of any Asbestos detected; and

    (e) an estimate of the concentration of Asbestos detected if practical to do so.

Dust monitoring

32. The Licence Holder must establish a dust monitoring and management program prior to the operation of waste storage and processing activities outdoors.

33. The dust monitoring and management program as detailed in Condition 32 must include the following elements as a minimum:

    (a) air sampler and depositional gauge proposed locations that reflect impact site conditions and siting to be guided by AS/NZS 3580.1.1:2016;

    (b) collection of monitoring data from the air sampler and depositional gauge, over at least five days while no waste storage and processing activities are taking place outdoors to provide a preliminary indication of baseline dust levels;

    (c) action criteria that together with management actions function as effective operational controls to prevent dust impacts at nearby receptors;

    (d) action criteria as detailed in Condition 33(c) to be derived by considering baseline data, setting 10 minute TSP action criteria, for additional dust control actions and for shut down of dust generating activities;

    (e) a description of activities to be taken for each action criterion exceedance;

    (f) an associated maintenance and calibration program to ensure data quality and continuous operation of instruments (24 hours per day) with minimum outages (operational at a minimum of 90% over a month (30 days)); and

    (g) complaint investigation protocol.

34. The Licence Holder must undertake dust monitoring in accordance with requirements specified in Schedule 3.

35. The Licence Holder must implement the management actions set out in Schedule 3: Monitoring; Table 10; Column 7 when the corresponding action criteria detailed in Schedule 3: Monitoring; Table 10; Column 6 have been exceeded.

36. Depositional dust sample analysis must be undertaken by a laboratory with current NATA accreditation for the analysis specified unless otherwise specified in Schedule 3.

Record-keeping

37. The Licence Holder must maintain accurate and auditable Books including the following records, information, reports and data required by this Licence:

    (a) the calculation of fees payable in respect of this Licence;

    (b) the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 26 of this Licence;

    (c) asbestos monitoring under Conditions 29 and 31 of this Licence;

    (d) complaints received under Condition 38 of this Licence; and

    In addition, the Books must:

    (e) be legible;

    (f) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;

    (g) be retained for at least seven years from the date the Books were made; and

    (h) be available to be produced to an Inspector or the CEO.

38. The Licence Holder must record the number and details of any complaints received by the Licence Holder relating to its obligations under this Licence and its compliance with Part V of the EP Act at the Premises, and any action taken by the Licence Holder in response to the complaint. Details of complaints must include:

    (a) an accurate record of the concerns or issues raised, for example a copy of any written complaint or a written note of any verbal complaints made;

    (b) the name and contact details of the complainant, if provided by the complainant;

    (c) the date of the complaint; and

    (d) the details and dates of the actions taken by the Licence Holder in response to the complaints.

Reporting

39. The Licence Holder must submit to the CEO, no later than 31 January, a Compliance Report indicating the extent to which the Licence Holder has complied with the Conditions in this Licence for the preceding Annual Period.

40. The Compliance Report required by Condition 39 must include the dust monitoring and management program in accordance with Condition 32 and a summary of the dust monitoring results including all raw data in Excel format in accordance with Conditions 33 to 36.

41. The Licence Holder must comply with a Department Request, within 14 days from

the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

42. Once the dust monitoring and management program has been submitted under Condition 32, the Licence Holder must submit a Fortnightly Exceedance and Complaints Report under the following circumstances:

    (a) the Licence Holder has received a complaint; or

    (b) there have been exceedances according to the dust monitoring and management program.

43. The Fortnightly Exceedance and Complaints Report must include the following:

    (a) the number of complaints received by the Licence Holder in relation to dust;

    (b) what equipment / infrastructure was operating at the time of complaint or exceedance

    (c) details of complaints

    (d) all monitoring raw data in excel format for the fortnightly period;

    (e) the number and details of exceedances of criteria; and

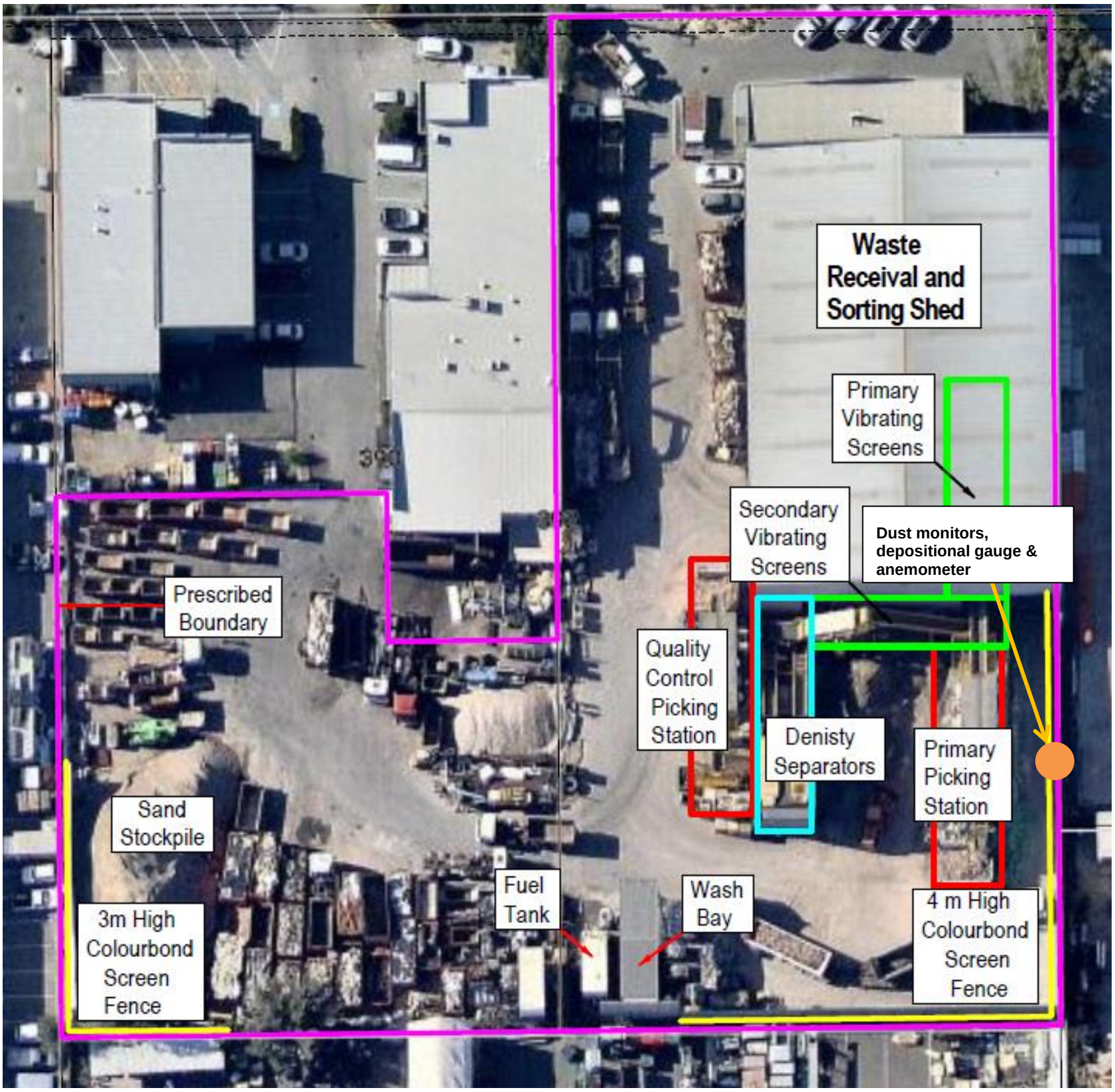
    (f) actions that were taken in response to the exceedances.

44. The Fortnightly Exceedance Report must be submitted to the CEO by 5pm every Friday on a fortnightly basis.

Schedule 1: Maps

Premises map

The Premises are shown in the map below.


Waste Receival and Sorting Shed
Primary Vibrating Screens
Secondary Vibrating Screens
Dust monitors, depositional gauge & anemometer
Prescribed Boundary
Quality Control Picking Station
Denisty Separators
Primary Picking Station
Sand Stockpile
Fuel Tank
Wash Bay
3m High Colourbond Screen Fence
4 m High Colourbond Screen Fence

Site map: Waste processing shed

Premises boundary

The Premises boundary is defined by the coordinates in Table 6.

Table 6: Premises boundary coordinates

Easting	Northing
395902	6474371
395903	6474269
395803	6474267
395802	6474322
395835	6474307
395835	6474322
395852	6474370

Schedule 2: Primary Activities

At the time of assessment, Emissions and Discharges from the following Primary Activities were considered in the determination of the risk and related Conditions for the Premises.

The Primary Activities are listed in Table 7:

Table 7: Primary Activities

Primary Activity	Premises production or design capacity
Category 62 – Solid waste depot: premises on which waste is stored or sorted pending final disposal or re-use.	80,000 tonnes per day

Infrastructure and equipment

The Primary Activity infrastructure and equipment situated on the Premises is listed in Table 8.

Table 8: Infrastructure and equipment

	Infrastructure	Site Plan Reference
	Prescribed Activity Category 62	
Acceptance and sorting of solid waste		
1	Waste receival and sorting shed	Schedule 1: Maps
2	Primary vibrating screens	
3	Secondary vibrating screens	
4	Primary picking station	
5	Conveyors	
6	Density separators	
7	Quality control picking station	
8	Vehicle and bin wash down bay	
9	Self bunded fuel tank	
10	Excavator with grab	
11	Open bin storage	
12	Bunkers / stockpiles of Waste and Product	
13	Road sweeper	
14	Water cart	
15	Fencing	

16	Water piping including sprinklers and sprays	
17	Front-end loader	
18	Oily water separator: Coalescing plate	

Site layout

The Primary Activity infrastructure and equipment is set out on the Premises in accordance with the site layout specified on the Premises map in Schedule 1.

Schedule 3: Monitoring

Dust Monitoring

The Licence Holder must undertake the baseline dust monitoring specified in Column 1 from the locations specified in Column 2 of Table 9. Emissions must be calculated as an average over the period specified in Column 3, at the frequency specified in Column 5, and in accordance with the method specified in Column 6.

Table 9: Baseline dust monitoring

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Parameter	**Location***	**Averaging period**	**Reportable Event/Action Criterion**	**Frequency**	**Method**
TSP (µg/m3)	As detailed on the map in Schedule 1	10 minute	N/A	Continuous	AS/NZS 3580.1.1:2016*
Wind Speed (m/s) and wind direction (degrees)	(Co-located with air sampler)	10 minute	N/A	Continuous	AS/NZS 3580.14:2014 AS/NZS 3580.1.1:2016*

*DWER requests that the Licence Holder provide a detailed summary on any major excursions from AS/NZS3580.1.1:2016

The Licence Holder must monitor the Emissions specified in Column 1 from the locations specified in Column 2 of Table 10. Emissions must be calculated as an average over the period specified in Column 3, at the frequency specified in Column 5, and in accordance with the method specified in Column 6.

Table 10: Dust monitoring during operations

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Monitoring instrument	**Monitoring location**	**Parameter**	**Frequency**	**Method**	**Reportable Event/Action Criterion**	**Corrective action levels** **Work stoppage levels**
Air sampler using light back scatter technology capable of sending alerts according to programmed settings	Schedule 1: Maps	TSP	Continuous as a 10 minute average	AS/NZS 3580.1.1:2016 *	150µg/m^3 over 10 min average	Immediately implement corrective actions of wetting, containment and/or changes to operational activities.
					200µg/m^3 over 10 min average	Immediately implement shut down of outdoors processing operations

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Monitoring instrument	**Monitoring location**	**Parameter**	**Frequency**	**Method**	**Reportable Event/Action Criterion**	**Corrective action levels** **Work stoppage levels**
Depositional gauge	Schedule 1: Maps	Mass deposition rate in g/m²/month Total solids, soluble solids, insoluble solids	Continuous as monthly averages	AS/NZS 3580.10.1:2014 AS/NZS3580.1.1:2016*	N/A	N/A
Anemometer	Schedule 1: Maps	Wind direction (degrees) Wind speed (m/s)	Continuous as 10 minute averages	To be installed as per manufacturer's specifications AS/NZS 3580.1.1:2016*	N/A	N/A

*DWER requests that the Licence Holder provide a detailed summary on any major excursions from AS/NZS3580.1.1:2016

Appendix A: Section 3.4 of DWER Asbestos Guideline

- The content/waste types within the load; and
- The type of load.

Where the source of the load can clearly be determined to be a building or structure constructed after 1990 then the load can be considered to represent a low risk of asbestos contamination and managed as outlined in the following section. Where the waste originates from a building constructed before 1990 or there is uncertainty over this issue, the risks associated with asbestos in the load must be established in line with the Risk Classification Matrix below.

Once classified, each load must be directed to the appropriate area for unloading and further inspection in line with the following sections.

Risk Classification Matrix			
	Type of load		
Material Type	**Commercial**	**Public, utes, cars and trailers***	**Skip bins**
Clean Concrete (without formwork)	Low	High	High
Clean Brick	Low	High	High
Clean Bitumen / Asphalt	Low	High	High
Mixed Construction waste	High	High	High
Mixed Demolition waste	High	High	High

* if it is possible to view the entire load of incoming C & D material (eg a small trailer with a shallow load, then consideration may be given to classifying these loads as low risk

(Risk Matrix Classification *adapted from WorkSafe Victoria 2006 and WMAA 2009*)

3.4 Load inspection after acceptance

Each accepted and classified load shall be directed to an unloading area at the site which is appropriately designed and constructed to ensure the waste will not mix with other waste. Where feasible, separate unloading areas shall be provided for low risk and high risk wastes.

All loads shall be dampened prior to unloading and maintained in a dampened state throughout the inspection process. Operators will need to ensure there are adequate facilities on the premises to achieve this.

Low risk load procedure

Loads classified as "low risk", must be visually inspected while the material is being unloaded to determine whether any asbestos can be identified.

If suspect fibrous asbestos (FA) or asbestos fines/fibres (AF) are detected, the load must be isolated, kept wet and once appropriately contained in accordance with the Asbestos Factsheet in Appendix A, redirected to an appropriately authorised disposal facility. If suspect ACM is identified, the load must be reclassified as "high risk" and continue to be processed in accordance with the high risk procedure below. Where the visual inspection confirms that the

load is clear of suspect ACM, FA and AF, the load may then be added to the waste stockpiles awaiting further processing eg crushing and screening.

High risk load procedure

Loads classified as "high risk" must be unloaded and spread over a sufficiently large area to enable a comprehensive visual inspection of all sides of the material to be undertaken. One method of achieving this is to spread the material to a depth of less than 30cm and to turn over the material with the use of an excavator or similar. Where appropriate, larger sections of concrete should be inverted to permit a visual check for embedded or underlying asbestos product debris.

If suspect FA or AF are detected, the load must be isolated, kept wet and once appropriately contained in accordance with the Asbestos Factsheet in Appendix A, and redirected to an appropriately authorised disposal facility.

Where suspect ACM is identified within a load and is not capable of being easily removed by hand, the load must be rejected and should be isolated, kept wet and once appropriately contained in accordance with the Asbestos Factsheet in Appendix A, and redirected to an appropriately authorised disposal facility.

Where suspected ACM fragments capable of being easily removed by hand are identified in a load, the suspect ACM must be removed from the load and either:

1. Appropriately isolated and covered for asbestos testing. If testing of representative samples confirms the material is ACM it must be redirected to an appropriately authorised disposal facility. If testing confirms the material is not ACM the waste can be added to the stockpile awaiting further processing; or

2. Assumed to be ACM and redirected to an appropriately authorised disposal facility.

All suspected or assumed ACM must be segregated. Material must be clearly labelled, kept secure and sufficiently contained to prevent the release of asbestos including wind blown fibres.

Once all suspected or assumed ACM has been removed from a load in line with the above procedure the residual waste can be added to the stockpile awaiting further processing.

Records must be kept to ensure that the process from receipt of C&D material to the completion of the unloading procedure is auditable and that any loads found to contain suspect asbestos can be traced back to the customer and originating site. Through Part V licence conditions, DEC will require records of loads found to contain asbestos and action taken by the C&D recycler to address this issue with the customer, to be submitted on a regular basis. DEC will take follow up action with customers delivering asbestos containing waste to the premises as necessary.

Appendix B: Section 4.3 of DWER Asbestos Guideline

4 Monitoring and Testing

Monitoring must be undertaken to confirm that risk management measures are effectively meeting their objectives. This shall include qualitative and quantitative monitoring and product testing.

4.1 Qualitative monitoring

Site operatives must undertake visual inspections whilst the facility is operational to ensure that fugitive emissions of dust are being adequately controlled and are not being carried outside of the premises. Where fugitive dust releases are identified their source must be investigated and all reasonable and practicable measures implemented to prevent or minimise the release.

Where risk management measures are ineffective or likely to be ineffective at preventing visible dust crossing the site boundary, for example during adverse weather conditions, waste processing activities must cease until additional measures have been put in place to prevent the discharge or until the adverse weather conditions have passed.

4.2 Quantitative environmental monitoring

On some sites it may be necessary for ambient dust or asbestos fibre air monitoring to be undertaken to provide further confidence in risk management measures. Such monitoring may be required where recycling sites are located in close proximity to sensitive receptors, are within a relevant Environmental Protection Policy area or have a poor compliance history relating to fugitive dust control. Where quantitative dust monitoring is not proposed, the proponent/operator must provide a risk based justification as to why it is not considered necessary at their premises.

Dust monitoring provides a useful surrogate measure to evaluate the potential generation and distribution of airborne dust and asbestos fibres and will normally be sufficient on most sites. Dust monitoring equipment must demonstrate that dust levels are kept as low as reasonably possible. Tapered Element Oscillating Microbalance (TEOM) (or equivalent) equipment is preferred to provide continuous and accurate perimeter air monitoring for community protection. Any site perimeter monitoring for this purpose should be conducted to ensure compliance with the National Environmental Protection Measure (NEPM) ambient air 24 hour PM_{10} goal of 50 ug/m^3.

Where air quality monitoring is required, an air quality monitoring and reporting strategy must be developed by a person suitably experienced in dust/asbestos sampling and exposure assessment and any associated analysis be undertaken by a laboratory accredited by NATA for this purpose.

4.3 Product testing and supply

To ensure that recycled products have been produced to the required specification in relation to asbestos content it is necessary for product testing to be undertaken. The testing procedures detailed in this section have application for the three main recycled products:

1. Recycled drainage rock 20-27mm;

2. Recycled sand, screened to <10mm; and
3. Recycled road-base, <19mm.

The testing must be documented as outlined under Section 5.3.

Product specification
To ensure the health of those using or coming into contact with recycled C&D products is protected, the asbestos content (in any form) of any recycled products must not exceed 0.001% asbestos weight for weight (w/w).

Inspection and sampling requirements
All types of recycled product must be inspected and/or sampled and tested for ACM, FA and AF, as outlined below. Inspections and sampling may be undertaken by staff employed by the licensee as long as they have received the required asbestos training for operational staff set out in section 5.2.

ACM and FA are subject to visual inspection and sampling procedures since they are larger in size (>7mm) and AF (<7mm) is assessed by submitting samples for laboratory analysis.

Recycled products may be sampled from conveyors or stockpiles. Whichever approach is adopted, the operator will need to ensure that they have appropriate systems in place to allow them to identify where in the product stockpiles each sample is from to allow further testing or separation to occur if required.

Stockpile inspection and sampling
In the case of recycled drainage rock and recycled road-base a visual inspection should be undertaken in a systematic grid fashion over the any new stockpile material to identify any suspect asbestos material.

No sampling is required for recycled drainage rock, other than to determine by laboratory analysis if necessary whether a suspect fragment is asbestos.

For recycled road-base and screened sand, sampling is necessary and must be spread evenly over the whole stockpile surface or samples may be taken at regular intervals (as per conveyor sampling) during construction of the stockpile. Suspect asbestos material or areas must be targeted for sampling.

Sampling of road base and screened sand products must occur at a minimum rate of 40 locations per 4000 tonnes or 14 samples per 1000m^3 of product.

Conveyor sampling
Sampling of road base and screened sand products must occur at a minimum rate of 1 sample per 70m^3 of a product output. Suspect asbestos material or areas must be targeted for sampling.

Sample treatment

Each sample collected must be at least 10 litres in volume and then be divided into 2 size fractions (>7mm and <7mm) in the field by sieving though a 7mm screen or spread out for inspection on a contrasting colour fabric. The >7mm fraction should be examined for any suspect asbestos material and this be retained to calculate the level of contamination.

The <7mm fraction will need to be a minimum 500 ml, be wetted, and submitted for laboratory analysis. This sample size is considered necessary to improve the limit of detection for asbestos in the analysis procedure.

Reduced Sampling Criteria

Once premises have demonstrated that their procedures are able to consistently produce recycled product that meets the product specification and undertake their activities to a high standard, DEC may authorise a reduced product testing rate including down to 5 locations per 4000 tonnes (1 sample per 600m^3) of product.

The criteria that DEC will use to consider and determine a reduction in product sampling frequency are:

1. Activities at the premises have been validated through a DEC inspection or audit to comply with these guidelines;
2. DEC has confirmed through an inspection or audit that the conditions of the Part V licence are being met;
3. DEC has not undertaken any enforcement action in relation to the activities at the premises in the last 6 months;
4. Product testing has demonstrated that the product specification has been consistently achieved at the premises for a continuous 6 month period;
5. The presence of mitigating factors such as best practice management measures, high control of source material or use of the product for low risk purposes;
6. The quantity of waste processed in the last 6 months and the different sources/types of material processed at the premises; and
7. DoH has agreed to the reduction in product sampling rate at the premises.

All requests for a reduced product sampling rate must be submitted in writing to the relevant DEC Industry Regulation Regional Leader for the Premises, details of which can be found in the interpretation section of the Part V licence for the Premises.

DEC will refer all requests to the DoH and operators must ensure that all requests include sufficient evidence, particularly in relation to product testing, to support compliance with the above criteria.

Proponents should note however, that despite a premises meeting the above reduced sampling criteria, there may be occasions where a reduced sampling rate is not approved by DEC. This

may occur for example where the site is close to sensitive receptors, contentious and/or there is a need to provide public confidence in the activities at the site.

Where a reduced sampling rate is approved at a premises, DEC will provide written notification of the approval and will continue to closely monitor that premises to ensure it remains compliant with the reduced sampling criteria. DEC's monitoring of the premises will be further supported by the annual process audits required by section 5.1 and the results of the product sampling.

DEC will withdraw the approval to implement a reduced sampling frequency where the reduced sampling criteria are not being met on an on-going basis. Where DEC withdraws approval for a reduced sampling frequency, proponents will be provided with the reasons for the withdrawal.

In the event that approval for a reduced sampling rate is withdrawn by DEC, proponents will be required to make a new reduced sampling frequency request and demonstrate that they have:

1. Implemented appropriate measures to prevent a re-occurrence of the non-compliance that caused the previous agreement for a reduced sampling frequency to be withdrawn; and that
2. The product specification (sampled at the 40 samples per 4000 tonnes rate) has been consistently met for a 6 month period following the implementation of the measures identified in 1. above.

Sample Analysis Method

>7mm sample fractions

Asbestos concentrations (ACM and FA) should be calculated in accordance with the methods detailed in section 4.1.7 of Department of Health (DoH), 2009, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*. As detailed in the DoH Guidelines, averaging asbestos levels across the stockpile is not appropriate and asbestos levels within each sample should be reported.

<7mm sample fractions

Each <7mm sample fraction must be analysed for FA and AF.

Asbestos analysis must be undertaken by an independent NATA certified laboratory and comply with Australian *Standard Method for the Qualitative Identification of asbestos in bulk samples* (AS4964–2004) or be demonstrated to be able to achieve the equivalent level of results to this Australian Standard.

AS4964-2004 is currently the only method in Australia that has NATA certification, however the practicable level of detection for this standard polarized light microscopy method (PLM) and dispersion staining (DS) is 0.01%w/w. It is possible however, to measure asbestos contamination at or lower than 0.001%w/w where an increased sample size used, however DEC recognises that any reporting of concentrations below 0.01%w/w will be outside the conditions set by NATA.

Therefore, to determine whether recycled products meet the product specification for asbestos content, samples must be a minimum of 500mL in size. Proponents must adopt one of the following analytical approaches:

1. Detected/non-detected – where any quantity of asbestos is detected by the PLM method it must be assumed, without further analysis, to be in concentrations above the product specification limit of 0.001%w/w. A weight of evidence approach may be adopted i.e. the frequency and occurrence of other positive results in the stockpile can be taken into account, to determine whether the stockpile being assessed is considered to meet the product specification or not; or

2. Where any quantity of asbestos is detected by the PLM method, the sample is subject to further testing in the form of a semi-quantitative method with a lower level of detection for asbestos. A number of laboratories have developed such semi-quantitative methods for the analysis of low levels of asbestos. Techniques include:
   - The extraction and weighing of fibre bundles or fibre cement material from the total sample; and
   - Measuring the width and length (ie volume) of individual fibre by Phase Contrast Microscopy (PCM) and calculating the weight of fibres in the extracted sub-sample.

The use of either of these methods is considered acceptable to DEC.

Whatever analysis methods are adopted by an operator, DEC expects a number of assessment based statements to be included in all laboratory analytical reports. These include:

- Details of the sample size;
- A Statement of Limit of Detection of the analysis;
- Results in relation to asbestos detected or not – note that AS4964-2004 allows for a nil detection if the asbestos is less than a certain concentration and is non-respirable however DEC would consider a positive result to exceed the 0.001% w/w limit;
- Description of any asbestos detected; and
- Estimate of the concentration of asbestos detected if practical to do so.

Interpreting Inspection and Sampling Results

If the visual inspection, sieve sample or analytical results identify asbestos above or possibly above the 0.001%w/w criteria then that stockpile or product process should be deemed potentially contaminated and considered for off-site disposal as asbestos waste, or subject to further actions to remediate it or to demonstrate its acceptability by further assessment. A record should be made of the decision making and action taken eg off-site disposal, further assessment undertaken etc, in relation to that stockpile.

In addition to the above, where asbestos is identified above or possibly above the 0.001%w/w criteria, an investigation into the likely cause for the presence of asbestos in the product should be undertaken and measures implemented to prevent a reoccurrence. A record of the

investigation and its findings together with the details of any preventative measures implemented at the site should be made.

As a guide, in the case of recycled drainage rock identification of a piece of ACM or FA per $10m^2$ of surface would be deemed to exceed the specification for that area, and for the whole stockpile if repeated in 2 or more other separate areas. A single fragment exceedance can be considered an isolated occurrence in the absence of other contamination evidence and the stockpile allowed for beneficial use. If there is multiple contamination only of a localised area then that area can be excavated to the extent of any visible asbestos and then the remainder of the stockpile considered to be suitable for use.

For laboratory analysis it is important that each result be considered on its own merits in regard to the asbestos control specification and that there is no averaging across samples. In the case of a single exceedance at a level less than 0.01% w/w, the stockpile (nominally 4000 tonnes) may not be deemed contaminated if repeat samples of immediately adjacent areas do not demonstrate specification exceedances.

The same approach as indicated in the preceding paragraph can be applied to the results of the >7mm sieve sampling in regard to the recycled sand material and roadbase. In this case a $1cm^3$ fragment of ACM or FA would be deemed to exceed the specification for a 10L sample.

It should be noted that specification exceedances in regard to different assessment methods for the same type of stockpile should not be viewed in isolation from each other.

Product Supply

Recycled products should only be supplied to customers from stockpiles that have been sampled and tested in accordance with section 4.3 and shown to conform to the product specification.

Appendix C: 'Attachment A' of DWER Asbestos Guideline

Appendix A: Asbestos Factsheet

TRANSPORTATION AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL

The transportation and disposal of asbestos-containing material from commercial, industrial and other activities is regulated by the Environmental Protection (Controlled Waste) Regulations 2004 (Regulations). The Regulations apply obligations on the waste transporter to ensure the waste is safely transported to an approved location.

The Regulations define what is considered to be asbestos containing material for the purposes of the Regulations. This definition includes material which contains 0.001% or more of asbestos fibres weight/weight.

Please note that removal, handling, signage, security and onsite packaging of asbestos contaminated material must be carried out in accordance with the Local Government Authority, Department of Health and WorkSafe requirements. Contact the relevant authority for further information (refer to the end of this factsheet).

TRANSPORTATION OF ASBESTOS-CONTAINING MATERIAL (ACM)

The Regulations require asbestos containing material to be:

1. Separated from other material for disposal where that is reasonably practicable;
2. Wrapped and contained in a manner that prevents asbestos fibres entering the atmosphere during transportation on a road; and
3. Labelled or marked with the words "CAUTION ASBESTOS" in letters no less than 50 millimetres high on the individual packages and the transport container.

Further guidance on the transportation of asbestos containing materials is set out in the Code of Practice for the Safe Removal of Asbestos 2nd Edition [NOHSC:2002(2005)] and the *Health (Asbestos) Regulations (1992 or as amended)*. This Code of Practice recommends that:

- ACM is sealed in heavy duty 200 μm (minimum thickness) polythene plastic and clearly labelled with the appropriate signage warning.
- All drums or bins used to store and dispose of ACM should be in good condition, with lids and rims in good working order. The drums or bins should be lined with polythene plastic (200 μm minimum thickness) and be clearly labelled.
- If a waste skip bin, vehicle tray or similar container is used, the ACM should be double bagged before being placed in to the container or sealed in double-lined, polythene plastic (200 μm minimum thickness), and be clearly labelled. In the case of bulk loads such as contaminated soil an alternative is to double line the vehicle tray with the polythene and completely cover the load with a close fitting durable material such as the double layered polythene or a tarpaulin.

- In the case of ACM in the form of contaminated soil, it needs to be wetted down prior to removal and loading onto vehicle or bin.

DISPOSAL OF MATERIAL CONTAINING ASBESTOS

All material containing asbestos must be disposed at a disposal site appropriately licensed or registered under *Part V* of the *Environmental Protection Act 1986* to accept asbestos waste.

A person who disposes of material containing asbestos other than at a licensed disposal site commits an offence.

Receipts for the disposal of ACM should be retained or passed on to the disposal client to assist any subsequent regulatory investigation.

DUTY TO NOTIFY OTHERS OF THE PRESENCE OF ASBESTOS

A person who takes material containing asbestos to a disposal site **MUST** inform the operator of the facility that the material is, or contains asbestos waste. This notification should be provided in a written form however where notification is verbally provided the disposal site should make a written record of the notification.

PENALTIES FOR NON-COMPLIANCE

Penalties apply for offences committed under the *Environmental Protection Act 1986* and the Environmental Protection (Controlled Waste) Regulations 2004.

DISPOSAL SITES FOR MATERIAL CONTAINING ASBESTOS

For a map of landfills within the Metropolitan area visit the WA Waste Authority website at: www.zerowastewa.com.au/disposal/community/perthlandfills

Please contact the Local Government Authority or the facility on the number provided for more information before visiting the disposal site. In Regional areas contact the Local Government Authority for disposal site locations. Please note this list is subject to change and is only intended as a guide.

Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Review of Existing Licence

Division 3, Part V *Environmental Protection Act 1986*

Licence Number	L8417/2010/2
Applicant	West Tip Waste Control Pty Ltd
ACN	088 277 123
File Number	DER2015/001638
Premises	Redoak Corporation and West Bins 394 Victoria Road, Malaga WA 6090 Legal description - Lot 73 on Diagram 97213; and Part of Lot 72 on Diagram 97213, Strata Lot 2 on Strata Plan 40768 Certificate of Title Volume 2161 Folio 619 As defined by the coordinates in Schedule 1 of the Revised Licence
Date of Report	25 August 2017
Status of Report	Final

Table of Contents

draft conditions

Appendix 4: Revised Licence L8417/2010/2

1. Definitions of terms and acronyms

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

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
ACM	means Asbestos containing material and has the meaning defined in the *Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia* (DOH, 2009)
AS/NZS 3580.1.1:2016	Australian / New Zealand Standard Method for sampling and analysis of ambient air. Guide to siting air monitoring equipment.
AS/NZS 3580.14:2014	Australian / New Zealand Standard Method for sampling and analysis of ambient air. Meteorological monitoring for ambient air quality monitoring applications.
AS/NZS 3580.10.1:2016	Australian / New Zealand Standard Methods for sampling and analysis of ambient air. Determination of particulate matter – Deposited matter – Gravimetric method.
BoM	Bureau of Meteorology
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the *Environmental Protection Act 1986* Locked Bag 33 Cloisters Square PERTH WA 6850 info-der@dwer.wa.gov.au
Clean Fill	has the meaning defined in the Landfill Guidelines
Compliance Report	means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO (guidelines and templates may be available on the Department's website).
Construction and Demolition Waste	has the meaning defined in the Landfill Guidelines
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under s.35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation As of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER). DWER was established under

	section 35 of the *Public Sector Management Act 1994* and is responsible for the administration of the *Environmental Protection Act 1986* along with other legislation.
EPA	Environmental Protection Authority
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
PN	Prevention Notice has the meaning defined in section 73A of the EP Act
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
Inert Waste Type 1	has the meaning defined in the Landfill Guidelines
Inert Waste Type 2	has the meaning defined in the Landfill Guidelines
Landfill Guidelines	refers to the Department of Environment and Conservation 'Landfill Waste Classification and Waste Definitions 1996'
Licence Holder	West Tip Waste Control Pty Ltd
m^3	cubic metres
Mixed Waste Loads	Construction and Demolition Waste accepted to the Premises including Clean Fill, Inert Waste Type 1, Inert Waste Type 2 and Putrescible Waste.
NEPM	National Environmental Protection Measure
Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
Occupier	has the same meaning given to that term under the EP Act.
PM	Particulate Matter
PM_{10}	used to describe particulate matter that is smaller than 10 microns (µm) in diameter
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Primary Activities	as defined in Schedule 2 of the Revised Licence
Product	refers to Wastes which have undergone processing or screening to create a useable recycled product and which has been tested and conforms with the specifications of this Licence.
Review	this Licence review
Revised Licence	the amended Licence issued under Part V, Division 3 of the EP Act following the finalisation of this Review.
Risk Event	As described in *Guidance Statement: Risk Assessment*
Special Waste Type 1	has the meaning defined in the Landfill Guidelines
Sprays	water droplet clouds emitted from the sprinklers

Sprinklers	infrastructure that delivers water in form of water droplets
TSP	total particulates entrained/suspended in the atmosphere and includes the fine particles (PM_{10} and $PM_{2.5}$) and larger particles that may settle out of the air causing nuisance impacts, usually measured as those particles having an equivalent aerodynamic diameter of 50 micrometres or less.
UDR	*Environmental Protection (Unauthorised Discharges) Regulations 2004* (WA)
µg/m^3	micrograms per cubic metre
µg/L	micrograms per litre
Waste	has the meaning defined in the EP ACT

2. Purpose and scope of assessment

The Department of Water and Environmental Regulation (DWER) has determined that a risk based licence review (Review) of Licence L8417/2010/2 (Existing Licence) held under Part V of the *Environmental Protection Act 1986* (EP Act) is required.

The determination for this Review was initiated following a Department investigation of complaints about dust emitted from the Premises. The investigation identified that emissions from the Premises were likely to be the main cause of the dust complaints received.

As part of the Review the licence amendment application lodged by the Licence Holder, on 8 November 2016 has been assessed. The amendment application makes a retrospective application to amend the boundary of the Premises, expand the waste sorting area, including storing and sorting of waste outside of the existing shed and includes an asbestos management plan and dust monitoring and management program.

As a result of the licence review and determination of the licence amendment application submitted on 8 November 2016, the Existing Licence is replaced by the Revised Licence set out in Attachment 3.

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 of licence amendment and supporting documentation.	8 November 2016
Additional supporting information.	29 May 2017
Dust monitoring and management program	3 August 2017
Dust monitoring and management program - updated	10 August 2017

3. Background

The Premises is currently licensed under Part V, Division 3 of the EP Act as a Category 62 solid waste depot facility as defined in Schedule 1 of the Environmental Protection Regulations 1987 (EP Regulations).

The Premises has been operated by the Licence Holder for the past 14 years, initially under licence L7889, which ceased in 2009, and subsequently under L8417/2010/1.

Table 3 lists the prescribed premises categories that are authorised by the Existing Licence.

Table 3: Prescribed Premises Categories in the Existing Licence

Classification of Premises	Description	*Approved Premises production or design capacity or throughput*
Category 62	Solid waste depot – premises on which waste is stored or sorted pending final disposal or re-use	80,000 tonnes per annual period

4. Overview of Premises

4.1 Existing operational aspects

The Licence Holder operates a solid waste sorting and transfer facility that is licensed to accept no more than 80,000 tonnes per annual period of mixed solid waste in skip bins. The Existing Licence authorises the acceptance of Clean Fill, Inert Waste Type 1, Inert Waste Type 2, Putrescible Waste (green-waste, paper and cardboard only) and Special Waste Type 1 (asbestos). The Licence Holder also accepts Construction and Demolition Waste from commercial and industrial properties for sorting and processing. Recyclable material is separated and removed off-site with the remaining waste directed to landfill

The existing Licence covers Lot 73 on Diagram 97213 that is owned by Redoak Corporation Pty Ltd as depicted in Figure 1.

Figure 1: Existing operations site plan

4.2 Proposed operational aspects

The Licence Holder is proposing to expand the Premises boundary as shown in Figure 2 and includes amending the Premises boundary to include Part of Lot 72 on Diagram 97213 Strata Lot 2 on Strata Plan 40768.

The proprietor of Lot 73 on Diagram 97213 is Redoak Corporation Pty Ltd. The proprietor on Record of Certificate of Title (provided in application) Lot 1 on Strata Plan 40768 is Mile Todoroski, a letter signed by Michael Todoroski provided in application allowing the use of Lot 1, 390 Victoria Road, Malaga.

The waste accepted on site will be the same and the throughput will remain 80,000 tonnes per annual period.

Operational process within the existing shed:

Summary of operational process (information provided by the Licence Holder in Application):

- Waste material is delivered in the waste receival and sorting shed for initial inspection.
- Excavators and front-end loaders sort out large materials.
- The waste material is then loaded into a hopper with a heavy duty pan feeder that delivers waste via a primary incline conveyor onto a primary vibratory screen.
- Oversize fraction is then fed into the primary picking station where materials such as cardboard, timber, plastic, plasterboard, green waste and non-ferrous materials are removed from the heavy fraction. The residual waste is passed through an over-band magnet to recover ferrous material (heavy product).
- Heavy product is then removed off-site.

Operational process outside of the existing shed:

- The undersize fraction is conveyed and transferred onto a secondary vibrating screen where the material is split into three size fractions consisting of fines and larger (upper) and smaller (lower) screened fraction.
- The fines (fill sand) are removed using a lower flip-flop deck to recover fines. The fines also pass over a magnetic head drum to recover fine ferrous metals.
- Both the upper and lower fractions from the secondary screen pass under an over-band magnet, then onto two density separators. A two-way conveyor under the first density separator produces drainage aggregate.
- The heavy fractions from the density separators are conveyed into a quality control picking station where the heavy stream is cleaned of any contamination and further receivables are recovered. A clean heavy product is produced ready for off-site removal.

Materials are separated into:

- Fine sand
- Drainage aggregate
- Coarse rubble
- Recyclable materials
    - Cardboard
    - Timber
    - Plastic
    - Plasterboard
    - Green waste
    - Ferrous and non-ferrous metals; and
- Waste residue

There is a range of material currently being stored outside of the existing waste receival and sorting shed, this includes:

- Bins containing waste material:
    - Material due to be processed
    - Material in transit and not due for processing

- Wrapped asbestos material being consolidated or in transit

- Processed material:
  - Sand in free-standing stockpiles at the secondary screen and in separate piles
  - Heavy product in bunkers at the output end of the two picking stations
  - Waste residue in bunkers below the picking station; and
  - Waste residue and recyclable materials in bins below the picking stations and elsewhere on site

Putrescible waste (green waste, paper and cardboard only) are stored externally in bins with a tarpaulin (in the event of rain) and are removed from the site within 48 hours of being received.

Oil filters / oily rags are stored externally in bins with a tarpaulin (in the event of rain) and removed from site within seven days.

All other materials are stored externally in bins and removed from site within seven days.

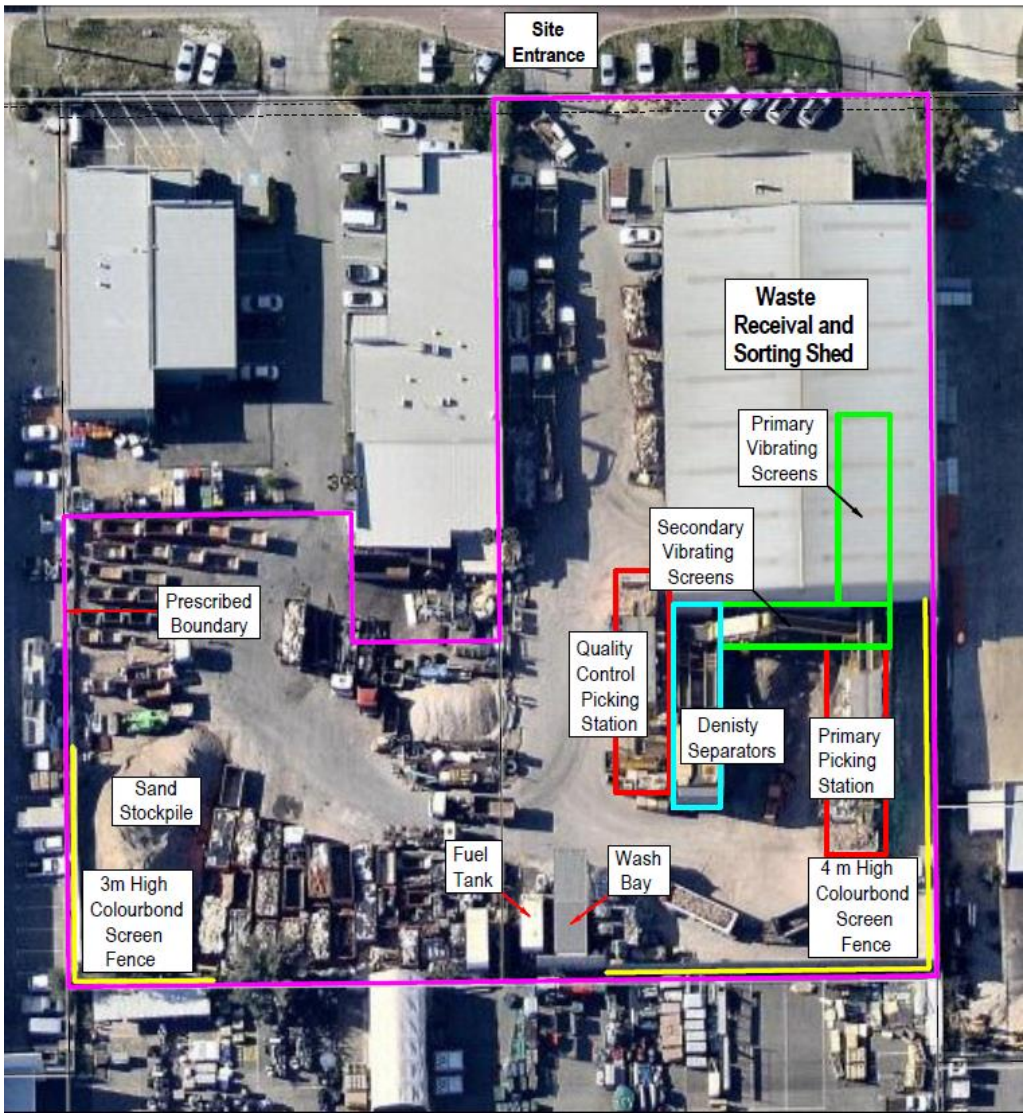


Figure 2: Proposed site plan

Vehicle and bin wash bay and oily water separator

During an inspection by Department Officers on 10 February 2016 the Licence Holder advised that the oil waste sump located on the Premises takes waste oil from Redoak Corporation and West Bins trucks. The waste oil is pumped up to an oil waste separator, the oil is collected in a 25L bucket underneath the oil water separator and is reused as lubrication in a steel shear/ baler on site. The water is discharged to sewer. DWER Officers viewed the receipt to discharge industrial wastewater to sewer from the Water Corporation**.**

Self bunded fuel storage tank

Bulk hydrocarbon (diesel) for mobile vehicle and equipment refueling is stored on site in a 27,000 L tank with a self-contained fuel, bowser and spill kit.

4.3 Infrastructure

The Premises facility infrastructure, as it relates to Category 62 activities and associated emissions and/or controls, is detailed in Table 4 and with reference to the Figure 2.

Table 4 lists infrastructure associated with each prescribed premises category.

Table 4: Solid waste depot facility Category 62 infrastructure

	Infrastructure	**Site Plan Reference**
	Prescribed Activity Category 62	
Acceptance and sorting of solid waste		
1	Waste receival and sorting shed	Figure 2: Proposed site plan
2	Primary vibrating screens	
3	Secondary vibrating screens	
4	Primary picking station	
5	Conveyors	
6	Density separators	
7	Quality control picking station	
8	Vehicle and bin wash down bay	
9	Self bunded fuel tank	
10	Excavator with grab	
11	Open bin storage	
12	Bunkers / stockpiles of Waste and Product	
13	Road sweeper	
14	Water cart	
15	Fencing	
16	Water piping including sprinklers and sprays	

17	Front-end loader	
18	Oily water separator: Coalescing plate	

5. Legislative context

5.1 Other relevant approvals

5.1.1 Planning approvals

The Premises is located within the City of Swan in an area zoned 'general industry'.

5.1.2 Water Corporation discharge to sewer

The Licence Holder holds a permit to discharge to sewer from the Water Corporation.

5.2 Part V of the EP Act

5.2.1 Applicable regulations, standards and guidelines

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

The guidance statements which inform this assessment are:

Guidance Statement: Regulatory Principles (July 2015)

Guidance Statement: Setting Conditions (October 2015)

Guidance Statement: Land Use Planning (February 2017)

Guidance Statement: Licence Duration (August 2016)

Guidance Statement: Publication of Annual Audit Compliance Reports (May 2016)

Guidance Statement: Decision Making (February 2017)

Guidance Statement: Risk Assessments (February 2017)

Guidance Statement: Environmental Siting (November 2016)

5.2.2 Works approval and licence history

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

Table 5: Works approval and licence history

Instrument	Issued	Nature and extent of works approval, licence or amendment
W3700/2000/1	16/10/2002	Issued in relation to the construction of the facility and associated infrastructure. The works approval was issued with a design capacity of up to 100 tonnes per day of inert waste and green waste, which equates approximately to 36,500 tonnes per annual period
L7889/2000/1	15/12/2003	Issued for the operation of a Category 62 solid waste depot with a design capacity of 80,000 tonnes per annual period. Licence expired due to unpaid fees.
L8417/2010/1	25/11/2010	New Licence granted.
L8417/2010/2	14/11/2013	Licence renewed.

5.3 Compliance history

5.3.1 Compliance inspections

Table 6 details the compliance history of the Premises including findings and corrective actions taken by the Licence Holder.

Table 6: Compliance inspection summary

Date	Purpose	Findings	Corrective action taken
22/12/2015	Investigate a dust complaint from community.	Contrary to conditions of the Existing Licence: • Waste sorting activities had expanded beyond the enclosed waste receival and sorting shed infrastructure; and • External sorting and storage of waste was occurring	No action was taken at that time. The Licence Holder had made a number of historical amendment applications to the Department to amend the Existing Licence. The historical amendment applications had not been made in the Approved Form and the Licence Holder had not resubmitted the amendment applications in the Approved Form.
10/02/2016	Follow up on previous site inspection.	Officers observed that waste had been stored outside of the waste receival and sorting shed in breach of condition 1.3.3 of the Licence.	Environmental Field Notice (EFR) 3166 issued to cease screening activity outside the waste receival and sorting shed.
24/08/2016	Compliance inspection.	Confirmed that the Licence Holder was continuing to operate contrary to conditions of the Existing Licence.	Discussions with Licence Holder.
29/08/2016	Meeting	The then Acting Executive Director Compliance and Enforcement met with the Licence Holder on 29 August 2016 and advised that the licensee was obliged to comply with conditions of the Existing Licence until such time that DER has reviewed and amended the licence, subject to an amendment application being made by the Licence Holder in the approved form. Meeting held between the Licence Holder and the Department.	Discussions with Licence Holder.
25/10/2016	Site inspection to investigate community complaints.	The following observations were made by Department Officers: • The Licence Holder was still undertaking screening activities at the rear of the Premises without authorisation. • There was a substantial amount of dust across the Premises. • No asbestos testing had been undertaken. • There was unwrapped material (that appeared to be asbestos) segregated and located in a bin, at the rear of the Premises. • There was significant hydrocarbon staining on	Discussions with Licence Holder.

		concrete outside. When it rains there is a potential for hydrocarbons from the Premises to enter the stormwater drain. • There was a substantial amount of material stored on outside of the shed. • It appeared some kind of washing has been undertaken over a stormwater drain on the Premises. • Housekeeping on site was noted as poor.	
9/11/2016	Compliance inspection.	DWER Officers observed that waste was continuing to be stored and sorted outside of the receival and sorting shed in an alleged breach of the Licence.	EFR issued to Licence Holder to immediately remove all waste stored outside of the waste receival and sorting shed.
18/11/2016	Compliance inspection.	DWER Officers observed that waste was continuing to be stored and sorted outside of the receival and sorting shed in breach of the Licence.	Discussions with Licence Holder.
26/11/2016	Compliance inspection.	DWER Officers observed that waste was continuing to be stored and sorted outside of the receival and sorting shed in an alleged breach of the Licence.	Discussions with Licence Holder.

5.3.2 Annual Audit Compliance Reports and Annual Environmental Reports

2013/2014 Annual reporting period

Annual Audit Compliance Report (AACR) and Annual Environmental Report (AER) were submitted in accordance with condition 5.1.3 and 5.2.1 for the 2013 – 2014 annual period. The Licence Holder reported compliance with the Licence conditions for this period. The AER did not include information relating to inputs and outputs as required by condition 3.6.1 The AER did not include information relating to a summary of failures or malfunction of any pollution control equipment.

2014- 2015 Annual reporting period

Annual Audit Compliance Report (AACR) and Annual Environmental Repot (AER) have been submitted in accordance with condition 5.1.3 and 5.2.1 for the 2014 – 2015 annual period. Following a review of the AACR and AER as part of this assessment it is noted that the Licensee stated non-compliance with condition 1.3.3 for the storing of more than 100m^3 of waste in the receival shed and processing waste outside of receival shed due to lack of space and busy periods. The Licence Holder advised that no complaints had been received.

The Licence Holder advised that he intended to apply for a licence amendment to rectify the non-compliance.

5.3.3 Complaints history check

From 15 December 2015 to 21 April 2017, DWER received 12 complaints in relation to emissions arising from the Premises. The majority of the complaints received by DWER were related to dust emissions from the operations occurring outside of the shed. DWER also received two odour complaints and one complaint relating to noise and one complaint related

to vibration from the site.

- In response to one dust complaint that also contained concerns about the composition of dust emitted from the Premises, DWER Officers took 18 samples of soil from stockpiles and two solid samples from unprocessed stockpiles of the mixed waste material for analysis. The sampling and analysis identified two asbestos fibres bundles that were located outside of the waste receival and storage shed. In addition, two stockpiles that were sampled identified asbestos, analysis of these samples showed the concentrations estimated to be below 0.01g/kg.
- One complainant described that the Licence Holder had installed a 'water blanket' across the rear door which improved the situation. The complainant advised that it was only used for a short time after installation and that when the Licence Holder had stopped using it, dust issues were increasing again.
- The Licence Holder advised that he was using sprinklers on the conveyor belts.

Since constructing a waste sorting facility outside the enclosed waste receival and sorting shed, the Premises has been the subject of ongoing dust complaints from neighbouring commercial premises notifying of health and financial business impacts.

The Licence Holder claims that he has not received any complaints as a result of the unauthorised outside activities on the Premises. However, complaints and evidence submitted to DWER demonstrated that operations contrary to conditions of the Existing Licence were having impact at a neighbouring business.

Environmental field reports (EFRs) issued:

EFR 3156 was issued to the Licence Holder on 10 February 2016 in relation to petrol, diesel or other hydrocarbon emitted onto two concrete areas near storm water drains.

EFR 3166 was issued to the Licence Holder on 13 April 2016 in relation to undertaking a prescribed activity of category 61A of the *Environmental Protection Regulations 1987*, cease undertaking screening activities of material until such time that a works approval and licence is granted.

EFR 3188 was issued to the Licence Holder on 26 April 2017 in relation to DWER Officers observing water from dust suppression activities within the waste acceptance and sorting shed discharging into the storm water drain directly outside the shed. This water had come in contact with waste material therefore, may have contained contaminants and sediments.

Prevention Notice:

DWER issued a Prevention Notice under Section 73A of the *Environmental Protection Act 1986* to the Licence Holder on 21 April 2017 for waste being discharged other than in accordance with the licence conditions. The requirements of the notice include:

- Immediately stop all receival and sorting of waste on the Premises unless it is conducted within the waste receival and sorting shed in accordance with Condition 1.3.3 in Licence L8417/2010/2.
- Within six weeks of the date of this Prevention Notice, remove all waste from the Premises that is not stored in accordance with Licence L8414/2010/2.

The Prevention Notice was issued following non-compliance with EFR 3166.

The Licence Holder ceased operating outside in accordance with the PN.

5.3.4 Key findings

The Delegated Officer has reviewed the information regarding the compliance and complaints history relating to Premises and has found:

1. *The Licence Holder was operating a sorting and screening facility outside of the waste receival shed which is not approved by the Existing Licence.*
2. *Dust complaints started in 2015 after the Licence Holder operated the processing equipment outside of the receival and sorting shed.*
3. *DWER has issued an Environmental Field Report (EFR 3166) and tan Prevention Notice (PN) to stop the unauthorised activity and its impacts.*
4. *There have been no dust complaints since the PN was issued and the Licence Holder stopped the operation of the outdoors sorting and screening facility.*

6. Modelling and monitoring data

6.1 Monitoring of noise emissions

The Licence Holder submitted a Noise Level Assessment (2016) as part of their amendment application.

Noise level measurements of the operations of Redoak Corporation and West Bins were conducted with the results being used as the basis in determining compliance against the *Environmental Protection (Noise) Regulations 1997.*

Equipment in operation during the noise assessment: One truck, two loaders, generator, density separators, two vibrating screens.

A noise assessment based on measured noise levels was provided within the Application. Noise levels measurements were taken at four commercial / industrial receptors adjacent to the Premises as detailed in Figure 3.

Figure 3: Noise Assessment Map *sourced from Noise Level Assessment, 2016

Location / Description	Noise Level dB(A)
North-Western Boundary (Adjacent Lot B)	63
Western Boundary (Adjacent Lot A)	61
Southern Boundary (Adjacent Lot C)	75
Eastern Boundary (Adjacent Lot D)	78
Entry to Shed	85
Centre of Screens and Blowers	84

Figure 4: Noise Measurements *sourced from Noise Management Plan

Based upon the noise levels recorded above, noise levels were calculated to the neighbouring premises, taking into account the distance and barriers present shown in Figure 5 and Figure 6. The calculated noise levels are shown in

Figure 5: Boundary fence

Figure 6: End of machinery barrier

Receiver	Assessable Noise Level, dB(A)
Industrial Lot A	56
Industrial Lot B	58
Industrial Lot C	61
Industrial Lot D	64

Figure 7: Calculated noise levels *sourced from Noise Management Plan

The Noise Level Assessment concluded "for typical operations at West Tip Waste Management, compliance with the Environmental Protection (Noise) Regulations 1997 would be achieved at all location during the operating hours".

6.1.1 Key finding

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

1. *The noise measurements detailed in Figure 4 at the southern and eastern boundary do not meet the LA_{10} assigned levels of 65dB at the Premises boundary.*
2. *The Licence Holder has installed a colourbond and concrete 4m high barrier between the Premises and Lots C (southern) and D (eastern) as well as parts of Lots A. Lot B has a 1.8m barrier. Additionally, the ends of the blowers and screens have a barrier with a combination of concrete and anticon as shown in Figure 5 and Figure 6.*
3. *The noise levels were not re-measured but were calculated based on the distance to receptors and the barriers present and the Noise Level Assessment concluded that compliance with the Noise Regulations would be achieved.*

7. Consultation

Since issue of the Prevention Notice, the complainant has been contacted by the Department and has advised that since the outside screener was no longer operational, dust was at an acceptable level.

In accordance with section 45 of the EP Act the Chief Executive Officer sent a copy of the amendment application to interested parties including any complainants and the City of Swan and invited comment on the proposal. DWER received two representations in relation to the application. A summary of the representations received and how DWER has considered the submissions are included in Appendix 2.

The Licence Holder was provided a copy of the draft Decision Report and Licence for comment on 9 August 2017.

8. Location and siting

8.1 Siting context

The site is located within the City of Swan and is approximately 7330m² in area. The site is surrounded by commercial / industrial properties. The Suburb of Noranda a medium-high density residential area is approximately 730 metres south west of the site and is also located

within the City of Swan.

8.2 Residential and commercial / industrial receptors

The distances to residential and commercial / industrial receptors are detailed in Table 7.

Table 7: Receptors and distance from activity boundary

Land Uses	Distance from Prescribed Activity
Residential Premises	715m south west of the Premises boundary
Residential Premises	900m north east of the Premises boundary
Commercial / Industrial receptors	Immediately north, south east and west to the Premises boundary

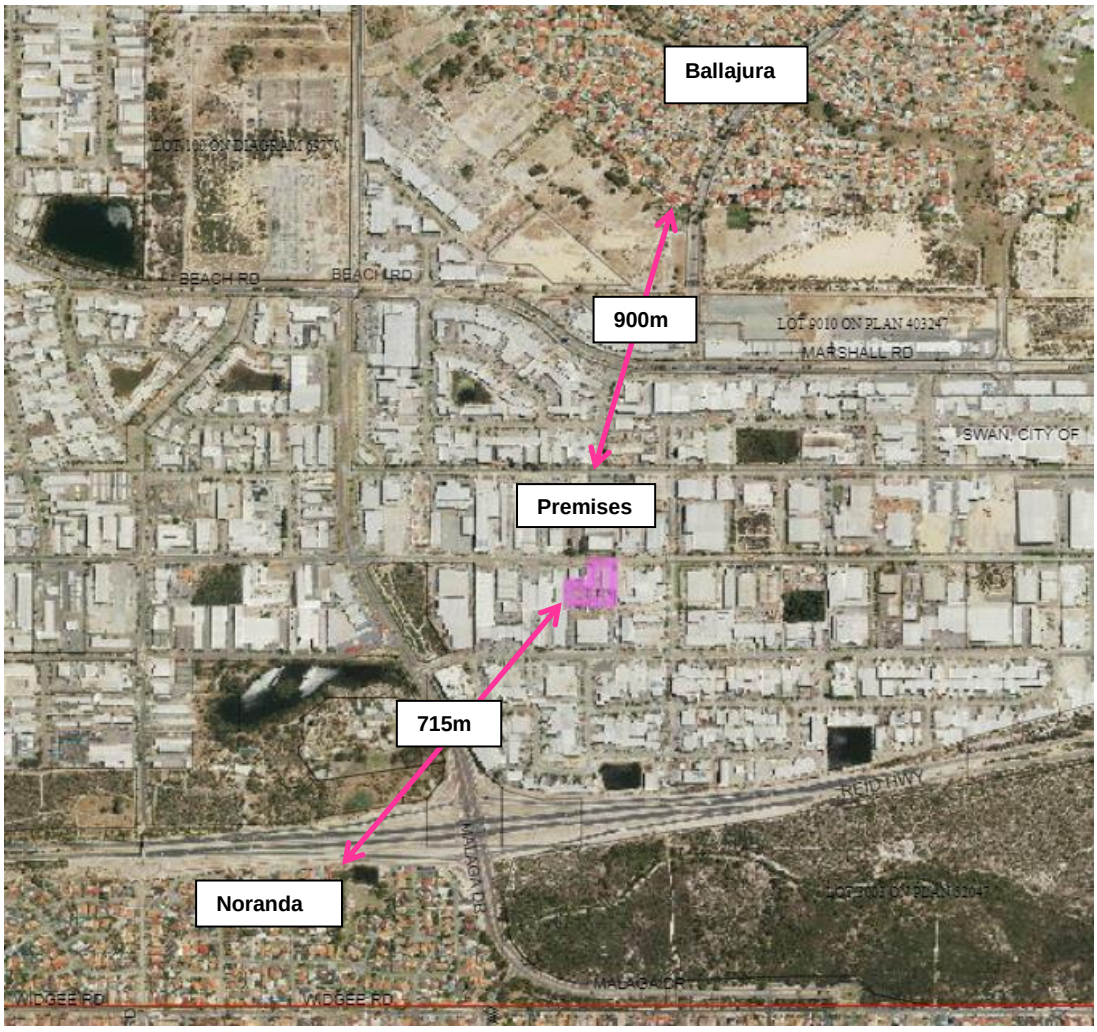


Figure 8: Aerial view of Premises and siting with sensitive receptors

8.3 Specified ecosystems

Specified ecosystems are areas of high conservation value and special significance that may be impacted as a result of activities at or Emissions and Discharges from the Premises. The distances to specified ecosystems are shown in Table 8 and as shown in Figure 9. Table 8 also identifies the distances to other relevant ecosystem values which do not fit the definition

of a specified ecosystem.

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

Table 8: Environmental values

Specified ecosystems	**Distance from the Premises**
Ramsar Sites in Western Australia	N/A
Important wetlands – Western Australia	N/A
South Coast Significant Wetlands	N/A
Geomorphic Wetlands	Wetlands – Geomorphic wetlands (classification) Swan Coastal Plain 160m south of the Premises, 200m east of the Premises, 300 metres south west of the Premises, 330 metres south east of the Premises, 400 metres north west of the Premises as shown on Figure 9.
Parks and Wildlife Managed Lands and Waters	N/A
Bush Forever: Regional open space or proposed regional open space	400 m south west of the Premises as shown on Figure 9.
Western Swamp Tortoise Habitat	N/A
Regional Parks	N/A
Waterways Conservation Areas	N/A
Threatened Ecological Communities and Priority Ecological Communities	N/A
Biological component	**Distance from the Premises**
Threatened/Priority Flora	N/A
Threatened/Priority Fauna	N/A

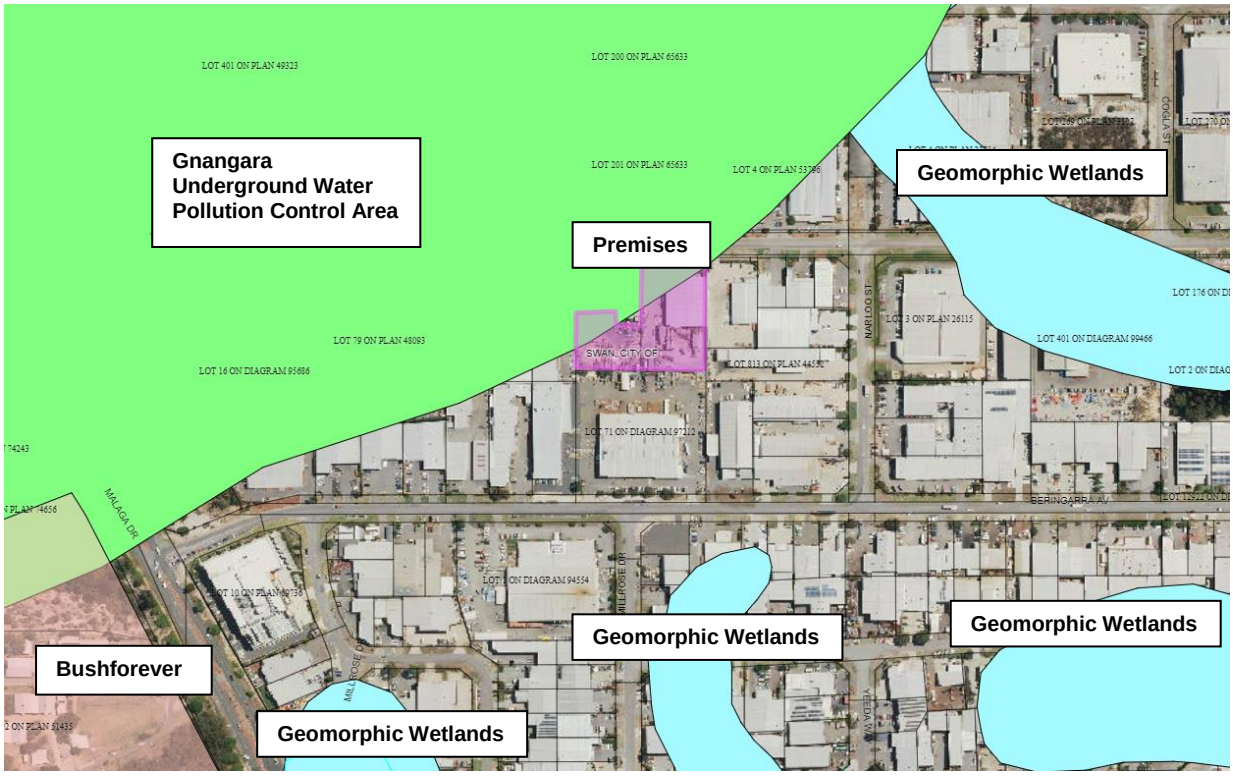


Figure 9: Aerial view of Specified Ecosystems

8.4 Groundwater and surface water sources

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

Table 9: Groundwater and water sources

Groundwater and water sources	Distance from Premises	Environmental value
Public drinking water source areas	Within the Premises boundary	Public Drinking Water Source Area (P3), Underground water pollution control area P3 areas are defined and managed to maintain the quality of the drinking water source for as long as possible with the objective of risk management as shown on Figure 9
Major watercourses/waterbodies	420m south west of the Premises	Hydrography, linear Lake - perennial
Groundwater	Depth to groundwater encountered at approximately 5m (based on the Department of Water's Groundwater Atlas).	Groundwater salinity is considered marginal with TDS being 500 – 1000mg/L (based on Department of Water's Groundwater Atlas)

8.5 Meteorology

The following wind roses (Figure 10) provide the annual wind direction and strength (km/h) for 9am and 3pm between the years 1994 to 206 in Perth Metro (BoM, 2016). The region has a dominant wind direction of north-easterly during the morning and south-westerly in the

afternoon (see 9.4 Risk Assessment – dust emission and impact) for further assessment.

It is important to note that these wind roses show historical wind speed and wind direction data for 1 May 1994 to 5 April 2016 weather station and should not be used to predict future data.

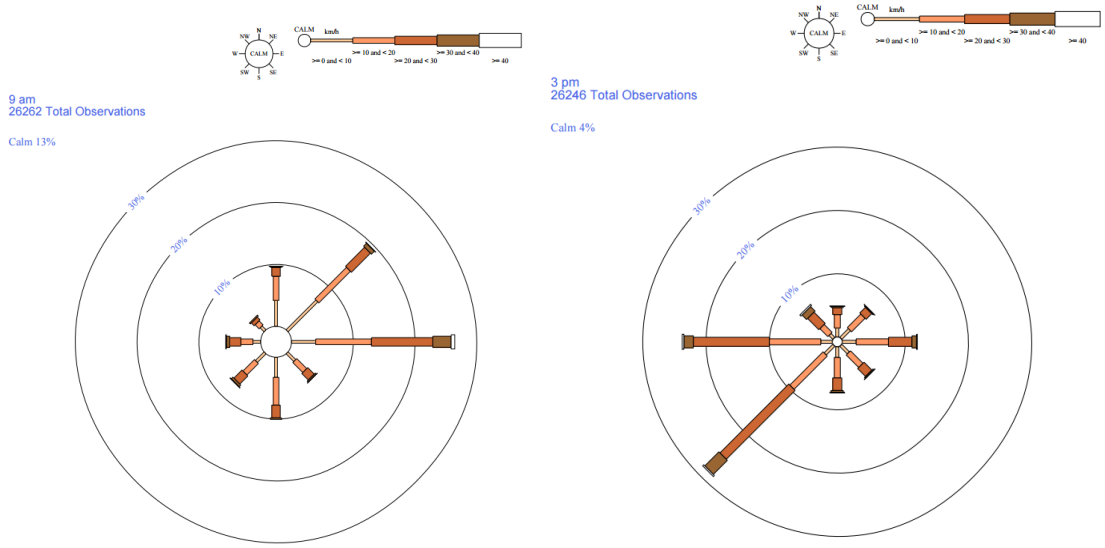


Figure 10: Wind roses for Perth Metro 9am and 3pm

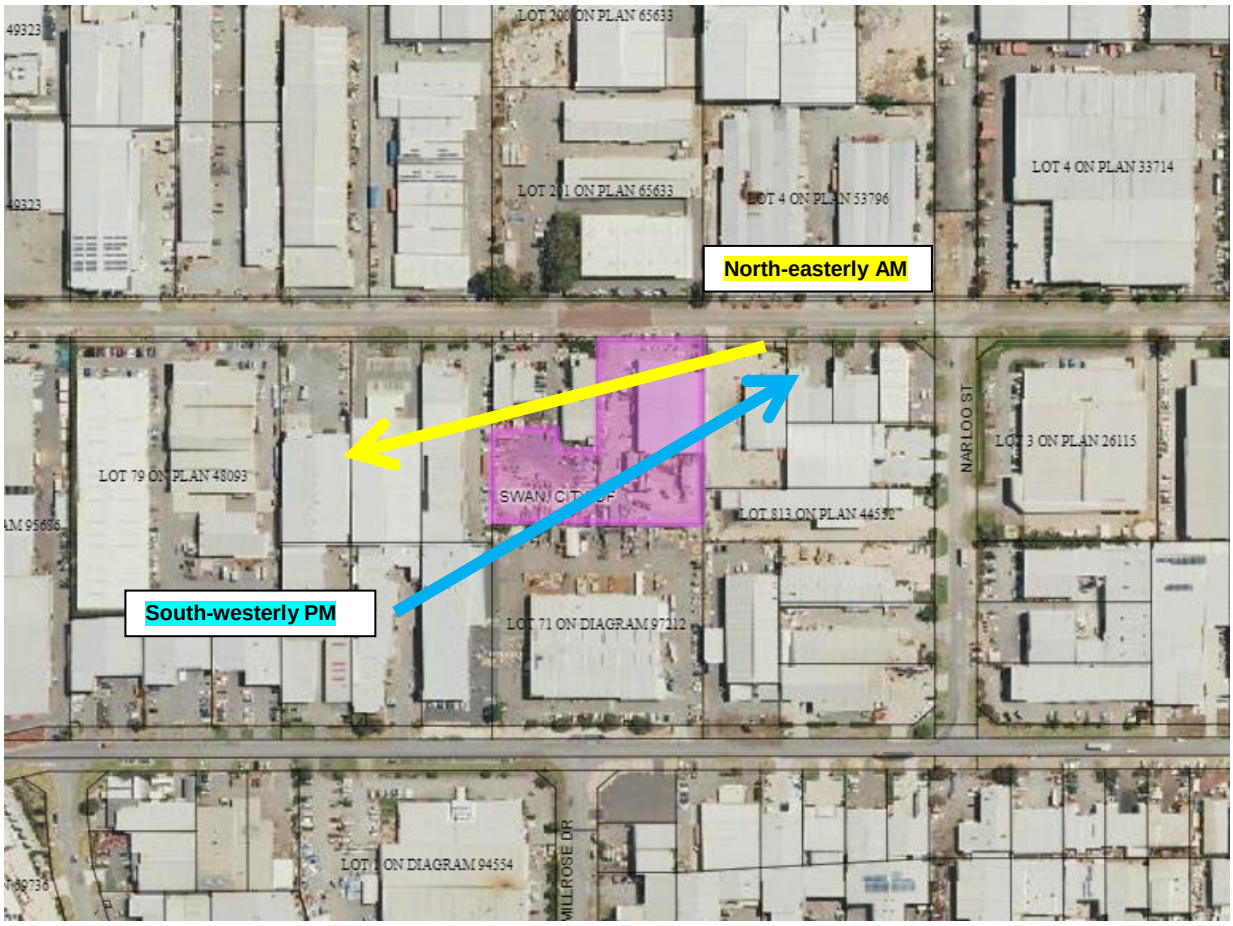


Figure 11: Aerial view of Premises with predominant wind directions

9. Risk assessment

9.1 Determination of emission, pathway and receptor

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

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission. Where there is no actual or likely pathway and/or no receptor, the emission will be screened out and will not be considered as a Risk.

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

Table 10. Identification of emissions, pathway and receptors during operation

Risk Events					Continue to detailed risk assessment	Reasoning
Sources/Activities	**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
Waste acceptance and handling	*Dust*	*Closest residential premises located 715m from the Premises boundary.* *Commercial / industrial properties located immediately adjacent to the Premises boundary.*	*Air / wind dispersion*	*Health impacts and amenity*	*Yes*	*See Section 9.4*
	Noise	*Closest residential premises located 715m from the Premises boundary.* *Commercial / industrial properties located immediately adjacent to the Premises boundary.*	*Air*	*Health impacts and amenity*	*Yes*	*See Section 9.6*
	Asbestos fibres from non-conforming waste types at the Premises being released into the air.	*Closest residential premises located 715m from the Premises boundary.* *Commercial / industrial properties located immediately adjacent to the Premises boundary.*	*Air / wind dispersion*	*Health impacts*	*Yes*	*See Section 9.5*

Risk Events					Continue to detailed risk assessment	Reasoning
Sources/Activities	**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
	Odour	*Closest residential premises located 715m from the Premises boundary.* *Commercial / industrial properties located immediately adjacent to the Premises boundary.*	*Air / wind dispersion*	*Health and amenity impacts*	*Yes*	*See Section 9.7*
	Leachate generated from putrescible waste	*Contamination of nearby surface water bodies and groundwater.*	*Stormwater drains throughout Premises.*	*Elevated nutrients, heavy metals and hydrocarbons leading to contamination of surface waters and ground water.*	*Yes*	*See Section 9.8*
Screening	*Dust*	*Closest residential premises located 715m from the Premises boundary.* *Commercial / industrial properties located immediately adjacent to the Premises boundary.*	*Air / wind dispersion*	*Health and amenity impacts*	*Yes*	*See Section 9.4*
	Noise	*Closest residential premises located 715m from the Premises boundary.* *Commercial / industrial properties located immediately adjacent to the Premises boundary.*	*Air*	*Health and amenity impacts*	*Yes*	*See Section 9.6*
	Asbestos fibres from non-conforming waste types at the Premises being released into the air.	*Closest residential premises located 715m from the Premises boundary.* *Commercial / industrial properties located immediately adjacent to the Premises boundary.*	*Air / wind dispersion*	*Health impacts*	*Yes*	*See Section 9.5*

Risk Events					Continue to detailed risk assessment	Reasoning
Sources/Activities	**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
Waste storage/product storage	*Dust from stockpiles*	*Closest residential premises located 715m from the Premises boundary.* *Commercial / industrial properties located immediately adjacent to the Premises boundary.*	*Air / wind dispersion*	*Health and amenity impacts*	*Yes*	*See Section 9.4*
	Leachate from the storage of putrescible waste	*Contamination of nearby surface water bodies.*	*Stormwater drains throughout Premises.*	*Elevated nutrients, heavy metals and hydrocarbons leading to contamination of surface waters and ground water.*	*Yes*	*See Section 9.8*
	Asbestos fibres from storage of incoming non-conforming waste types at the Premises being released into the air.	*Closest residential premises located 715m from the Premises boundary.* *Commercial / industrial properties located immediately adjacent to the Premises boundary.*	*Air / wind dispersion*	*Health impacts*	*Yes*	*See Section 9.5*
	Fire from the storage of combustible material.	*Closest residential premises located 715m from the Premises boundary.* *Commercial / industrial properties located immediately adjacent to the Premises boundary.*	*Air / wind dispersion*	*Health and amenity impacts*	*No*	*The Licence is subject to conditions that limit the type and quantity of combustible material that can be accepted on site (green-waste, cardboard and paper only).*

9.2 Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 11 below.

Table 11: Risk rating matrix

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

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

Table 12: Risk criteria table

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

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)**
Rare	The risk event may only occur in exceptional circumstances	Slight	• **onsite impact**: minimal • Specific Consequence Criteria (for environment) met	• **Local scale**: minimal to amenity • Specific Consequence Criteria (for public health) met

^ Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting.*
* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines.*
"onsite**"** means within the Prescribed Premises boundary.

9.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment Table 13 below:

Table 13: 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.

9.4 Risk Assessment – dust emission and impact

9.4.1 Description of dust emission and impact

The waste handling, processing and storage within the Premises may generate dust emissions which may result in health and amenity impacts near the Premises.

The potential sources of dust within the Premises are:

- material unloading upon delivery
- manual and mechanical sorting and screening along conveyors
- movement of material to storage areas
- storage of material (lift-off from stockpiles / bunkers)
- loading of material for transport off the Premises and

- vehicle movements.

9.4.2 Identification and general characterisation of emission

Dust in the form of airborne particulate matter (PM) may be generated by handling, processing and storing of Construction and Demolition Waste. It may also be generated from vehicle movements. Particulate matter is classified as total suspended particulates (TSP), PM_{10} and $PM_{2.5}$. The term TSP applies to particles of any size, suspended in ambient air. Since particles larger than 30 µm remain suspended for a relatively short period of time before deposition (compared to smaller particles), total suspended particles are in effect all ambient particles up to approximately 30 µm in diameter. Other categories of dust are differentiated as size fractions with PM_{10} describing particles of up to 10µm diameter and $PM_{2.5}$ particles of up to 2.5µm diameter respectively.

Due to the materials handled and the types of mechanical screening processes, the coarser particulate fractions which are best measured as TSP and PM_{10} are likely to be emitted from this type of industry. The proportion of coarser particles within a dust plume is larger, the closer a sample is taken from the originating source. With increasing distance from the source larger and heavier particles will settle out and only finer particles travel over extended distances. In the present situation dust impacts could occur at neighbouring properties adjacent to the dust source. It is therefore appropriate to choose TSP as dust category for monitoring impacts as it includes the coarser fractions of dust.

PM_{10} and $PM_{2.5}$ are both health relevant particle size fractions. Particles in this size range can be drawn deep into the lungs.

$PM_{2.5}$ is associated with particulate matter often generated from combustion processes and is a major consideration when assessing air pollution from vehicle emissions in cities but not likely to be generated in significant quantities from the activities taking place on the premises.

9.4.3 Description of potential adverse impact from the emission

Dust emissions have the potential to impact public health when inhaled; affecting both the respiratory and cardiovascular systems. Factors that may influence the health effects related to exposure to particles include chemical composition and physical properties of the particle, the mass concentration of airborne particles, the size of the particles and duration of exposure. Risks from certain types of particles are further discussed in section 9.5 in relation to asbestos fibres.

Amenity may also be impacted by visible dust plumes and the deposition of material on a variety of surfaces such as vehicles, dwellings, clothing and products.

The submissions from the community consultation (as detailed in Appendix 2) have raised serious concerns with the dust emissions from the Premises impacting on a neighbouring business. Concerns relate to potential health impacts to employees working outside on adjacent premises through exposure to high dust concentrations in the air.

Amenity impacts have been documented and described by the complainants as substantial dust deposition at the product laydown area with dust being deposited on products and rendering it unsalable on some occasions.

Based on the community feedback received and the distances to potential receptors, the receptors most likely to be affected by dust emissions are businesses located immediately adjacent to the Premises.

As shown in Figure 10 the dominant wind direction is a south-westerly in the afternoon that may support the complainants concerns of dust impacts.

9.4.4 Criteria for assessment

Health relevant criteria for air quality are defined by the National Environment Protection (Ambient Air Quality) Measure (NEPM) 2003 which recommends, for the relevant particulate parameter of PM_{10} that 50µm/m³ is not exceeded over a 24 hour averaging period. However, this criterion has been developed for application to residential situations where a residential population is exposed to air pollution, not a commercial or industrial setting where employees may be exposed to elevated dust concentrations temporarily during their work hours. The application of the NEPM air quality guidance also requires air quality monitoring to specified Australian Standards. In the current setting of the Premises, surrounded by buildings which influence air movement and dust deposition, a monitoring setup as required by the NEPM guideline would not be possible. For these reasons the NEPM criteria cannot be usefully applied in this context.

Amenity impacts are caused by dust deposition. The most appropriate parameter to be measured for amenity impacts is TSP because it accounts for all dust particulates including the coarser fractions of particles.

The most suitable approach for the present situation is to develop site specific criteria. These should be derived taking into account a baseline dust level that exists while the new outdoors facility is not in operation. There were no complaints about excessive dust while the new outdoors facility was not in operation and complainants confirmed that dust issues only started when the facility was operated. Site specific criteria would be defined as elevated dust levels above the baseline concentration thus indicating when dust suppression controls are not effective. In addition dust deposition monitoring can be implemented to document the dust deposition rates on a monthly basis. In the absence of impact criteria for dust deposition, the monthly data will provide a quantifiable measure of impact, which together with particulate monitoring of the open air can be used to evaluate and verify complaints and the effectiveness of dust controls.

9.4.5 Licence Holder controls

This assessment has reviewed the existing dust controls set out in Table 14. In response to the PN issued on 21 April 2017, the Licence Holder installed a number of dust controls to improve dust management on site, these controls have been set out in Table 15.

This assessment has reviewed the controls set out in Table 14 and Table 15 below.

Table 14: **Licence Holder's proposed controls for dust emission and impact**

Process / Source	Control(s)	Operation details
Unloading of waste	Containment (shed). Water sprinklers and ceiling mist sprays.	All waste is delivered into the existing shed for initial inspection and sorting. Sprinklers are set up throughout the existing shed to maintain waste in a damp state.
Primary vibrating screen	Containment (located within existing shed). Water sprinklers along the screener.	Sprinklers have been installed to control the moisture of the material going through the sorting process.
Screen pan feeder	Sprinklers	Sprinklers have been installed to control the moisture of the material going through the sorting process.
Secondary vibrating screen	Containment	Covered by a customised lid to prevent dust emissions.

Process / Source	Control(s)	Operation details
Density separators	Containment and sprinklers	Water sprays mounted between and above the equipment to suppress dust generation. Surrounded by a colourbond enclosure.
Material conveyors	Containment and sprinklers	Sprinklers fitted along the length of the conveyors and at the discharge points. Raised side extensions to prevent material spillage from the conveyors and reduce wind impact.
Storage of waste	Sprinklers Bins	Concrete and bricks are contained in concrete bunkers with sprinkler system. Sand is stored in free standing stockpiles with sprinkler system. Timber, plastic, cardboard and scrap steel are stored in bins. Light waste is stored within a cage with a sprinkler system.
Loading / unloading of waste	Containment.	Roller door installed at the entrance of the load out bay and is to remain closed during unloading of waste.
Fugitive dust from traffic areas and sealed surfaces.	Fencing / containment Sealed roads Street sweeper	South western portion of the Site boundary has a 4m high colourbond fence. Roads are constructed of asphalt or sealed concrete. Activities will cease during dusty conditions. Vehicles restricted to 15km/hr

**Sourced from the Waste Bin Waste Control Pty Ltd 'Dust Management Plan'

The additional dust controls have been included by the Licence Holder in response to the PN issued on 21 April 2017, the controls are set out in Table 15 below.

Table 15: Licence Holder's additional controls for dust emissions and impacts

Process / Source	Control(s)	Operational details
Conveyors	Containment Sprinklers	Covers have been installed over the external conveyors and screening equipment. Shade cloth type covers have been installed at the light material storage bay. Sprinklers to be kept operational at all times when equipment is in operation.
Unloading of waste	Containment (roller door) Sprinklers	New roller door installed at the exit of the load out bay. Additional sprinklers installed above the loadout bay roller door. Both roller doors will be closed during loading and unloading of wastes.

Process / Source	Control(s)	Operational details
Storage of waste	Sprinklers	Improved water sprays
Fugitive dust from traffic areas and sealed surfaces	Fencing / containment Water cart	Additional internal fencing: • extension of an existing fence from 5m to 8m high, that includes a return on the top of the fence • new fence encloses the void below the second picking station Water tanker continuously available on site.

On 7 July 2017 Department Licensing Officers attended the Premises and discussed the issue of dust emissions with the Licence Holder. The Licence Holder was advised that the Department had concerns with the proposed dust emission controls not being effective. The Officers advised the Licence Holder that dust monitors may be required and would be implemented to:

1. be an additional dust control, providing feedback on dust levels triggering additional corrective actions to be taken or work stoppages to occur; and
2. be used to confirm whether the dust controls are effective or not.

The Licence Holder also advised the Officers that they had considered enclosing the outdoor sorting and screening facility within a shed as a dust control, however it was likely to take around three to four months to install. The operational details of the new proposed waste processing shed are detailed in Table 16 below.

Table 16: Waste processing shed

Process / Source	Control(s)	Operational details
Screeners / conveyors and density separators	Waste processing shed	The waste processing shed be constructed to enclose all dust producing operations. The shed must be sealed to prevent dust escaping. Vehicle access opening to the shed is to be designed to minimise dust emissions by: • cladding to extend at least 2 metres downwards from the roof • installing and operating sprinklers so that a “misting curtain” forms that prevents dust from leaving the shed

The additional controls as discussed above have been considered in the risk assessment of dust emissions.

9.4.6 Key findings

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

1. *The operation has the potential to generate fugitive dust emissions that can cause amenity and health impacts at neighbouring premises.*
2. *The type of dust emitted from the Premises is most suitably characterised as TSP.*

3. *Current Licence Holder dust controls are based on the principles of containment and wetting.*
4. *The Licence Holder has installed additional dust controls at the new outdoors screening and sorting facility.*
5. *The Licence Holder has also proposed to install a new shed to completely enclose the outdoor operating facility as a second phase of dust control implementation.*

9.4.7 Risk Assessment of Dust – prior to shed

9.4.8 Consequence

If the emission of dust occurs, then the Delegated Officer has determined that the impact of such dust emissions on receptors may be Specific Consequence Criteria (for public health) are at a risk of not being met, and midlevel offsite impacts on a local scale. Therefore, the Delegated Officer considers the consequence of dust emission and impact to be **Major.**

9.4.9 Likelihood of Risk Event

The Delegated Officer has determined that dust being emitted and causing amenity or health impacts could occur at some time. Therefore, the Delegated Officer considers the likelihood of dust emission and impact to be **Possible.**

9.4.10 Overall rating of dust emission and impact (prior to shed)

The Delegated Officer has compared the consequence and likelihood ratings described above for the Risk Criteria Table 11 and determined that the overall rating for the risk of dust on receptors during operation is **High*.***

9.4.11 Risk Assessment of Dust – post construction of shed

9.4.12 Consequence

If the emissions of dust occurs, then the Delegated Officer has determined that the impact of such dust emissions on receptors may be low level offsite impacts. Therefore, the Delegated Officer considers the consequence of dust emissions and impact to be **Moderate.**

9.4.13 Likelihood of Risk Event

The Delegated Officer has determined that dust being emitted and causing amenity of health impacts could occur at some time. Therefore, the Delegated Officer considers the likelihood of dust emission and impact to be **Possible.**

9.4.14 Overall rating of dust emission and impact (post construction of shed)

The Delegated Officer has compared the consequence and likelihood ratings described above for the Risk Criteria Table 11 and determined that the overall risking rating for the risk of dust on receptors during operation is **Medium.**

9.5 Risk Assessment – asbestos fibres emission and impact

9.5.1 Description of asbestos fibres emission and impact

Asbestos is a hazardous material that was used extensively in Australian buildings and structures from the 1950s through to 1990. Due to this widespread use, there is potential for the incoming wastes to contain asbestos fibres.

The Existing Licence allows the acceptance of asbestos for consolidation prior to removal off-site.

There is also a potential for the waste handling, processing and storage within the Premises to have the potential to release asbestos fibres, as asbestos may be contained within loads of waste delivered to the Premises for sorting and screening. Asbestos fibres may cause health impacts for people nearby the Premises or final end users of products produced on the Premises.

The potential sources for the release of asbestos fibres within the Premises are:

- material unloading upon delivery;
- manual and mechanical sorting and screening;
- movement of material to storage areas;
- storage of material; and
- loading of material for transport off the Premises.

9.5.2 Identification and general characterisation of emission

The frequency and time of exposure of receptors to asbestos fibres would vary depending on the degree of contamination of the waste materials within the Premises, the activities carried out at the Premises, and weather conditions.

9.5.3 Description of potential adverse impact from the emission

Asbestos fibres have the potential to impact public health when inhaled; severe health impacts include asbestosis and mesothelioma.

9.5.4 Criteria for assessment

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

The Existing Licence does not have any conditions relating to the management of asbestos or require the Licence Holder to monitor for asbestos.

9.5.5 Licence Holder controls

An Asbestos Management Plan was submitted to DWER on the 8 November 2016 as part of this amendment application which consists of the controls outlined in Table 17 below.

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

Table 17: **Licence Holder's proposed controls for asbestos fibres emissions**

Source	Control(s)	Operation details
Incoming waste	Pre-acceptance procedures for Asbestos material	• Customers are advised that asbestos is only acceptable at the Facility delivered as a dedicated load and that the asbestos is appropriately wrapped. • The facility entrance sign identifies that asbestos is only accepted at the Facility if in a dedicated load and appropriately wrapped.
	Pre-acceptance	• Customers are advised that asbestos is not accepted at the

Source	Control(s)	Operation details
	procedures for all other loads	Facility in mixed loads. • Waste bins operated by the Licence Holder have 'no asbestos warning. • Facility entrance sign identifies that asbestos is not accepted in mixed loads.
	Acceptance procedures for asbestos material	• The load is inspected prior to offloading to confirm that only asbestos is in the load and that it is appropriately wrapped. • Acceptable loads are then directed to the Temporary Asbestos Storage Area where the bin containing asbestos is unloaded and stored, or the wrapped asbestos is consolidated. • Any unloading, handling and loading of wrapped asbestos is to occur with care to ensure that the wrapping is not damaged.
	Acceptance procedures for High Risk Loads (skip bins)	• The load in inspected prior to off-loading. • If any asbestos identified, the load is rejected and removed from the facility and the load recorded. • Accepted loads are directed to the tipping area, where the load is wet down and unloaded in the materials inspection area. • Material is spread out in a layer approximately 300mm thick and re-inspected. • If asbestos material is detected, the load is isolated and re-inspected to assess the degree of asbestos contamination. • If the contaminated load contains only a few random large pieces of ACM, the asbestos is removed and the remainder of the load is then added to the uncontaminated waste pile. If ACM is not easily removed, the whole load is rejected. • If the asbestos contaminated load contains Asbestos Fines (AF) or Fibrous Asbestos (FA), the complete load is isolated and treated as being asbestos contaminated. • All confirmed asbestos contaminated material is removed from the Facility within 48 hours.
	Acceptance procedures for Low Risk loads	• Loads classified as Low Risk (commercial loads of clean concrete – without formwork, clean brick and clean bitumen/asphalt) must be visually inspected while the material is being unloaded to determine whether any asbestos can be identified. • Is suspect FA or AF, are detected, the load must be isolated, kept wet and removed from site. • If suspect ACM is identified, the load must be reclassified as High Risk.
Waste processing	Material processing procedures	• Dust Management
Waste storage	Stockpile management	• Material on site is maintained in two separate stockpiles for unprocessed and processed material tested for asbestos with 3m distance or stored in bunkers and clearly identified. • Dust management.

Source	Control(s)	Operation details
Final product	Sampling and analysis program	• Regular sampling and analysis of the inert screened material. • Activities relating to the processing of inert building material and sand screened to <10mm is sampled and analysed. • The asbestos content of the screened material is not to exceed 0.001% asbestos weight for weight. • The sampling of the screened fines products occurs at a minimum of 14 samples per 1000m³ or 1 sample per 70m³ of product.

9.5.6 Key findings

The Delegated Officer has reviewed the information regarding asbestos fibre emissions from the Premises and found that:

1. *Samples of mixed Waste within the waste receival and sorting shed were found to contain asbestos. The Asbestos content was estimated to be below 0.01g/kg.*
2. *The Licence Holder submitted an Asbestos Management Plan as part of this amendment.*
3. *The Licence Holder's Asbestos Management Plan has been derived from DWER's Asbestos Guidelines.*
4. *The Waste containing Asbestos content was found on site prior to the Licence Holder implementing his Asbestos Management Plan.*

9.5.7 Consequence

If the emission of asbestos fibres occurs, then the Delegated Officer has determined that the impact of exposure of receptors to asbestos fibres may be ongoing medical treatment or loss of life. Therefore, the Delegated Officer considers the consequence of asbestos fibres emission and impact to be **Severe.**

9.5.8 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood that asbestos fibres being emitted in concentrations above 0.001% asbestos weight for weight (w/w) for asbestos content, and causing health impacts will probably not occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of asbestos fibres emission and impact to be **Unlikely.**

9.5.9 Overall rating of asbestos fibres emission and impact

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix Table 11 and determined that the overall rating for the risk of asbestos emission and impact is **High**.

9.6 Risk Assessment – noise emission and impact

9.6.1 Description of noise emission and impact

Waste handling and processing within the Premises may generate noise emissions which may result in health and amenity impacts for people nearby the Premises.

The potential sources of noise within the Premises are:

- operation of vehicles (trucks making delivery or pickup, front end loaders, excavators, conveyors and the water cart); and
- operation of the screening infrastructure.

9.6.2 Identification and general characterisation of emission

The Premises typically operates between the hours of 7:00am to 5:00pm Monday to Friday and 7:00am to 1:00pm Saturday.

9.6.3 Description of potential adverse impact from the emission

Noise emissions have the potential to reduce public well-being, amenity and comfort of noise sensitive receptors (residential dwellings) located approximately 715 metres south west and 915 metres north east of the Premises and commercial / industrial neighbouring properties located immediately adjacent to the Premises.

9.6.4 Criteria for assessment

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

The Licence Holder provided a Noise Level Assessment Report, 2016. Noise measurements were taken under normal operations. Noise measurements at the southern and eastern boundary did not meet the Noise Regulations of 65dB at the Premises boundary.

9.6.5 Licence Holder controls

The Licence Holder has a number of noise controls to reduce the noise emissions on site. These include:

- Density separator sound proofing.
- Colourbond fencing and concrete fencing has been installed along the boundary of the Premises at 4m height at the south of the Premises.
- Lot A and Lot B have a 1.8m height barrier.
- Barriers at the end of the blowers and screeners with a combination of concrete and Anticon.

The Noise Level Assessment Report used the noise levels recorded and used the distance to receptors and the additional noise controls to calculate the predicted noise levels. The Report concluded that noise emitted from the Premises would meet the assigned levels of the Noise Regulations during operation.

9.6.6 Key findings

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

1. *According to the noise measurements detailed in Figure 4 taken from the Noise Assessment 2016, the noise emissions exceed the LA_{10} assigned levels of 65dB, however the acoustic consultant has calculated the noise levels at the receiving premises and the noise levels are compliant with the assigned levels.*
2. *The Licence Holder has noise controls around infrastructure to reduce noise emissions.*

9.6.7 Consequence

The Delegated Officer has determined that noise may not meet the Specified Consequence Criteria (Noise Regulations) at receptors. Therefore, the Delegated Officer considers the consequence to be **Moderate.**

9.6.8 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood of noise emissions exceeding the Specified Consequence Criteria (Noise Regulations) could occur at some time. Therefore, the Delegated Officer considers the consequence to be **Possible.**

9.6.9 Overall rating of noise emission and impact

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix Table 11 and determined that the overall rating for the risk of noise emissions and impact is **Medium.**

9.7 Risk Assessment – odour emission and impact

9.7.1 Description of odour emissions and impact

Odour emissions generated from the acceptance and storage of putrescible wastes causing an adverse impact on people outside of the Premises.

9.7.2 Identification and general characterisation of emission

The Licence Holder is authorised to accept green-waste, cardboard and paper only.

9.7.3 Description of potential adverse impact from the emission

Individual responses to odour emissions may vary depending on age, health status, sensitivity, and odour exposure patterns. Perceived odour intensity may increase or decrease on exposure. Community response to an odour can include annoyance, potentially leading to stress, and loss of amenity. Exposure to repeated odour events can create a nuisance effect.

9.7.4 Criteria for assessment

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

9.7.5 Licence Holder controls

The Licence Holder stores putrescible material within a sealed container that is covered with a tarpaulin during wet weather. Putrescible wastes are removed off-site within 48 hours of receipt.

9.7.6 Key findings

The Delegated Officer has reviewed the information, relating to odour emissions and found that:

1. *The Licence Holder is only proposing to approximately 8,000 tonnes per annum of putrescible wastes**;***
2. *There has been one odour complaint, however it was not verified by the Department; and*

3. *Putrescible waste is stored in containers and covered with a tarpaulin in the event of rain.*

9.7.7 Consequence

If the odour emissions and impact occurs*, then* the Delegated Officer has determined that the impact of low level impacts to amenity will be minimal offsite impacts on a local scale. Therefore, the Delegated Officer considers the consequence of odour emissions and impact to be **Minor.**

9.7.8 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood of odour emissions and impact occurring will probably not occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of Risk Event 1 to be **Unlikely.**

9.7.9 Overall rating of Odour emissions and impact

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix Table 11 and determined that the overall rating for the risk of odour emissions and impact is **Medium.**

9.8 Risk Assessment – leachate emission and impact

9.8.1 Description of liquid waste discharge emission and impact

Emissions of liquid waste or leachate from the storage of putrescible wastes discharging into the environment through the stormwater drains impacting the geomorphic wetlands located 120m from the Premises boundary and groundwater that is approximately 5mBGL.

9.8.2 Identification and general characterisation of emission

Leachates generated from the storage of green waste may contain organic compounds terpenes, phenols and / or have high biological oxygen demand (BOD) and nutrient concentrations being generated from green waste stored at the Premises. Other putrescibles are limited and considered to have low leachability potential.

9.8.3 Description of potential adverse impact from the emission

Leachates may enter surface water or groundwater in the area causing aquatic organism death or bioaccumulation of contaminants in the surrounding ecosystems. Groundwater is found at a depth of five metres and the nearest surface water body is approximately 160 metres south of the Premises. The Premises has a number of interconnected storm water drains that could provide a pathway to the environment.

9.8.4 Criteria for assessment

Impacts to groundwater can be assessed against the Australian Drinking Water Guidelines (NHMRC/ARMCANZ, 2011) as well as the Non-Potable Use Guidelines (DoH, 2014).

9.8.5 Licence Holder controls

The Licence Holder removes putrescible wastes from the Premises within 48 hours. This practice is likely to reduce the likelihood of leachates generating on site. Additionally the Licence Holder has stated within the application that, should the material have the potential to be damaged by rain (paper and cardboard) or generated contaminated surface water runoff (oil filters / oily rags), storage bins are covered with tarpaulin to prevent rainwater ingress.

9.8.6 Key findings

The Delegated Officer has reviewed the information regarding leachate emission and impact and has found that:

1. *There is limited putrescible material accepted and stored on site.*
2. *The majority of the site is on a sealed surface.*
3. *The storm water drains on site are not sealed and have the potential to discharge sediments off site.*
4. *The Licence Holder is placing on tarpaulin on bins to prevent rainwater ingress for putrescible materials, therefore the potential for leachate to be generated outside of the shed is unlikely.*

9.8.7 Consequence

If liquid waste discharge emission and impact occurs, *then* the Delegated Officer has determined that the impact of minimal will be offsite impacts at a local level. Therefore, the Delegated Officer considers the consequence of liquid waste discharge emission and impact to be **Minor.**

9.8.8 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood of liquid waste discharge emission and impact occurring could occur at some time. Therefore, the Delegated Officer considers the likelihood of liquid waste discharge emission and impact to be **Unlikely.**

9.8.9 Overall rating of liquid waste discharge emission and impact

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix Table 11 and determined that the overall rating for the risk of liquid waste discharge emission and impact is **Medium.**

9.9 Summary of acceptability and treatment of Risk Events

A summary of the risk assessment and the acceptability or unacceptability of the risk events set out above, with the appropriate treatment and control, are set out in Table 15 below. Controls are described further in section 10 Regulatory controls of this decision report.

Table 18: 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 (outdoor operations)	Acceptance / storage and processing of waste	Air/wind to sensitive receptor causing health impacts and amenity impacts from inhalation of dust.	Infrastructure and management controls	Moderate consequence Likely likelihood **High Risk**	Acceptable subject to Licence Holder controls being conditioned and regulatory controls.
2.	Fugitive Dust (indoor operations only)	Acceptance / storage and processing of waste	Air/wind to sensitive receptor causing health impacts and amenity impacts from inhalation of dust.	Infrastructure and management controls	Moderate consequence Possible likelihood **Medium risk**	Acceptable subject to regulatory controls
3.	Noise	Vehicles and equipment / infrastructure	Air to sensitive receptor impacting on well-being amenity and comfort.	Infrastructure and management controls.	Moderate consequence Unlikely likelihood **Medium risk**	Acceptable subject to regulatory controls
4.	Odour	Putrescible material	Air / wind impacting on sensitive receptors well-being, comfort and amenity.	Limiting the putrescible material on site to green-waste, paper and cardboard only and limiting the time putrescible material will remain on site.	Minor consequence Unlikely likelihood **Medium Risk**	Acceptable subject to regulatory controls.
5.	Asbestos	Non-conforming waste accepted on site and processed through screeners. Asbestos material not handled correctly when	Air/wind to sensitive receptor causing health impacts from inhalation of fibres.	Management controls	Severe consequence Rare likelihood **High Risk**	Acceptable subject to Licence Holder controls being conditioned and regulatory controls.

	Description of Risk Event			Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
	Emission	**Source**	**Pathway/ Receptor** **(Impact)**			
		consolidating				
6.	Leachate discharge	Oil-water separator Leachate from storage of putrescible material Truck washout	Stormwater drains.	Putrescible waste to be stored on site for 48 hours.	Minor consequence Possible likelihood **Medium Risk**	Acceptable subject to regulatory controls.

10. Regulatory controls

A summary of regulatory controls determined to be appropriate for the Risk Event is set out in Table 19. The risks are set out in the assessment in section 9 and the controls are detailed in this section. DWER will determine controls having regard to the adequacy of controls proposed by the Licence Holder. The conditions of the Licence will be set to give effect to the determined regulatory controls.

Table 19: Summary of regulatory controls to be applied

		Controls (references are to sections below, setting out details of controls)						
		11.1.1 Throughput restrictions	**11.1.2 Waste restrictions and classification**	**11.1.4 Waste acceptance and load inspection**	**11.1.5 stockpile / bunker management**	**11.1.6 Infrastructure and equipment**	**11.1.8 Product testing and supply**	**11.1.7 Monitoring**
Risk Items (see risk analysis in section 9)	**1. Dust from waste handling, storage, processing and vehicle movements (outdoor operations)**	●			●	●		●
	2. Dust from waste handling, storage, processing and vehicle movements (indoor operations)	●			●	●		●
	3. Asbestos fibres from waste handling, processing and storage		●	●	●	●		●
	4. Asbestos fibres in final product		●	●	●		●	
	5. Noise from waste handling and processing	●				●		●
	6. Odour from waste acceptance and storage	●	●	●				
	7. Leachate from waste acceptance & storage	●	●	●		●		

10.1 Licence controls

10.1.1 Throughput restrictions

The Licence Holder must only accept Clean Fill, Inert Waste Type 1, Inert Waste Type 2, Putrescible Waste (green-waste, cardboard and paper only) and Special Waste Type 1 (asbestos).

The Licence Holder shall be subject to total annual volumes limitations of throughput of a combined total of 80,000 tonnes of Waste for Clean Fill, Inert Waste Type 1 and Inert Waste Type 2.

Putrescible Waste and Special Waste Type 1 is limited to 8,000 tonnes per annual period.

The Licence Holder will be required to record volumes of incoming and outgoing Waste.

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

Grounds: the likelihood of odour and leachate emissions are related to the types of Putrescible Waste to be accepted on the Premises. Limiting the types of Putrescible Wastes will impact the sources of odour and leachate.

10.1.2 Waste restrictions and waste classifications

The Licence Holder must only accept Clean Fill, Inert Waste Type 1, Inert Waste Type 2, Putrescible Waste (green-waste, paper and cardboard only) and Special Waste Type 1 (Asbestos).

The Waste acceptance has been separated into Mixed Waste Loads and Dedicated Loads.

Mixed Waste Loads includes all Clean Fill, Inert Waste Type 1 and 2 and Putrescible Waste. The Licence Holder must only accept Mixed Waste Loads that does not contain visible asbestos or ACM. The Licence Holder must comply with a number of acceptance criteria, including maintaining a visible sign at the entrance at the Premises and signed declarations from the suppliers. The Licence Holder must visually inspect loads as they arrive at the Premises, reject loads suspected of containing asbestos and maintain accurate records.

Dedicated Loads are Special Waste Type 1 (asbestos) that can only be accepted on site for consolidation and storage prior to removal off-site. The Asbestos must only be accepted at the Premises if it is appropriately wrapped and labelled.

Note: These controls are derived from the Department's Asbestos Guidelines (DEC, 2012), which the Licence Holder has implemented as part of its Asbestos Management Plan (November 2016).

Grounds: These controls are derived from the Department's Asbestos Guidelines (DEC, 2012) which the Licence Holder has implemented as part of its Asbestos Management Plan (November, 2016).

The Licence Holder is required to store all Dedicated Loads (Asbestos) within a secure area that is clearly marked and delineated.

Grounds: This condition has been included to ensure that Asbestos is kept separate to prevent mixing with Mixed Waste Loads.

10.1.3 Waste acceptance and load management

The Licence Holder must maintain a designated unloading area where Wastes cannot mix, maintain solids wastes in a damp state, maintain records for Classified Loads and continue to

visually inspect loads at all stages of storage, sorting and screening.

Grounds: These controls are derived from the Department's Asbestos Guidelines (DEC, 2012) which the Licence Holder has implemented as part of its Asbestos Management Plan (November 2016).

Putrescible Waste must be removed from the Premises within 48 hours of acceptance.

Grounds: the acceptance and storage of Putrescible Wastes are related to odour and leachate emissions. The longer the putrescible waste is stored on site, the more potential there is for the waste to start to decompose and create odour emissions and leachate.

10.1.4 Stockpile / bunker management

The Licence Holder must within three months of the date of the Revised Licence issue, maintain unprocessed, tested processed and untested processed material in three separate stockpiles. Unprocessed stockpiles and product stockpiles should also be kept clearly separate at a minimum three metre distance. Signage must also be erected on respective stockpiles to clearly identify and delineate tested products, untested products and unprocessed waste.

Grounds: Separation of stockpiles and clear signage addresses the risk of cross-contamination between processed and unprocessed waste to provide effective controls to mitigate the risk of potential asbestos contamination in materials.

The Licence Holder must ensure that putrescible materials are stored in a bin / concrete bunded hardstand that is covered with tarpaulin.

Grounds: the above controls have been derived from the Licence Holder's current controls to manage leachate.

10.1.5 Noise emission controls: Infrastructure and equipment

The Licence Holder must maintain the following equipment to control noise emissions at the Premises:

- Fencing; and
- Barriers along the screeners and conveyors.

Grounds: the above infrastructure controls have been derived from the Licence Holder's current controls to manage noise emissions on site.

10.1.6 Dust emission controls: Infrastructure and equipment

The Licence Holder must maintain the following equipment to control dust emissions at the Premises:

- Dust covers / fencing;
- Waste receival shed with roller doors at entrance and exit of loadout bay;
- Sprinklers on top of all conveyors, stockpiles, density separators, vibrating screen, ceiling sprinklers inside the waste receival shed, and at the entrance and exit of the loadout bay;
- Street sweeper with spray bar; and
- Water cart.

The Licence Holder is required to install and maintain a dust monitoring unit with light backscatter technology, that is capable of working with alerts and that is capable of monitoring TSP size fraction at a minimum. The Licence Holder shall also install an anemometer to record wind speed and direction data.

The Licence Holder is required to install and maintain a dust deposition gauge.

As phase two of the implementation of additional dust controls the Licence Holder is required to install a waste processing shed that is constructed to enclose all dust producing operations, that is sealed and has a “misting curtain” present to prevent dust escaping through the vehicle assess opening. The waste processing shed is to be constructed within four months of the revised Licence being granted**.**

Grounds: The above controls have been derived from the Licence Holder’s current and proposed controls to address the dust issues on site and complaints raised by the community. Additional dust controls have been included in the Licence that include dust monitors to monitor the dust levels and determine if the dust controls are effective. The additional controls also include the establishment of an enclosure of the outdoors screening and sorting facility.

10.1.7 Dust emission controls: operational management

The Licence Holder must ensure that the heights of Waste and Product stockpiles do not exceed a level of at least one metre below the adjacent fence height.

The Licence Holder is required to ensure that all vehicles operate at a speed of less than 15km/hr on the Premises.

The Licence Holder will also be required to establish a dust monitoring and management program to the satisfaction of the CEO. The dust monitoring and management program is required to include at a minimum:

- Air sampler and depositional gauge proposed locations that reflect the impact site locations and the siting is required to be guided by AS/NZS 3580.1.1:2016;
- Collection of monitoring data over at least five days while outdoor facility is not operating to determine baseline dust levels;
- Action criteria that function as effective operational controls to prevent dust impacts at nearby receptors;
- Action criteria to be derived by considering baseline data, setting 10minute TSP levels, for additional dust control actions and for shut down of dust generating activities;
- A description of actions to be taken for each action criterion exceedance;
- An associated maintenance and calibration program to ensure data quality and continuous operation of instrument (24 hours per day) with minimum outages (operational at a minimum of 90% over a month (30 days));
- Complaint investigation protocol; and
- The dust monitoring and management program must provide the information as set out in the table below.

DWER has provided the following table as an example of the type of information to be set out by the Licence Holder in the dust monitoring and management program:

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Monitoring instrument	**Monitoring location**	**Parameter**	**Frequency**	**Method**	**Action Criterion**	**Action for criterion exceedances**

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Monitoring instrument	**Monitoring location**	**Parameter**	**Frequency**	**Method**	**Action Criterion**	**Action for criterion exceedances**
Air sampler using light back scatter technology capable of sending alerts according to programmed settings	As detailed on the map in Schedule 1	TSP	Continuous in 10 min averages	AS/NZS 3580.1.1:2016*	150µg/m^3 over 10 min average	*Immediately implement corrective actions of wetting, containment and/or changes to operational activities.*
					200µg/m^3 over 10 min average	*Immediately implement shut down of outdoors processing operations*
Depositional gauge	As detailed on the map in Schedule 1	Mass deposition rate in g/m²/month Total solids, soluble solids, insoluble solids	Continuous as monthly averages	AS/NZS 3580.10.1:2014 AS/NZS3580.1.1:2016*	N/A	N/A
Anemometer	As detailed on the map in Schedule 1	Wind direction (degrees) Wind speed (m/s)	Continuous as 10 min averages	AS/NZS 3580.14:2014 AS/NZS 3580.1.1:2016	N/A	N/A

*DWER requests that the Licence Holder provide a summary on any major excursions from AS/NZS3580.1.1:2016

Grounds: The above control regarding vehicle speed has been derived from the Licence Holder's current controls to address the dust issues caused by vehicle activity on site.

Grounds: The Delegated Officer has determined that the overall rating for the risk of dust on receptors during operation is high and that therefore additional dust controls are needed.

To accommodate the Licence Holder's operational needs additional dust controls are implemented in two phases. The first phase consists of implementation of an air quality monitoring and management program and the second phase consists of installing an enclosure around the outdoors screening and sorting facility.

The air quality monitoring and management program will function as an operational tool to provide direct and early feedback when dust levels are elevated. Dust level alerts allow the operator to immediately inspect the effectiveness of current dust controls and take corrective action thereby preventing dust impacts on nearby receptors.

The existing dust controls associated with the new outdoors sorting facility consist mainly of sprinklers and covers which are based on the principles of containing dust behind barriers and wetting materials to prevent dust lift off. While these are effective methods in principle, how effective they are in practice depends on the specific implementation detail.

Based on a visual inspection of the facility while it was not operational, DWER officers have

formed the view that there is still a potential for dust emissions from the new plant. For instance, dust covers made from shade cloth may reduce dust emissions but not eliminate them completely. Also current enclosures of conveyors leave gaps and open areas for dust to escape.

Equally, while sprinklers are mounted at strategic points, their sprays may not achieve full coverage and sufficient wetting of materials to adequately suppress dust. The effectiveness of sprays may also vary according to weather conditions and the types of materials handled.

It is therefore considered that a management program based on monitoring feedback and operational actions is a suitable tool to complement a system of dust controls that by themselves and without continuous evaluation of their effectiveness may not achieve the required dust control.

The development of the air quality monitoring and management program with appropriate action criteria levels requires baseline data reflecting dust concentrations in the air while the new outdoors facility is not operational. Action criteria concentrations will be defined with the objective to maintain air quality comparable to the background level when the new outdoors facility is operating. For this reason at least one week of dust monitoring prior to operating the new outdoors sorting facility will be required.

The Delegated Officer considers the dust monitoring and management program an interim dust control that will provide adequate dust control during the wetter and cooler winter and autumn months while dust risk is low. The establishment of an enclosure around the outdoors facility will ultimately provide more reliable and consistent dust control during all weather conditions and is therefore to be constructed as soon as possible.

This dust monitoring and management program is to be in place for the time the facility exists as ab outdoors operation, during the construction of the new processing shed that will enclose the facility and for at least three months after the shed has been established to ensure that dust is being adequately controlled.

Grounds: Air quality monitoring is also required as a way of objectively measuring emissions and impacts. Monitoring data from both the backscatter air sampler and the depositional gauge will provide information on dust levels. Particularly the continuous data from the light backscatter instrument can be correlated with the operational times of the outdoors facility and also dust complaints received. The Licence Holder will therefore be required to record the operation times of the new outdoors facility and the times and details of any dust complaints received. Collecting these data will allow the Licence Holder to undertake more comprehensive analysis of causal factors for dust emissions in the context of complaints. This type of analysis is expected to be carried out as part of a complaint and exceedance investigation by the Licence Holder.

The data will also provide a trend that can be analysed to understand whether dust emissions have been adequately controlled or whether improvements are required.

The extended monitoring program beyond the construction of the processing shed will provide evidence to determine the effectiveness of the new enclosure as a dust control measure.

It is envisaged that once the shed has been established and monitoring results demonstrate that dust emissions from the Premises are not unacceptable, the requirement for monitoring could be removed from the licence through a licence amendment application.

10.1.8 Leachate emissions controls: Infrastructure and equipment

The Licence Holder must maintain the following equipment to control leachate emissions at the Premises:

- Putrescible waste bins providing leachate containment; and
- Leachate containment within the waste receival shed that is designed to capture

leachate and contaminated stormwater prior to removal via sewer; and

- Sediment retention at all storm water drains**.**

Grounds: the above controls have been derived from the Licence Holder's current and proposed controls to manage leachate on site and sediment that may be discharged through the storm water drains on site.

10.1.9 Air quality performance reporting

The Licence Holder will be required to submit a fortnightly exceedance and complaints report when exceedances and/or complaints have occurred during the reporting period.

The report must include the following:

- the number of complaints received in relation to dust;
- the equipment / infrastructure that was operating at the time of complaint or exceedance
- details of complaints including all monitoring data for the fortnightly period;
- the number and details of exceedances of criteria; and
- actions that were taken in response to the exceedances

Grounds: This reporting requirement has been mandated so DWER can assess whether the Licence Holder is adequately managing dust emissions from his operations. In cases where reporting is triggered, DWER will also be able to review and assess the level of impact and evaluate complaint information against operational and monitoring data. A fortnightly reporting interval will allow DWER to be informed in a more immediate timeframe, which is appropriate should regulatory intervention be required to prevent dust impacts. DWER may review the appropriateness and adequacy of the licence controls based on the review of exceedance and complaint reports.

10.1.10 Noise emission controls

The Licence Holder will be required to adhere to specified hours of operation and to maintain infrastructure designed specifically as noise controls (see 9.6.5).

Note: These noise controls have been derived from the Licence Holder's current controls.

10.1.11 Product testing and supply

The Licence Holder must test all finished products in accordance with Section 4.3 of the DWER Asbestos Guidelines. Finished products must not be supplied to customers unless testing demonstrates the finished product meets the specification of 0.001% asbestos weight for weight for asbestos content (in any form). Records must be kept for at least seven years.

The Licence Holder will be required to report the product testing results annually within a Compliance Report to demonstrate compliance with the above provisions. An interpretive summary shall be provided and shall include a detailed summary of how exceedances of limits were managed.

Note: These controls are derived from DWER's Asbestos Guidelines, which the Licence Holder has implemented as part of its Asbestos Management Plan (November 2016).

11. Determination of Licence conditions

The conditions in the Revised Licence in Attachment 3 have been determined in accordance with the *Guidance Statement: Setting Conditions*.

The *Guidance Statement: Licence Duration* has been applied and the issued licence expires in 2033 years from date of issue.

Table 20 provides a summary of the conditions to be applied to this licence.

Table 20: Summary of conditions to be applied

Condition Ref	Grounds
Emissions Condition 1	This condition is valid, risk-based and consistent with the EP Act.
Throughput restrictions Conditions 2 and 3	These conditions are valid, risk-based and contain appropriate controls (see section 10 of this Decision Report)
Waste type restrictions and waste classification – Mixed Waste Loads and Dedicated Loads. Conditions 4 to 11	
Waste processing restrictions Condition 12	
Waste acceptance and load inspection. Condition 13 to 19	
Stockpile / bunker management Condition 20	
Infrastructure and equipment Condition 21	
Dust emission controls Conditions 22 to 25	
Product testing and supply Conditions 26 to 30	
Monitoring Conditions 31 and 32	
Record-keeping Conditions 33 and 34	These conditions are valid and are necessary administration and reporting requirements to ensure compliance.
Reporting Conditions 35 to 37	

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.

12. Applicant's comments

The Licence Holder was provided with the draft Decision Report and draft issued *Licence* on 9 August 2017. The Licence Holder provided comments which are summarised, along with DWER's response, in Appendix 3.

13. 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 inspection by DWER officers on 26 June 2017 and 7 July 2017.

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

Ruth Dowd
Senior Manager, Industry Regulation (Waste Industries)
Delegated Officer
under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Licence L8417/2010/2 – Redoak Corporation and West Bins	L8417/2010/2	accessed at www.der.wa.gov.au
2.	Bureau of Meteorology – Climate data online. Accessed 12 June 2017	BoM 2017	http://www.bom.gov.au/climate/data/
3.	Department of Water – Perth Groundwater Atlas, Accessed 12 June 2017	DoW 2017	http://atlases.water.wa.gov.au
4.	Department of Environment and Conservation, 2012. Guidelines for managing asbestos at construction and demolition waste recycling facilities	DEC 2012	https://www.der.wa.gov.au/images/documents/our-services/approvals-and-licences/final-guidelines-asbestos-in-cd-recycling--version-1.pdf
5.	Department of Health, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, May 2009	DoH 2009	http://ww2.health.wa.gov.au/~/media/Files/Corporate/general%20documents/Asbestos/PDF/Guidelines-Asbestos-Contaminated%20Sites-May2009.ashx
6.	NSW EPA, Air Emissions in My Community	NSW EPA, 2013	accessed at http://www.epa.nsw.gov.au/resources/air/130841AEsubstance.pdf
7.	Licence amendment application – West Bins Waste Control Malaga Waste Transfer Station	Amendment application (2017)	DWER records (A1192998)
8.	West Bin Waste Control Pty Ltd Asbestos Management Plan, November 2016	Asbestos Management Plan (2016)	DWER records (A1192998)
9.	West Bin Waste Control Pty Ltd, Dust Management Plan, November 2016	Dust Management Plan (2016)	DWER records (A1192998)
10.	Herring Storer Acoustics, West Tip Waste Management, Waste Facility Malaga, Noise Level Assessment, September 2016	Noise Level Assessment (2016)	DWER records (A1192998)
11.	DER, July 2015. *Guidance Statement: Regulatory principles.*	DER 2015a	accessed at www.dwer.wa.gov.au

	Department of Environment Regulation, Perth.		
12.	DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.	DER 2015b	
13.	DER, August 2016. *Guidance Statement: Licence duration.* Department of Environment Regulation, Perth.	DER 2016a	
14.	DER, November 2016. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.	DER 2016b	
15.	DER, November 2016. *Guidance Statement: Decision Making*. Department of Environment Regulation, Perth.	DER 2016c	

Appendix 2: Summary of submissions comments

Aspect	Summary of submission points	DWER response
Dust	Concerns relating to excessive dust that has had a negative impact on their ability to operate from their premises. Airborne particles contaminate their premises including work areas, storage, warehouse, kitchen and office area. Staff members have complained of various symptoms including coughing, skin irritation and eye irritation from being exposed to airborne particles. Airborne particles settled onto stock and makes unsaleable with products being rejected by customers. Customers of the products have raised concerns relating to OHS issues due to the high level of risk of eye injury and dust making the products slippery to handle when loading on vehicles and warehouse racks. Photographs were submitted for submission against the application, the photographs show dust throughout the warehouse. Section 9.5.2 Excessive dust emissions and Section 5 of the Dust Management Plan in the amendment application, as there have been no set quantifiable trigger levels, is it possible to extend the definition of 'Corrective Action Trigger Level' to include events where off-site dust emissions/deposition have been confirmed by the operator or relevant authority.	The risks associated with dust have been considered in Section 9.4 of this Decision Report. Additional controls relating to the management of dust emissions have been included in the Revised Licence to manage risk to public health and environment to acceptable levels. DWER will undertake periodic compliance inspections on the premises to identify whether these controls are being appropriately implemented and to verify that the dust controls are adequate. Quantifiable triggers levels will be set, once the background monitoring has been undertaken.

Aspect	Summary of submission points	DWER response
Asbestos	Extreme concern raised with regards to page 22 of the amendment application that states 'due to the mixed nature of the waste that the Facility handles, there is the possibility that non-acceptable asbestos material could be inadvertently received on site'. Asbestos is an extreme concern with regard to their employee's health and well-being.	The risks associated with asbestos have been considered in Section 9.5 of this Decision Report. Controls relating to asbestos have been included in the Revised Licence to manage risks to public health. DWER will undertake periodic compliance inspections to identify whether the controls are being appropriately implemented.
Complaints / non-compliance	On page 35 of the amendment application it states 'To date there have been no complaints received by Westbin from neighbouring properties'. This is incorrect; they have spoken to the Licence Holder on many occasions since the facility started operating outside of the existing shed. The Licence Holder has tried a number of ways to reduce the dust including installing sprinklers and installing higher fencing but nothing has stopped the dust. The Licence Holder has also operated the equipment outside of normal working hours. Since the PN was issued to Westbin, the dust pollution has returned to an acceptable level. The only perceivable solution which may stop the pollution would be to fully enclose the equipment outside of the shed.	The risks associated with compliance and complaints have been considered in Section 5.3 of this Decision Report. DWER will undertake periodic compliance inspections to identify whether the Licence Holder is complying with the Revised Licence. The establishment of a shed to enclose the new sorting and screening facility has been included as a new control to be implemented in the medium term.
Discharges to water	Section 12.6 & 20 Discharge to Water and Surface Water Management of the amendment application. Discharge of contaminated storm water is one of the City of Swan's main concerns. Records indicate both premises connect to the City's offsite storm water collection system along Victoria Road. A revised site map showing location of	A number of leachate controls have been included in the Revised Licence including putrescible waste to be stored and processed on a bunded hardstand, leachate containment within the waste receival shed and sediment collection

Aspect	Summary of submission points	DWER response
	onsite storm water drains and site storm water system and management would be useful.	to be installed and maintained in all of the stormwater drains to prevent sediment run-off.
Fire Management	Section 16 – Fire Management – With the recent fires at waste recovery facilities in Victoria. Would a fire management plan be something DWER would consider. Typically fire control capability, procedures, alarms, storm water maps.	DWER considers fire as a cause of emissions for waste facilities based on risk. Combustible material has been limited to the acceptance of green-waste, paper and cardboard only and limited to 8,000 tonnes per annual period.

Appendix 3: Summary of Licence Holder's comments on risk assessment and draft conditions

Aspect	Summary of submission points	DWER response
Administration comments.	1. Registered Business Address: 311 – 313 Hay Street SUBIACO WA 6008 2. Estimated Putrescible throughput – 8,000tpa 3. Estimated Type 1 Special Waste throughput- 500tpa 4. Water Cart – 12,000L 5. All storm water drains have mesh installed to catch sediment 6. Mile Todoroski is the correct name for Lot 1, 390 Victoria Road Malaga 7. Water Corporation Trade Waste Permit – The last time I contacted WC they said they do not issue permits for this application. They just sent me a copy of the invoice which I have attached. I will ring again tomorrow morning to confirm. 8. Sprinklers will be operational at all time when operating the recycling plant	The Decision Report and Licence have been updated with this information.
Table 5, point 9 of Licence	This should be referencing the density separators having noise barriers, not the screen and conveyors.	The Licence has been updated to reflect this.
Table 5, point 11	All stormwater in the receival shed is captured through soak wells into a holding pit, which is then pumped through a solids arrestor and discharged to sewer. This water does not enter the City's stormwater pits.	The Licence and Decision Report have been updated.
Noise Emission controls	Herring Storer Noise Assessment, the noise study was conducted when the 4m colourbond fence and cladding around the density separators was installed. My understanding of the report is that we currently comply with the noise restrictions.	The Licence and Decision Report have been updated.

Aspect	Summary of submission points	DWER response
Shed location	The proposed location is correct, however the size is incorrect. Proposed shed plan attached.	Schedule 1: Maps, Site Map: waste Processing shed has been amended. The Licence Holder's map did not include all of the conveyors and screeners currently located outside, therefore the map has been amended to enclose all operations.
Stockpile heights	The draft document states that two metres maximum height however, conveyor discharge heights are up to five metres, can this be changed to five?	The stockpile heights have not been amended as the risk of fugitive dust emissions from the storage of Waste and Product in stockpiles is reduced when the stockpile heights are restricted to lower that the fence heights.
Dust monitoring	After the shed is installed and dust monitoring is compliant for four weeks, then we can off hire of the dust monitoring equipment. This is not mentioned in the document.	The Licence Holder may apply for a Licence Amendment at any stage to remove the dust monitoring conditions. Evidence must be provided to show that there is a low risk of dust emissions.

Appendix 4: Revised Licence L8417/2010/2