Government of Western Australia
Department of Environment Regulation

Licence

Environmental Protection Act 1986, Part V

Licensee: King Green Pty Ltd

Licence: L8890/2015/1

Registered office: Unit 1
4 Farrall Road
MIDVALE WA 6056

ACN: 166 791 724

Premises address: King Green Pty Ltd
329 Gnangara Road
WANGARA WA 6065
Being Part Lot 600 on Plan 73328 as depicted in Schedule 1 and as defined by the Global Positioning System coordinates:

Position No.	Latitude	Longitude
1	31° 47’ 47.30” S	115° 51’ 1.86” E
2	31° 47’ 47.38” S	115° 51’ 6.91” E
3	31° 47’ 50.76” S	115° 51’ 6.91” E
4	31° 47’ 50.76” S	115° 51’ 1.86” E

Granted: Thursday, 20 October 2016

Commencement date: Monday, 24 October 2016

Expiry date: Tuesday, 25 June 2019

Prescribed premises category
Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
13	Crushing of building material: premises on which waste building or demolition material (for example, bricks, stones or concrete) is crushed or cleaned.	1,000 tonnes or more per year	300,000 tonnes per annual period
62	Solid waste depot: premises on which waste is stored, or sorted, pending final disposal of re-use.	500 tonnes of more per year	

Conditions
This Licence is subject to the conditions set out in the attached pages.

Date signed: 20 October 2016
.....
Alan Kietzmann
MANAGER LICENSING (WASTE INDUSTRIES)
Officer delegated under section 20
of the *Environmental Protection Act 1986*

Contents

Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role
The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements
This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:
http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.

- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.

- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places 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.

Licence fees
If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non-payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions
If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary
King Green Pty Ltd (King Green) will operate a construction and demolition (C&D) waste crushing and recycling facility at Lot 600, 329 Gnangara Road, Wangara. The facility has a design capacity of 300,000 tonnes per annum, however King Green has indicated the operation is expected to have an annual throughput of between 50,000 and 100,000 tonnes per annum and is intended to operate for a five year period.

The premises is located within the City of Wanneroo. The site was previously zoned rural but was re-zoned in 2012 as industrial, forming part of the East Wanneroo Cell 8 Agreed Structure Plan No. 10. The premises is located within a wetland area that is considered as having very limited environmental value. The on-site wetland has been allocated a management category of 'Multiple use'; wetlands in this category are considered to be significantly degraded, possessing few natural attributes and limited human-use interest. It was concluded in the East Wanneroo Cell 8 Agreed Structure Plan No. 10 that the wetland does not represent a constraint to the development of the land for industrial purposes and is being infilled with development.

The resource recovery facility is situated on approximately 10,000m^2 in the south-west corner of the premises (See Appendix A). The nearest residential premises are located approximately 500 metres to the south-east, adjacent to Gnangara Road. There are new industrial sub-division roads and vacant lots to the north of the premises, a storage facility to the west, salvage yard to the south and undeveloped land to the east, with land that is zoned residential 500 metres further to the east.

C&D waste will be accepted for screening, crushing and sorting for subsequent resale/reuse or disposal off-site. King Green proposes to recover several different waste streams comprising of sand, concrete, bricks, cement mortar and ceramic tiles. Minor inclusions of non-conforming waste, such as wood, plastic, metal, cardboard, plasterboard, electric cables and glass may also be present in incoming C&D loads. Asbestos containing material (ACM) is not to be accepted on-site. Any ACM inadvertently received is to be managed in accordance with the site's Asbestos Management Plan and removed from site to an appropriate licensed disposal facility.

C&D waste accepted onto site will be deposited on a hardstand handling area, comprising of 200mm of crushed road base material and will then be sorted. Storage of the processed/sorted materials will be in stockpiles not higher than the perimeter noise bund. Sorted inert materials will be subject to a crushing and screening process in order to produce recycled aggregate products which will then be

offered for sale to the construction industry. Other non-conforming waste such as plastic, wood and cardboard will be separated out into specific categories and removed off-site to registered landfill disposal facilities.

A separation distance of 1,000 metres is recommended between a sensitive receptor and a premises that undertakes crushing, with the main emissions considered to be noise and dust. The Delegated Officer has determined that because the crushing facility is within 1,000m of sensitive receptors, there may be an elevated risk to public health and sensitive receptors, and may require greater regulatory controls.

The main emissions associated with the activities undertaken at the premises include stormwater contaminated with sediments from unsealed surfaces and material storage areas; noise from plant operations and vehicles; and fugitive air (dust and asbestos) from waste handling, processing and storage.

This Licence is for the operation of a new facility established under works approval W5791/2015/1.

The licence has been granted to 25 June 2019 to align with the City of Wanneroo's planning approval.

The licences and works approvals issued for the Premises since 26/03/2015 are:

Instrument log		
Instrument	**Issued**	**Description**
W5791/2015/1	26/03/2015	New application
L8890/2015/1	20/10/2016	New application

Severance
It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION

Licence conditions

1 General

1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'Acceptance Criteria' has the meaning defined in Landfill Definitions**;**

'ACM' means Asbestos Containing Material;

'Act' means the *Environmental Protection Act 1986;*

'Anniversary Date' means 1 July of each year;

'annual period' means a 12 month period commencing from 1 July until 30 June in the following year;

'asbestos' means the asbestiform variety of mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals and includes actinolite, amosite, anthophyllite, chrysolite, crocidolite, tremolite and any mixture containing 2 or more of those;

'asbestos containing material' has the meaning **defined** in the Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia, (DOH, 2009);

'Attachment 1' means Attachment 1 of this Licence unless otherwise stated;

'Attachment 2' means Attachment 2 of this Licence unless otherwise stated;

'Attachment 3' means Attachment 3 of this Licence unless otherwise stated;

'averaging period' means the time over which a limit is measured or a monitoring result is obtained;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of notification means;

Chief Executive Officer
Department Div.3 Pt.V EP Act
Locked Bag 33 Cloisters Square
PERTH WA 6850
info@der.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. Classification of waste loads shall be undertaken in accordance with the provisions outlined in Section 3.3 and 3.4 DER Asbestos Guidelines;

'clean fill' has the meaning defined in Landfill Definitions;

'Compliance Report' means a report in a format approved by the CEO as presented by the Licensee or as specified by the CEO from time to time and published on the Department's website.

'construction and demolition waste' has the meaning defined in Landfill Definitions;

'controlled waste' has the definition in *Environmental Protection (Controlled Waste) Regulations 2004*;

'damp' means moist to the touch;

'Department' means the department established under s.35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Division 3 Part V of the *Environmental Protection Act 1986*.

'DER' means the Department of Environment Regulation;

'DER Asbestos Guidelines' means 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;

'Inert Waste Type 1' has the meaning defined in Landfill Definitions;

'Landfill Definitions' means the document titled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer of the Department of Environment as amended from time to time;

'Licence' means this Licence numbered L8890/2015/1 and issued under the Act;

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'normal operating conditions' means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to monitoring;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;

'shut-down' means the period when plant or equipment is brought from normal operating conditions to inactivity;

'start-up' means the period when plant or equipment is brought from inactivity to normal operating conditions; and

'usual working day' means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia.

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

1.2 Premises operation

1.2.1 The Licensee shall only accept waste on to the Premises if:
(a) it is of a type listed in Table 1.2.1;
(b) the quantity accepted is below any quantity limit listed in Table 1.3.1; and
(c) it meets any specification listed in Table 1.2.1;

Table 1.2.1: Waste acceptance

Waste type	Quantity Limit	Specification
Clean Fill (as defined in the Landfill Definitions)	300,000 tonnes per annual period (combined total)	Waste containing visible asbestos or ACM shall not be accepted.
Inert Waste Type 1		

1.2.2 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1.2.1 it is removed from the Premises by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.

1.2.3 The Licensee shall ensure that any waste that does not conform to the waste acceptance criteria in Table 1.2.1 due to asbestos content, is covered or bagged and kept within a clearly identified, labelled, segregated and secure container prior to being removed off site to an appropriate authorised facility within 48 hours.

1.2.4 The Licensee must advise all source material providers that asbestos or potentially asbestos contaminated material is not accepted at the Premises.

1.2.5 The Licensee must include a ‘no asbestos’ clause in all contracts with all source material providers.

1.2.6 The Licensee must maintain a clearly visible sign saying ‘No Asbestos’ at the entry to the Premises.

1.2.7 The Licensee 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 the DER Asbestos Guidelines as per Attachment 1(Classified Load).

1.2.8 Where the inspection required by condition 1.2.7 confirms that the load does contain asbestos or ACM, the Licensee must:
(a) reject the waste for acceptance;
(b) maintain accurate records of all rejected loads on the Premises and the documentation must be made available to DER officers upon request; and
(c) record the details of the waste source, material carrier, registration number of the vehicle and date of rejection.

1.2.9 The Licensee shall direct each accepted and Classified Load to an unloading area at the site for further inspection. The unloading area shall be appropriately designed and constructed to ensure the waste will not mix with other waste.

1.2.10 The Licensee shall dampen all Classified Loads prior to unloading and maintain the waste in a damp state throughout the inspection process using appropriate dust suppression measures.

1.2.11 The Licensee must inspect and maintain records for all unloaded waste in accordance with the low risk and high risk load procedure as outlined in section 3.4 of the DER Asbestos Guidelines as per Attachment 2.

1.2.12 The Licensee must continue to visually inspect waste on the Premises at all stages of the storage, sorting and screening process. Suspect asbestos identified at any stage of the process must be handled in accordance with the high risk load procedure outlined section 3.4 of the DER Asbestos Guidelines, as per Attachment 2.

1.2.13 The Licensee must maintain waste and processed waste on the Premises in at least two separate stockpile areas for unprocessed waste, processed waste tested for ACM and:

(a) unprocessed waste and processed waste areas must be kept clearly separated at a minimum 3 m distance;
(b) processed waste tested for ACM and processed waste awaiting testing for ACM must be clearly separated by a minimum 3 m distance OR clearly delineated and separated with impermeable barriers; and
(c) clearly visible and legible signage must be erected on individual stockpiles to clearly identify and delineate tested processed waste, untested processed waste and unprocessed waste.

1.2.14 The Licensee shall ensure that the asbestos content of any recycled output originating from Inert Waste Type 1 does not exceed the contamination limit of 0.001% w/w for asbestos (in any form).

1.2.15 The Licensee shall ensure that recycling outputs originating from Inert Waste Type 1 are sampled and tested in accordance with the DER Asbestos Guidelines, as outlined in Attachment 3.

1.2.16 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the processes set out in Table 1.2.2, in accordance with any process limits described in that Table.

Table 1.2.2: Waste processing

Waste type	Process	Process limits
Clean Fill	Acceptance, screening and storage prior to removal off-site	• No waste material to be landfilled (buried) on-site • All processing, storage and containment to be maintained in areas designated in the 'Site Layout Map' in Schedule 1. • Stockpiles must not exceed the height of the noise bunds defined in Table 1.2.3. • All loads to be wet down prior to unloading. • All processing and storage of materials to be undertaken on a 200mm compacted road base. • All storm water to be directed to the soak
Inert Waste Type 1	Acceptance, crushing, screening and storage prior removal off-site	

		wells. • Operate the infrastructure as specified in Table 1.2.3 to ensure: a) stockpiles are maintained in a damp state, stabilised using spray binders, grassing or otherwise provided with wind breaks to prevent dust lift-off; and b) water mist sprayers on crushing and screening equipment, including conveyors, are functioning when the equipment is in operation. • Cease activities when relevant infrastructure specified in Table 1.2.3 fails or during weather conditions where dust emissions cannot be effectively controlled.

1.2.17 The Licensee shall ensure that the infrastructure or equipment specified in Table 1.2.3 is installed and operated in accordance with the specification of that table and located in the area depicted in the Site Layout Map in Schedule1.

Table 1.2.3: Infrastructure and equipment requirements

Item	Specification
Hardstand	Minimum 200mm crushed road base hardstand covering the whole of the premises. The integrity of the hardstand must be maintained at all times.
Noise bund: Northern Bund (B1)	Greater than or equal to 3.4m in height above ground level of crusher.
Noise bund: Western Bund (B2)	Greater than or equal to 4.0m in height above ground level of crusher.
Noise bund: Southern Bund (B3)	Greater than or equal to 3.4m in height above ground level of crusher.
Noise bund: Eastern Bund (B4)	Greater than or equal to 2.7m in height above ground level of crusher.
2 x water cart	Maintain an operational water cart with 10,000L capacity, and a standby water cart with 10,000L capacity. The water carts must be fitted with high volume side and rear spray bars and/or water cannon to ensure complete coverage of stockpiles and roadways and to assist during tipping and processing as required.
Large mobile screener (up to 100 tonnes/hour capacity)	To be located in the area depicted in the Site Layout Map.
Small screener (up to 25 tonnes/hour capacity)	To be located in the area depicted in the Site Layout Map.
Jaw crusher	To be located in the area depicted in the Site Layout Map.

Table 1.2.3: Infrastructure and equipment requirements	
Item	**Specification**
Impact crusher	To be used at the picking station and to be located in the area depicted in the Site Layout Map.
Pulveriser	Must not be operated at the same time as the jaw crusher or impact crusher.
Picking station	To be located in the area depicted as 'crushing, screening & sorting area' in the Site Layout Map.
Water mist sprayers to crusher, screener and conveyors	Crushing and screening equipment, including conveyors, must be fitted with water mist sprayers. The spray reach and rate of flow of water mist sprayers must be maintained in good working order to ensure complete coverage of crushers, screener and conveyors.
Soak wells x 3	To be located in the area depicted in the Site Layout Map. Must be kept free of litter and debris.

1.2.18 The Licensee shall ensure that no waste is burnt at the Premises.

1.2.19 The Licensee shall collect all windblown waste from the boundary as required to prevent windblown waste from escaping the Premises.

2 Monitoring

2.1 Monitoring and recording of inputs and outputs

2.1.1 The Licensee shall undertake the monitoring in Table 2.1.1 according to the specifications in that table.

Table 2.1.1: Monitoring and recording of inputs and outputs				
Input/Output	**Parameter**	**Units**	**Averaging period**	**Frequency**
Waste Inputs	Clean Fill Inert Waste Type 1	m^3	N/A	Each load arriving at the Premises
Waste Outputs	Waste type as defined in the Landfill Definitions			Each load leaving or rejected from the Premises
Product outputs	Crushed and screened products			Each load leaving the Premises

2.2 Monitoring of noise emissions

2.2.1 The Licensee shall undertake noise monitoring in accordance with the requirements of Table 2.2.1:

Table 2.2.1: Noise monitoring		
Reference number	**Requirement**	**Date of completion**
NM1	The Licensee shall undertake noise monitoring of the Premises during normal operating conditions at the Premises boundary. A report on the noise monitoring shall be prepared in accordance with Part 3 of the *Environmental Protection (Noise) Regulations 1997 (Noise Regulations).* The report shall be submitted to the CEO and shall include: (a) methods used for monitoring of noise; (b) an assessment of whether noise emissions from the Premises comply with the assigned noise level in the Noise Regulations; and (c) if improvements are required to comply with the prescribed standard, proposed recommendations of any noise control mitigation measures to meet the prescribed standard.	Noise monitoring to be completed within two months of the licence being granted and report to be provided to the CEO within one month of the monitoring being completed.

3 Information

3.1 Records

3.1.1 All information and records required by the Licence shall:
(a) be legible;
(b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
(c) except for records listed in 3.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
(d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
(i) off-site environmental effects; or
(ii) matters which affect the condition of the land or waters.

3.1.2 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

3.2 Reporting

3.2.1 The Licensee must submit to the CEO within 30 days after the Anniversary Date, a Compliance Report indicating the extent to which the Licensee has complied with the Conditions in this Licence for the Annual Period.

3.2.2 The Licensee shall submit to the CEO within 30 days after the Anniversary Date, an Annual Environmental Report containing the information listed in Table 3.2.1 for the Annual Period.

Table 3.2.1: Annual Environmental Report		
Condition or table (if relevant)	**Parameter**	**Format or form**
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
1.2.14 and 1.2.15	Recycled outputs sampling and testing data	None specified
2.1.1	Summary of monitored and recorded inputs and outputs	None specified
3.1.2	Complaints summary	None specified

3.3 Notification

3.3.1 The Licensee shall ensure that the parameters listed in Table 3.3.1 are notified to the CEO in accordance with the notification requirements of the table.

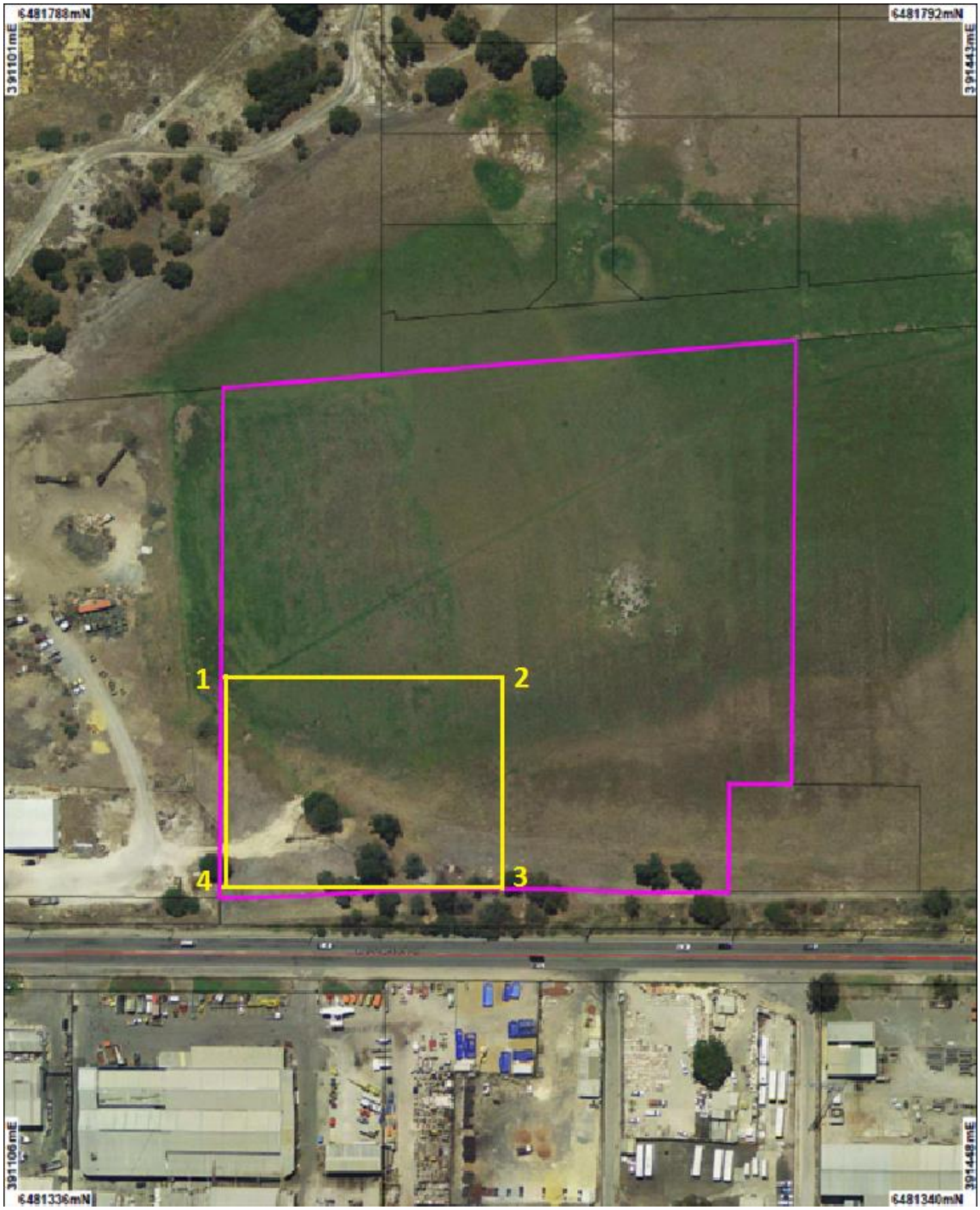
Table 3.3.1: Notification requirements			
Condition or table (if relevant)	**Parameter**	**Notification requirement[1]**	**Format or form[2]**
-	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act
Note 2: Forms are in Schedule 2

Schedule 1: Maps

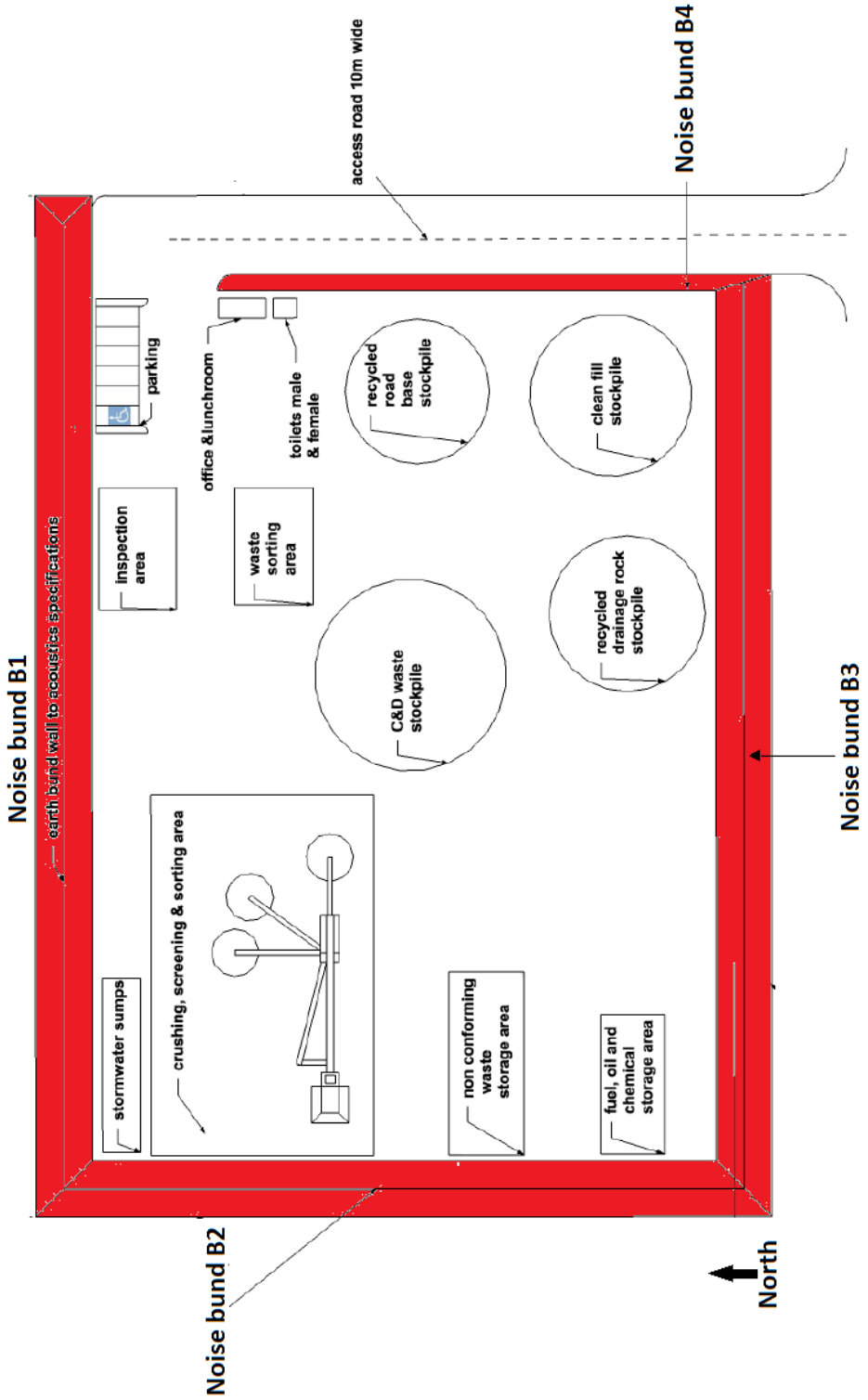
Premises map

The Premises is shown in the map below. The pink line depicts the Cadastral Lot boundary. The yellow line depicts the Premises boundary and the yellow numbers reflect the Global Positioning System coordinates identified on the front page of the licence.



Site Layout Map

The site layout and noise bunds referred to in Table 1.2.3 are shown in the map below. The solid red areas depict the noise bunds.



Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

Licence: L8890/2015/1 Licensee: King Green Pty Ltd
Form: N1 Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.
Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of King Green Pty Ltd	
Date	

Attachment 1: Section of 3.3 of the DER Asbestos Guidelines (page 10 and11)

- Ensuring a "no asbestos" clause is included in any contracts with C&D waste suppliers;
- Installing a clearly visible sign saying "No Asbestos" is present at the entry to the facility;
- Establishing a system to record the details of loads arriving/received at the site which have been found to contain asbestos.

DEC has a supply of brochures that outline the rules on disposal of asbestos loads that can be handed to customers. Please contact DEC's Waste Management Branch on (08) 6467 5323 for copies.

3.3 Acceptance procedures

When waste arrives at the recycling facility, acceptance procedures must serve to confirm that the characteristics of the waste are consistent with the waste types permitted by the Part V licence and to determine the risk of the load containing asbestos.

To follow on from the pre-acceptance procedures, all persons bringing waste onto the premises must be asked to sign a declaration or provide a 'customer warranty' on a vehicle load specific basis confirming that their load is free from asbestos. The associated documentation should be retained on the premises and be available for DEC to inspect Where an individual is not prepared to sign this disclaimer or provide such a warranty the load shall be refused entry.

All loads must be visually inspected when they arrive at the recycling site. Where the inspection identifies that the wastes are not permitted by the licence and/or asbestos is visually identified in the load it shall be rejected for acceptance. A record of all rejected loads must be maintained on the premises and be available for DEC to inspect. As a minimum, a record must be made of the waste producer, waste carrier, registration number of the vehicle and the date of rejection.

The risk of a load containing asbestos is related to the type and source of the waste. In general, buildings and structures constructed after 1990 are unlikely to have asbestos containing materials within them, whereas buildings and structures constructed before this date may have been built using asbestos containing materials.

Because large buildings and structures undergo regulated asbestos removal programs and inspections before they are demolished the probability of asbestos being present in the demolition debris should be low. However, a risk of contamination can remain from asbestos formwork embedded or attached to concrete columns that cannot be readily identified through the asbestos clearance certification processand from asbestos piping from reclaimed road, car park areas and water supply systems.

It is also common for mixed waste from unknown sources, particularly those in skip bins or from small-scale demolition or refurbishment activities to contain amounts of asbestos waste. These sources must be considered high risk.

To determine the risk of an incoming load containing asbestos the gatehouse operator shall establish:

- The source of the load including the site location and if possible the age of any building or structure from which the C&D waste originated;

- 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

Attachment 2: Section of 3.4 of the DER Asbestos Guidelines (page 11and 12)

- 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

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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.

Attachment 3: Section of 3.4 of the DER Asbestos Guidelines (page 15 - 20)

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.

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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.

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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.

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Government of Western Australia
Department of Environment Regulation

Decision Document

Environmental Protection Act 1986, Part V

Proponent: King Green Pty Ltd

Licence: L8890/2015/1

Registered office: Unit 1
4 Farrall Road
MIDVALE WA 6056

ACN: 166 791 724

Premises address: King Green Pty Ltd
329 Gnangara Road
WANGARA WA 6065
Being Part Lot 600 on Plan 73328 as defined by the Global Positioning System coordinates:

Position No.	Latitude	Longitude
1	31° 47’ 47.30” S	115° 51’ 1.86” E
2	31° 47’ 47.38” S	115° 51’ 6.91” E
3	31° 47’ 50.76” S	115° 51’ 6.91” E
4	31° 47’ 50.76” S	115° 51’ 1.86” E

Granted: Thursday, 20 October 2016

Commencement date: Monday, 24 October 2016

Expiry date: Tuesday, 25 June 2019

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER) CEO’s delegated officer has decided to grant a licence. The DER delegated officer considers that in reaching this decision, he has taken into account all relevant considerations.

Decision Document prepared by: Lauren Fox
A/Senior Licensing Officer

Decision Document authorised by: Alan Kietzmann
Delegated Officer

Contents

1 Purpose of this Document

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

2 Administrative summary

Administrative details		
Application type	Works Approval ☐ New Licence ☒ Licence amendment ☐ Works Approval amendment ☐	
Activities that cause the premises to become prescribed premises	**Category number(s)** 13 61A	**Assessed design capacity** 300,000 tonnes
Application verified Application fee paid	Date: 8/05/2015 Date: 11/06/2015	
Works Approval has been complied with Compliance Certificate received	Yes☐ No☒ N/A☐ Yes☒ No☐ N/A☐	
Commercial-in-confidence claim	Yes☐ No☒	
Commercial-in-confidence claim outcome	N/A	
Is the proposal a Major Resource Project?	Yes☐ No☒	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986*?	Yes☐ No☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☐
Is the proposal subject to Ministerial Conditions?	Yes☐ No☒	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the *Environmental Protection Act 1986*)?	Yes☐ No☒ Department of Water consulted Yes ☐ No ☐	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes☐ No☒		
Is the Premises subject to any EPP requirements? Yes☐ No☒		

3 Executive summary of proposal and assessment

King Green Pty Ltd (King Green) will operate a construction and demolition (C&D) waste crushing and recycling facility at Lot 600, 329 Gnangara Road, Wangara. The facility has a design capacity of 300,000 tonnes per annum, however King Green has indicated the operation is expected to have an annual throughput of between 50,000 and 100,000 tonnes per annum and is intended to operate for a five year period.

The premises is located within the City of Wanneroo. The site was previously zoned rural but was re-zoned in 2012 as industrial, forming part of the East Wanneroo Cell 8 Agreed Structure Plan No. 10 (Plan No. 10). The premises is located within a wetland area; however, the lake is considered as having very limited environmental value. The wetland has a management category as 'multiple use'; wetlands in this category are considered significantly degraded, possessing few natural attributes and limited human-use interest. It was concluded in Plan No. 10 that the wetland does not represent a constraint to the development of the land for industrial purposes and is being infilled with development.

Using the Department of Water's *Perth Groundwater Atlas* (PGA), groundwater is identified at between 1 to 1.5m below ground level (bgl) which is consistent with the site being within a wetland area. The inferred groundwater flow is south to north. PGA described the surface geology as *swamp and lacustrine deposits – peat, peaty sand and clay*. Groundwater has a high risk of iron staining, high to moderate risk of acid sulfate soils, and is considered marginally saline (total dissolved solids 500 – 1000 mg/L). Priority 1 and Priority 3 Public Drinking Water Source Areas are located 1.3km east of the Premises.

Bush Forever areas classified under State Planning Policy 2.8 *Bushland Policy for the Perth Metropolitan Region* (June 2010) are located 120m north, 1.07km north-east and 1.25km north-west of the Premises. Other Bush Forever areas are located over 2km from the site.

The resource recovery facility is situated on approximately 10,000m^2 in the south-west corner of the premises (See Appendix A). The nearest residential premises are located approximately 500 metres to the south-east, adjacent to Gnangara Road. There are new industrial sub-division roads and vacant lots to the north of the premises, a storage facility to the west, salvage yard to the south and undeveloped land to the east, with land that is zoned residential 500 metres further to the east.

C&D waste will be accepted for screening, crushing and sorting for subsequent resale/reuse or disposal off-site. King Green proposes to recover several different waste streams comprising of sand, concrete, bricks, cement mortar and ceramic tiles. Minor inclusions of non-conforming waste, such as organic wood, plastic, metal, cardboard, plasterboard, electric cables and glass may also be present in incoming C&D loads which are required to be removed offsite as non-conforming waste. Asbestos containing material (ACM) is not to be accepted on-site. Any ACM inadvertently received is to be managed in accordance with the site's Asbestos Management Plan and removed from site to an appropriate licensed disposal facility.

C&D waste accepted onto the site will be deposited on a hardstand handling area, comprising of 200mm of crushed road base material and will then be sorted. Storage of the processed/sorted materials will be in stockpiles not higher than the perimeter noise bund. Sorted inert materials will be subject to a crushing and screening process in order to produce recycled aggregate products which will then be offered for sale to the construction industry. Other non-conforming waste such as plastic, wood and cardboard will be separated out into specific categories and removed off-site to registered landfill disposal facilities.

A separation distance of 1,000 metres is recommended between a sensitive receptor and a premises that undertakes crushing, with the main emissions considered to be noise and dust. The CEO's

Delegated Officer has determined that because the crushing facility is within 1,000m of sensitive receptors, there is an elevated risk to the environment, and may require greater regulatory controls.

The main emissions associated with the activities undertaken at the premises include stormwater contaminated with sediments from unsealed surfaces and material storage areas; noise from plant operations and vehicles; and fugitive air (dust and asbestos) from waste handling, processing and storage.

4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	**Condition number L=Licence Number**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
Premises operation	L1.2.1 to L1.2.19	**Please refer to Appendix A**	Application supporting documentation
Fugitive emissions	L1.2.3 to L1.2.15 (asbestos) L1.2.16 and L1.2.17 (dust and noise) L1.2.18 (fires) L1.2.19 (windblown waste)	**Please refer to Appendix A**	Application supporting documentation
Noise	L1.2.17 and L2.2.1	**Please refer to Appendix A**	Application supporting documentation
Information **Information**	L3.1.1 and L3.1.2, L3.2.1, 3.2.2 and L3.3.1	Condition L3.1.1 sets out the requirements for any records that are required under this licence, such as ensuring they are legible and retained for 6 years which assists DER in regulating the conditions of this licence. L3.1.2 requires a complaints management system to be implemented where the occupier can internally address any issues that arise from premises operations. DER will review these complaints as reported in the Annual Environmental	N/A

DECISION TABLE			
Works Approval / Licence section	**Condition number L=Licence Number**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
continued		Report (AER) and can consider the requirement for reassessment of any regulatory controls to address the complaints. Condition L3.2.1 requires the occupier to undertake an audit of their operations against the conditions of the licence and to report on this compliance in an Annual Audit Compliance Report (AACR). This condition assists DER in regulating the occupier's compliance with licence conditions and allows an opportunity for DER to review the occupier's environmental performance. L3.1.2 requires a complaints management system to be implemented where the occupier can internally address any issues that arise from premises operations. DER will review these complaints as reported in the Annual Environmental Report (AER) and can consider the requirement for reassessment of any regulatory controls to address the complaints. L3.2.2 requires the occupier to submit an AER. The AER is required to include the AACR and a summary of the complaints required under condition L3.1.2. The AER is also required to provide the results for the monitoring of inputs/outputs, and results of recycled outputs sampling and testing data to enable compliance auditing and minimise risk of exposure to asbestos. The occupier is also required to provide a summary of any malfunction of pollution control equipment or any environmental incidents. DER reviews all of the data provided in the AER to assess compliance with the licence conditions and to monitor the environmental impacts from the premises. Condition L3.3.1 requires the occupier to notify the CEO if there is a breach of any licence limits (i.e. throughput limits). The notification required under this condition give DER sufficient notice of any environmental impacts at the premises so that DER can determine if any further action is required to address the incident.	
Licence Duration	N/A	King Green Pty Ltd has valid planning approval from the City of Wanneroo (the City) until 25 June 2019. To align with the City's planning approval, the CEO's	DER's Guidance Statement;

DECISION TABLE			
Works Approval / Licence section	**Condition number L=Licence Number**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
		Delegated Officer has determined a licence expiry date of 25 June 2019.	Licence Duration (revised May 2015)

5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
22/06/2015	Application advertised in *The West Australian*	No comments received	N/A
22/06/2015	Application referred to City of Wanneroo	No comments were received however DER has been previously advised that the Premises has valid planning approval granted by the City of Wanneroo until 25 June 2019.	Licence duration has been aligned with the expiry date of the planning approval.
10/10/2016	Proponent sent a copy of draft instrument	Comments received 19 October 2016: • Occupier has concerns that there is an insufficient water supply to meet the requirements for dust management and requested a permit to use groundwater. • Occupier has requested that stockpiles exceed the noise bund height by three metres as there is limited space onsite to undertake economical operations. • Occupier has requested to burn waste onsite as City of Wanneroo has granted a burning permit.	**Dust and asbestos emissions** The Delegated Officer's risk assessment has identified a moderate risk of dust emissions and a high risk of asbestos fibres. Dust suppression is required to control these emissions. No additional measures to control dust have been proposed by the occupier in response to the draft documents. Regulatory controls for dust suppression, including the use of waste, were included on the licence to reflect the occupier's commitments that were proposed in the licence application. The regulatory control to maintain stockpiles below the noise bund height is another control that was proposed by the occupier as part of the licence application. The occupier has not provided any justification to support that dust/asbestos emissions can be managed at an increased stockpile height.

Date	Event	Comments received/Notes	How comments were taken into consideration
			In the absence of any additional controls proposed by the occupier to manage dust and asbestos emissions, the Delegated Officer has determined that the controls for dust and asbestos emissions, including maintaining stockpiles being below noise bunds, are required to sufficiently manage emissions to an acceptable level. Any changes will require an amendment application to be submitted, outlining any alternative controls and justification for the amendment, to be considered by the Delegated Officer through a new risk assessment. Approval to use groundwater is required to be obtained from the Department of Water. **Fires** The risk assessment for fires has resulted in a high risk to the environment and public health from waste being burnt onsite. Previous onsite fires resulted in complaints being reported to DER. The burning of timber treated with preservatives (amongst the burning of other materials) is also an offence under the *Environmental Protection (Unauthorised Discharges) Regulations 2004.* Based on the high risk to the environment and public health posed by burning waste onsite, the Delegated Officer has determined that the requirement for no waste being burnt onsite remains as a regulatory control.

6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High

Appendix A

Hydrocarbon storage
The occupier has advised that the site diesel fuel tanker which has a capacity of approximately 800 litres, will be placed in a bunded container on a trailer prevent fuel spillage while refuelling equipment. Although the storage of fuels is not regulated by DER as it is not a prescribed activity, any discharges or spills of fuel, oil or other chemicals may be subject to the *Environmental Protection (Unauthorised Discharges) Regulations 2004.*

Emission Description (Leachate)
Emission: Stormwater contaminated with leachate from waste storage of non-conforming wastes.
Impact: Contamination of surrounding land, surface water drainage systems and infiltration to groundwater. Impacts to the Bush Forever area located 120m from the site. Groundwater is approximately 1 metre below the premises and the nearest wetland to the site is Lake Gnangara at a distance of 1.3 kilometres.

The site comprises of a natural depression with part of the site inundated (wetland) for six months of the year. The site itself is defined as a Multiple Use Wetland according to the wetland categories within the Geomorphic Wetlands on the Swan Coastal Plain dataset. The nearest public drinking water source is at a distance of 1.3 kilometres to the east of the site at the Priority 1 Public Drinking Water Source area (Gnangara underground water pollution control area).

Controls: The Premises is located on a hardstand constructed of 200mm of crushed road base material. Stormwater is directed by site gradient to three soak wells located in the north-western corner of the premises for infiltration. The occupier will only accept inert wastes that by nature, pose a lower risk to the environment.

Risk Assessment
Consequence: Moderate
Likelihood: Possible
Risk Rating: Moderate

Regulatory Controls
Condition 1.2.1 has been included on the licence to limit the types and quantities of waste that can be accepted at the premises to those that have been assessed as suitable and can be sufficiently managed through the premises infrastructure and controls. Condition 1.2.2 requires the occupier to remove any wastes from the Premises that are not authorised by condition 1.2.1 to assist in mitigating the potential leachate risk of runoff and infiltration from stockpiling non-conforming waste. Furthermore, condition 1.2.17 has been included to stipulate approved containment infrastructure to assist in leachate management and fugitive emissions.

Residual Risk
Consequence: Moderate
Likelihood: Unlikely
Risk Rating: Moderate

Fugitive Emissions

Emission Description
Emission: Fugitive dust emissions from the crushing and screening of C&D waste which have the potential to contain asbestos, dust lift-off from trafficked roads, lift-off from stockpiles, and handling of C&D wastes and screened products.

Impact: Degradation of local air quality. Dust emissions blocking photosynthesis of vegetation in the Bush Forever area located 120m north of the Premises. Nuisance impacts on the comfort and

amenity and health and wellbeing impacts on sensitive receptors located 600m south of the site, especially when northerly winds are experienced. Potential human health impacts from any asbestos fibres in dust emissions.

Impacts to human receptors include:

- Health
  - Asbestosis;
  - Irritation of eyes;
  - Coughing;
  - Sneezing;
  - Hayfever;
  - Increasing symptoms of existing respiratory conditions such as:
    - Asthma;
    - Emphysema; and
    - Chronic obstructive airways disease.
- Nuisance
  - Dust covering people's homes and property;
  - Impacting of people's amenities; and
  - Impacting on people's comfort.

Controls: The proponent has committed to a number of dust management strategies outlined in a Dust Management Plan, King Green Pty Ltd, submitted to DER December 2014 (DMP). The DMP outlines the following controls:

- Stockpiles will be no higher than the height of the constructed noise bunds;
- Dust management and dust controls will be by means of a 10,000L water cart on site fitted with water cannon and spray bars, with an additional 10,000L water cart on standby;
- The effectiveness of this system will be monitored (visually) by the occupier and adjusted accordingly; and
- Water mist sprayers on the jaw crusher, screener and conveyors.

Risk Assessment (dust)
Consequence: Moderate (when dust abatement is operational)
Likelihood: Unlikely
Risk Rating: Moderate

Although it is unlikely to occur, there is the potential that the residential community may be impacted to a moderate degree by dust during normal operations given that the operations are occurring within the 1,000m recommended separation distance. This results in an overall moderate level of risk to the environment and public health from dust emissions.

Regulatory Controls
Table 1.2.2 (in condition 1.2.16) requires stockpile heights to be limited to no higher than the constructed noise bunds, which are stated in Table 1.2.3 of condition 1.2.17.

Table 1.2.2 also required all loads to be wet down prior to unloading, stockpiles to be maintained in a damp state and water sprayers to be used on all crushing and screening equipment, including conveyors, when operational.

Table 1.2.3 (condition 1.2.17) specifies the infrastructure and equipment requirements for the Premises. This includes the height requirements of the noise bunds (which also assist in containing dust emissions on site), use of a water cart fitted with water cannon and/or spray bars, and the installation of water mist sprayers on the crusher, screener and conveyors. These requirements

reflect the dust abatement measures proposed in the licence application (as detailed above in the 'Emissions description' section).

Should dust emissions be identified as causing an impact to the Bush Forever area or sensitive residential receptors, additional regulatory controls, such as the requirement to undertake dust sampling, may be considered.

Residual Risk
Consequence: Moderate
Likelihood: Unlikely
Risk Rating: Moderate

Dust containing asbestos
The proponent provided an Asbestos Management Plan, King Green Pty Ltd, submitted to DER December 2014 (AMP), as part of the works approval application. Below is an overview of the proposed controls outlined in the AMP:

- Pre-acceptance procedures:
  - Advising all clients that asbestos is not accepted onsite;
  - Installation of a 'no asbestos' sign at premises entry; and
  - Recording details of all loads arriving at the premises.
- Acceptance procedures:
  - Clients will be requested to sign a declaration that loads are asbestos free. Any clients refusing to sign the declaration will not be granted approval to deposit their loads onsite;
  - If visually identified, loads will be rejected and vehicle details will be maintained by occupier;
  - The waste receiver is required to ask the waste driver the source, content and risk status of the loads to determine the classification of each loan in accordance with the *Guidelines for managing asbestos at construction and demolition waste recycling facilities,* published by the Department of Environment and Conservation (December 2012) (DER Asbestos Guidelines); and
  - Classified loads will be dampened and unloaded in designated areas for further visual inspection. Loads will remain damp during inspection.
- Post-acceptance:
  - Loads will be inspected and managed in accordance with DER's Asbestos Guidelines;
  - If asbestos is not identified, it will be processed onsite;
  - Waste containing asbestos will be isolated, kept damp and directed offsite to an appropriate disposal facility;
  - Visual inspection will be ongoing throughout all phases of the site operations;
  - Sampling of processed material will be undertaken in accordance with DER's Asbestos Guidelines.

It is noted that the AMP appears to be consistent with DER's Asbestos Guidelines.

The proposed controls for fugitive dust also assist in reducing the likelihood of asbestos fibres being released.

Risk Assessment (**Asbestos fibres**)
Consequence: Severe

Likelihood: Unlikely
Risk Rating: High

The controls proposed by the proponent should control asbestos such that it is unlikely that asbestos fibres will be released from the activities. However, due to the severe consequences of asbestos fibres reaching a receptor the risk rating is high.

Regulatory Controls
Condition (and table) 1.2.1 specifies that waste containing visible asbestos or ACM shall not be accepted onsite. This condition assists in reducing the risk of asbestos or ACM being accepted which also reduces the risk that this type of waste will be crushed or screened.

Condition 1.2.2 requires non-conforming waste to be removed offsite which assists in the separation and removal of any asbestos material that may be received in mixed waste streams.

Conditions 1.2.3 to 1.2.15 have been included specifically in regards to asbestos management. These conditions assist in reducing the risk of asbestos fibres being released during crushing and screening operations, as well as reducing the risk to public health when the processed material is re-used. These conditions are representative of the requirements for asbestos management as specified in the DER Asbestos Guidelines and reflect the occupier's commitments as stated in the AMP.

The regulatory controls included for general fugitive dust emissions also assist in reducing the likelihood of asbestos being released.

Risk Assessment (Asbestos fibres)
Consequence: Severe
Likelihood: Rare
Risk Rating: High

While impacts from releases of asbestos fibres is considered to be severe, the risk of fibres being released with regulatory controls in place is rare and therefore despite the residual risk being high, this is considered to be acceptable.

Emission Description (Fires)
Emission: Smoke and emissions to air in the event of a fire. Contaminated fire wastewaters generated from firefighting activities.

Impact: Contamination of surrounding land and surface water drainage systems from the addition of contaminated fire wastewater and ash fallout. Degradation of local air quality. Destruction of the Bush Forever area located 120m north of the Premises. Nuisance impacts on the comfort and amenity, as well as health and wellbeing impacts, on sensitive receptors located 600m south of the site.

Controls: Although the occupier has not specified any controls for managing fire risk, the onsite water cart with water cannon and spray bars will assist in fire prevention and control.

Risk Assessment
Consequence: Major
Likelihood: Possible
Risk Rating: High

Three confirmed fires have occurred at the Premises where treated timber has been burnt generating smoke emissions that are detrimental to the environment and public health. Based on the numbers of

fires onsite, the likelihood of fires occurring is possible and given the severity of fires, the overall risk is considered extreme.

Regulatory Controls
DER understands that a burning permit was obtained from the City of Wanneroo for fires to be undertaken at the premises however based on the high risk rating associated with fires, licence condition 1.2.18 has been included on the licence specifying that no waste is to be burnt on the site, which assists in reducing the risk of impacts to the environment and public health from fires.

Residual Risk
Consequence: Major
Likelihood: Rare
Risk Rating: Moderate

Emission Description (Windblown waste)
Emission: Windblown waste from Premises generating offsite litter, particularly from the presence of plastics in mixed construction and demolition waste streams.

Impact: Contamination of surrounding land and surface water drainage systems from the addition of litter. Adverse impacts to the Bush Forever area 120m north of the site.

Controls: No specified controls have been proposed by the occupier for windblown waste however the installation of the noise bunds may assist in containing waste within the Premises.

Risk Assessment
Consequence: Minor
Likelihood: Possible
Risk Rating: Moderate

Regulatory Controls
Given the moderate risk rating of windblown waste and the proximity to the Bush Forever area, condition 1.2.19 requires windblown waste to be collected from the boundary when required to prevent litter escaping the premises. This condition assists in preserving the integrity of the environment.

Residual Risk
Consequence: Minor
Likelihood: Unlikely
Risk Rating: Moderate

Noise Emissions
The occupier provided the document *Environmental Noise Assessment – King Green Pty Ltd*, Herring Storer Acoustics, August 2014 as part of the works approval application. DER's Noise Regulation (NR) undertook a review of the noise assessment and has made the following comments:

- *The methodology of the assessment appeared to be appropriate and sound power levels used seem to be correct;*
- *SoundPlan was used for the modelling factoring in the worst case scenario for meteorological conditions; and*
- *The noise assessment results are considered reliable and NR agreed that noise emissions from the facility can be managed to comply with the assigned levels in the Environmental Protection (Noise) Regulations 1997 (EP Noise Regulations) at the nearest sensitive receptors and at the boundary of the neighbouring industrial premises.*

Based on the comments from NR, the following risk assessment for noise emissions has been completed.

Emission Description
Emission: Emission: Unreasonable noise emissions from the crushing, screening and mulching of waste as well as noise emitted from vehicle movements (including reversing beepers) and the general handling of waste.

Impact: Reduced wellbeing, amenity and comfort of sensitive noise receptors 600m from the Premises.

Controls: The proponent has provided an environmental noise assessment which demonstrates that noise emissions are expected to comply with the *Environment Protection (Noise) Regulations 1997* and can be managed, through the use of noise bunds around the perimeter of the facility, without affecting sensitive receptors. These noise bunds, comprising of a series of low height earth bund walls on the south, west and north boundaries, were constructed under works approval W5791/2015/1.

The occupier is committed to operating between the hours of 7am to 5pm Monday to Friday and 7am to 1pm on Saturdays. These hours are within the 'daytime' hours specified in the EP Noise Regulations where a higher level of noise emissions is assigned.

Risk Assessment
Consequence: Minor
Likelihood: Possible
Risk Rating: Moderate

Regulatory Controls
Condition 1.2.19 has been included on the licence to require the Licensee to maintain the integrity of the noise bunds to the height specifications provided with the noise assessment. The noise modelling and predicted levels were calculated using these specified bund heights which are required to be maintained to meet compliance with the EP Noise Regulations. Table 1.2.3 of condition 1.2.17 specifies the location of the crushing and screening equipment as well as specifying that the pulveriser cannot be operated at the same time as the crushers, and requiring the height of the noise bunds to be maintained.

Information provided by the occupier on the survey reports for the noise bund height confirms that the bunds have been constructed above the minimum height requirements specified in the works approval.

During a compliance audit of the Works Approval W5791/2015/1 undertaken on 22 June 2016, it was noted that the crusher and screening equipment was operating near the northern area of the premises, with an additional dual crusher and hand-sorting conveyor in place. While an increased separation distance will mitigate noise, additional noise sources have been brought on site. The audit also identified an additional screener, pulveriser and impact crusher located on Premises which represents additional risk to the nearest sensitive receptors. This was not described in the works approval application. This arrangement was not considered in the acoustic assessment that was presented in the works approval application and was not assessed by the CEO's Delegated Officer.

The additional equipment and altered location of the original crusher and screener will need to be assessed to determine if the noise emissions complies with the assigned levels in the EP Noise Regulations. Consequently, the CEO's Delegated Officer deems it appropriate for the Licensee to verify that the alteration to the operations still complies with the requirements of the EP Noise Regulations through the inclusion of a noise monitoring condition (2.2.1).

Should noise monitoring demonstrate that the noise emissions exceed the EP Noise Regulations assigned levels, additional regulatory controls such as the requirement to implement low tonal reversing beepers may be considered.

Residual Risk
Consequence: Minor
Likelihood: Possible
Risk Rating: Moderate