Government of **Western Australia**
Department of **Environment and Conservation**

Your ref: L8724/2013/1
Our ref: 2012/002956
Enquiries: Jamie Piotrowski
Phone: 9725 4300
Fax: 9725 4351
Email: jamie.piotrowski@dec.wa.gov.au

Mr Brent Burns
KBB Pty Ltd
295 Kaloorup Rd
VASSE WA 6280

Dear Mr Burns

***ENVIRONMENTAL PROTECTION ACT 1986*: LICENCE GRANTED**

Premises
Landsave Organics
Lot 1 Sussex 295 Kaloorup Road
VASSE WA 6280
Licence Number:L8724/2013/1

Alicence under the *Environmental Protection act 1986* (the Act) has been granted for the above premises. The Department of Environment and Conservation will advertise the issuing of this licence in the public notices section of *The West Australian* newspaper.

The licenceincludes attached conditions. Under Section 58(1) of the Act, it is an offence to contravene a condition of a licence. This offence carries a penalty of up to $125,000 and a daily penalty of up to $25,000

In accordance with section 102(1)(c) of the Act, you have 21 days to appeal the conditions of the licence. Under section 102(3)(a) of the Act, any other person may also appeal the conditions of the licence.To lodge an appeal contact the Office of the Appeals Convenor on 6467 5190 or by email at admin@appealsconvenor.wa.gov.au.

Where a licence is issued for more than one year it requires payment of an annual fee and will cease to have effect if the fee is unpaid. It is the occupier's responsibility to lodge a fee application and pay the annual fee in sufficient time to avoid incurring a late payment fee and for processing to be completed before the licence anniversary date.

If you have any queries regarding the above information, please contact Jamie Piotrowski on 9725 4300.

Yours sincerely

Alan Sands
Officer delegated under Section 20
of the *Environmental Protection Act 1986*

Thursday, 30 May 2013

enc: *Environmental Protection Act 1986* Licence L8724/2013/1

South West Region
South West Highway, Bunbury WA 6230
Phone: 08 97254300 / Fax: 08 97254351
PO Box 1693, Bunbury, WA 6231
www.dec.wa.gov.au

Department of
Environment and Conservation
Our environment, our future

Licence

Environmental Protection Act 1986, Part V

Licensee: KBB Pty Ltd

Licence: L8724/2013/1

Registered office: 295 Kaloorup Rd
VASSE WA 6280

ACN: 112 798 615

Premises address: 295 Kaloorup Rd
VASSE WA 6280
Being Lot 1 on Diagram 13299 as depicted in Schedule 1

Issue date: Monday, 3 June 2013

Commencement date: Monday, 3 June 2013

Expiry date: Thursday, 2 June 2016

Prescribed Premises Category
Schedule 1 of the Environmental Protection Regulations 1987

Category number	Category description	Category production or design capacity	Premises production or design capacity
67A	Compost manufacturing and soil blending: premises on which organic material (excluding silage) or waste is stored pending processing, mixing, drying, or composting to produce commercial quantities of compost or blended soils.	1000 tonnes or more per year	7,000 tonnes per year

Conditions of Licence
Subject to the conditions of the licence set out in the attached pages.

.....
Officer delegated under Section 20
of the *Environmental Protection Act 1986*

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Introduction

This Introduction is not part of the Licence conditions.

Who we are
The Department of Environment and Conservation (DEC) is a Government Department in the portfolio of the Minister for the Environment. Our purpose is to protect and conserve the State's environment on behalf of the people of Western Australia.

Our industry licensing role
DEC has responsibilities under Part V of the *Environmental Protection Act 1986*(the Act)for the licensing of prescribed premises. We also monitor and audit compliance with works approvals and licence conditions, take enforcement action as appropriate and develop and implement licensing and industry regulation policy.

Licence requirements
This licence is issued under Part V of theAct. Conditions contained with the licence relate to the prevention, reduction or control of emissions and discharges 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. These 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 should comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply. Additional guidance on pollution prevention can be found in the Department of Water's Water Quality Protection Guidelines and Codes of Practice accessed through:
http://www.water.wa.gov.au/Managing+water/Water+quality/Water+quality+protection+guidelines/default.aspx

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 the Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary
KBB Pty Ltd trade under the business name "Landsave Landscape Supplies" (Landsave). The company's office and operations are situated at 295 Kaloorup Road, Vasse in the Shire of Busselton. KBB Pty Ltd is a small, family-run business and has been trading since 2005.

Landsave produce a high quality product labelled "Controlled Microbial Compost". This is humified compost containing macro and micro nutrients. The company claim that the product contains inoculums of diverse beneficial microbes that allow the plants to uptake select nutrients at the ideal time for plant growth.

Landsave use a range of feedstock to produce different compounds of compost, depending on market demand. The major feed stocks used in compost production at the Landsave site include agricultural straw, greenwaste, shredded tree pruning, grape marc and occasional horse or cattle manure. Minor feedstock used to create specific compost blends include bentonite clay, rock phosphate and rock dust.

This is a new Licence for an existing facility.

The licences and works approvals issued for the Premises since Monday, 3 June 2013are:

Instrument log		
Instrument	**Issued**	**Description**
L8724/2013/1	3 June 2013	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:

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

"annual" means the inclusive period from 1 July until 30 June in the following year;

"AS/NZS 5667.1" means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples;*

"Code of Practice for the Storage and handling of dangerous goods" means the Storage and handling of dangerous goods, Code of Practice, Department of Mines and Petroleum, Government of Western Australia;

"Contact Address" for the purpose of correspondence and advice means:
Regional Leader, Industry Regulation, South West Region
Department of Environment and Conservation
PO Box 1693
BUNBURY WA 6231
Telephone: (08) 9725 4300
Facsimile: (08) 9725 4351;

"dangerous goods" has the meaning defined in the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007;

"Director" means Director, Environmental Regulation Division of the Department of Environment and Conservation for and on behalf of the Chief Executive Officer as delegated under Section 20 of the *Environmental Protection Act 1986;*

"environmentally hazardous material" means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm;

"fugitive emissions" means all emissions not arising from point sources;

"hardstanding" means a surface with a permeability of 10^{-9} metres/second or less;

"leachate" means a liquid that carries contaminants dissolved out of materials through which it has percolated;

"Licence" means this Licence numbered L8724/2013/1 and issued underthe *Environmental Protection Act 1986;*

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

"NATA" means the National Association of Testing Authorities, Australia;

"NATA accredited" means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

"placard quantity" has the meaning defined in the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007;

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

"waste" has the meaning defined in the *Environmental Protection Act 1986*; and

"µS/cm" means microsiemens per centimetre.

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the current version of that standard.

1.2 General conditions

1.2.1 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in theLicence, where the emission amounts to:
- (a) pollution;
- (b) unreasonable emission;
- (c) discharge of waste in circumstances likely to cause pollution; or
- (d) being contrary to any written law.

1.2.2 The Licensee shall maintain all pollution control and monitoring equipment to the manufacturer's specification or any internal management system.

1.2.3 The Licensee, except where storage is prescribed in section 1.3,shall only store substances that are classed as dangerous goods below placard quantities or environmentally hazardous materials not classified as dangerous goods if they are stored in accordance with the Code of Practice for the Storage and handling of dangerous goods.

1.2.4 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.

Stormwater control

1.2.5 The Licensee shall ensure that uncontaminated stormwater is kept separate from contaminated or potentially contaminated stormwater. Where stormwater has come into contact with a possible source of contamination, it should be treated as contaminated.

2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit, and/or target in this section.

2.2 Point source emissions to air,surface water andgroundwater

There are no specified conditions relating to point source emissions to air, surface water or groundwater in this section.

2.3 Emissions to Land

There are no specified conditions relating to point source emissions to land in this section.

2.4 Fugitive emissions

2.4.1 The Licensee shall use all reasonable and practical measures to prevent and where that is not practicable to minimise dust emissions from the Premises.

2.4.2 The Licensee shall ensure that no visible dust generated by the activities of the Premises crosses the boundary of the Premises.

2.5 Odour

2.5.1 The Licensee shall ensure that odour emitted from the Premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the Premises.

2.6 Noise

There are no specified conditions relating to noise in this section.

3 Monitoring

3.1 General monitoring

3.1.1 The Licensee shall ensure that:
(a) all wastewater samples are collected in accordance with AS/NZS 5667.10; and
(b) all samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured.

3.1.2 The Licensee shall ensure that:
Monthly monitoring is undertaken at least 15 days apart.

3.2 Monitoring of point source emissions to air,surface waterand groundwater

There are no specified conditions relating to monitoring of point source emissions to air, surface water or groundwater in this section.

3.3 Monitoring of emissions to land

There are no specified conditions relating to monitoring of emissions to land in this section.

3.4 Monitoring of inputs and outputs

There are no specified conditions relating to monitoring of inputs and outputs in this section.

3.5 Process monitoring

There are no specified conditions relating to process monitoring in this section.

3.6 Ambient environmental quality monitoring

There are no specified conditions relating to ambient environmental quality monitoring in this section.

3.7 Meteorological monitoring

There are no specified conditions relating to meteorological monitoring in this section.

4 Improvements

4.1 Improvement programme

4.1.1 The Licensee shall complete the improvements in Table 4.1.1 by the date specified.

4.1.2 The Licensee, for improvements not specifically requiring a written submission, shall write to the Director stating whether and how the Licensee is compliant with the improvement within one week of the completion date specified in Table 4.1.1.

Table 4.1.1: Improvement programme

Improvement reference	Improvement	Date of completion
IR1	The Licensee shall undertake the works for the Hardstand area and the construction of the Settlement Pond as per section 8.5.5 of licence application document; *Composting Facility Information for Licensing Application*, ASK Waste Management, January 2012.	1 July 2013
IR2	The licensee shall submit a report to the Director upon completion of the works outlined in IR1. The report shall contain appropriate certification proving that the works have been completed as stated in document licence application document; *Composting Facility Information for Licensing Application*, ASK Waste Management, January 2012. The report shall include certification that all work areas, wastewater storage areas and wastewater drains/pipes have a coefficient of permeability of less than 1.0 x (10^{-9}) m/sec.	31 August 2013

5 Information

5.1 Records

5.1.1 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 5.1.1(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 groundwater.

5.1.2 The Licensee shall ensure that:
- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
- (b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.

5.1.3 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous year.

5.1.4 The Licenseeshall 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.

5.2 Reporting

5.2.1 The Licensee shall submit to the Director at the Contact Address an annual environmental report within 28 calendar days after of the end of the annual period. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

Table 5.2.1: Annual environmental report

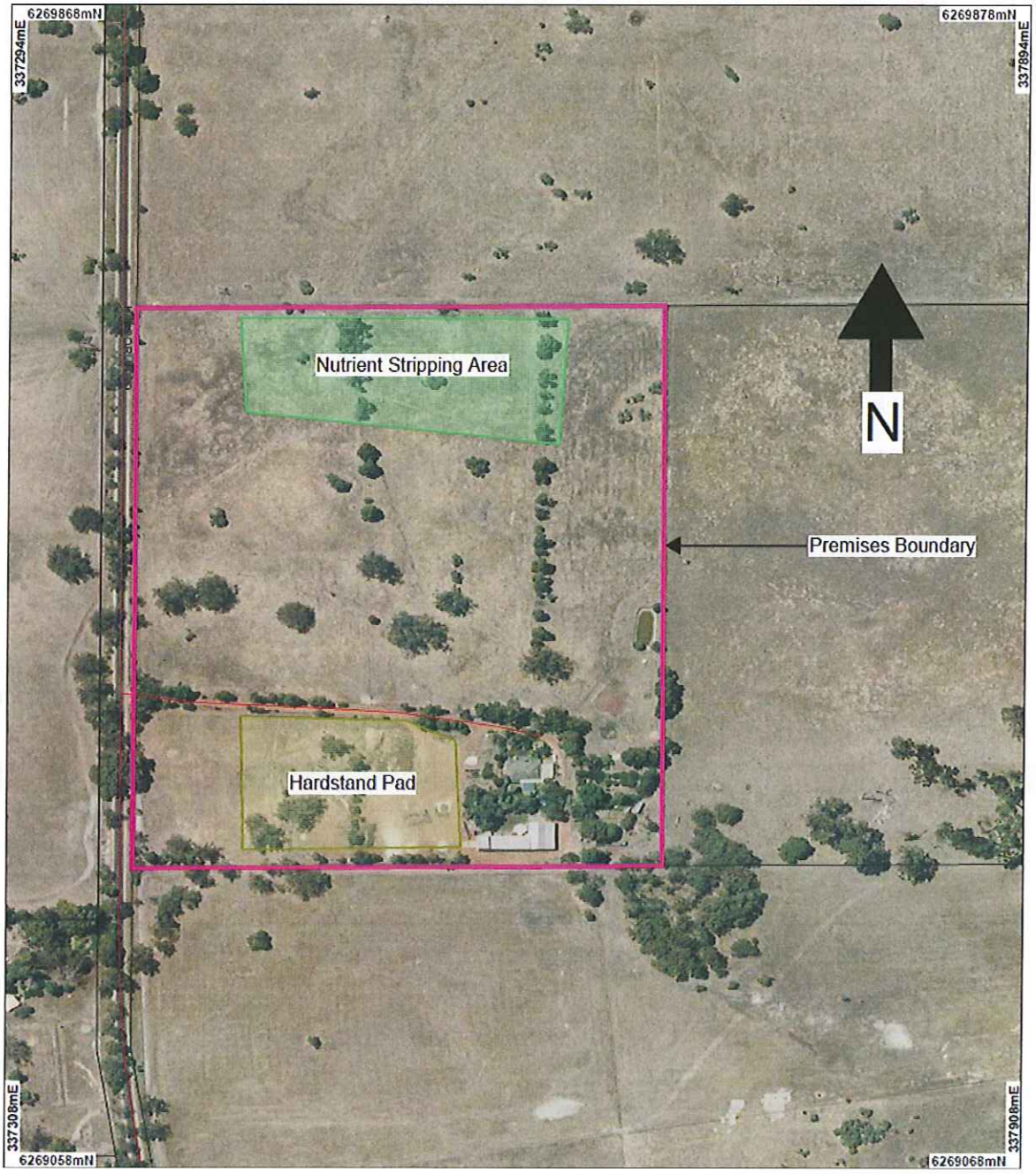
Condition or table (if relevant)	Parameter	Format or form[1]
-	Summary of any failure or malfunction of any pollution control equipment or any incidents that have occurred during the year and any action taken	None specified
5.1.3	Compliance	AACR
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

Schedule 1: Maps

Premises map

The Premises is shown in themapbelow.Thepink line depicts the Premises boundary.



Schedule 2: Reporting & notification forms

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

Copies of the original monitoring reports must also be submitted.

Licence: L8724/2013/1
Form: AACR
Name: Annual audit compliance report

Licensee:KBB Pty Ltd
Period :

Annual audit compliance report

Section A: Statement of compliance with Licence conditions

Were all conditions of licence complied with within the reporting period?		
Yes	□	Initial Sections A & B, then proceed to Section C
No	□	Initial Section A, then proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this annual audit compliance report (AACR).

Initial:

Section B: Details of non-compliance with Licence condition

a) Licence condition not complied with?	
b) Date(s) b) Date(s) and time(s) the non compliance occurred, if applicable?	
c) Was this non compliance reported to DEC?	
☐ Yes, and ☐ Reported to DEC verbally Date ☐ Reported to DEC in writing Date	☐ No
d) Has DEC taken, or finalised any action in relation to the non compliance?	
e) Summary of particulars of non compliance, and what was the environmental impact?	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram)	
g) Cause of non compliance	
h) Action taken or that will be taken to mitigate any adverse effects of the non compliance	
i) Action taken or that will be taken to prevent recurrence of the non compliance	

Please use a separate page for each Licence condition that was not complied with. Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:

Section C: Signature and certification

This AACR may only be signed by a person(s) with legal authority to sign it as defined below. Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the Licence holder is		The AACR must be signed and certified:
an individual	☐	by the individual Licence holder, or
	☐	by a person approved in writing by the Chief Executive Officer (CEO) of DEC to sign on the Licensee's behalf.
a corporation	☐	by affixing the common seal of the Licensee in accordance with the Corporations Act 2001; or
	☐	by two directors of the Licensee; or
	☐	by a director and a company secretary of the Licensee, or
	☐	if the Licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or
	☐	by the principal executive officer of the Licensee; or
	☐	by a person with authority to sign on the Licensee's behalf who is approved in writing by the CEO of DEC.
A public authority (other than a local government)	☐	by the principal executive officer of the Licensee; or
	☐	by a person with authority to sign on the Licensee's behalf who is approved in writing by the CEO of DEC.
a local government	☐	by the CEO of the Licensee; or
	☐	by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of $50,000 for an individual or body corporate.

I/We declare that the information in this AACR is correct and not false or misleading in a material particular.

Signature: _____ Signature: _____

Name: (printed) _____ Name: (printed) _____

Position: _____ Position: _____

Date: _____/_____/_____ Date: _____/_____/_____

Seal (if signing under seal)

LICENCE: L8724/2013/1
LICENCE FILE NUMBER: 2012/002956
APPLICATION DATE: 19/04/2012
EXPIRY DATE: 2 June 2016

PREMISES DETAILS

LICENSEE
KBB Pty Ltd
295 Kaloorup Rd
VASSE WA 6280

ACN: 112 798 615

PREMISES
Landsave Organics
Lot 1 on Diagram 13299
VASSE WA 6280

PRESCRIBED PREMISES CATEGORY

Category number*	Category Description*	Category Production or Design Capacity*	Premises Production or Design Capacity#	Premises Fee Component**
67A	Compost manufacturing and soil blending: premises on which organic material (excluding silage) or waste is stored pending processing, mixing, drying, or composting to produce commercial quantities of compost or blended soils.	1,000 tonnes or more per year	7,000 tonnes per year	More than 5,000 but not more than 50,000 tonnes per year

* From Schedule 1 of the Environmental Protection Regulations 1987
#From application
** From Schedule 4 of the Environmental Protection Regulations 1987

This Environmental Assessment Report (EAR) has been drafted for the purposes of detailing information on the management and mitigation of emissions and discharges from the prescribed premises. The objective of the EAR is to provide a risk assessment of emissions and discharges, and information on the management of other activities occurring onsite which are not related to the control of emissions and discharges from the prescribed premises activity. This does not restrict DEC to assessing only those emissions and discharges generated from the activities that cause the premises to become prescribed premises.

Basis of Assessment
The Landsave Organics Composting Facility (Landsave) which has been assessed as "prescribed premises" category number 67A under Schedule 1 of the Environmental Protection Regulations 1987.

Landsave produces approximately 7,000 tonnes per annum of organic compost for the commercial market. Nitrogen based feedstock and carbon based feedstock are blended with bentonite clay and inoculums. The mixture is then placed into windrows to mature, being turned and watered to a specific program. The final product is sold to the commercial market.

1.0 BACKGROUND

1.1 GENERAL COMPANY DESCRIPTION

KBB Pty Ltd trade under the business name "Landsave Landscape Supplies" (Landsave). The company's office and operations are situated at 295 Kaloorup Road, Vasse in the Shire of Busselton. KBB Pty Ltd is a small, family-run business and has been trading since 2005.

Landsave produce a high quality product labelled "Controlled Microbial Compost". This is humified compost containing macro and micro nutrients. The company claim that the product contains inoculums of diverse beneficial microbes that allow the plants to uptake select nutrients at the ideal time for plant growth.

The owners of Landsave also run a company called "A-Cut Tree Lopping". By operating both businesses out of the same property, the owner is able to utilise the greenwaste from the tree lopping activities into the composting activities.

1.2 LOCATION OF PREMISES

Lot 1 on Diagram 13299 is located on Kaloorup Road, Vasse, in the Shire of Busselton. The nearest town site is Vasse, 2km to the north of Lot 1. The area is zoned "General Farming" and there are eight possible receptors within 1km of the premises, all domestic properties.

Lot 1 is located on the Swan Coastal Plain, in the Shire of Busselton. The premises is located within the Busselton-Capel Groundwater area and does not fall within a Public Drinking Water Source Area.

Topography at Lot 1 sees a gradual south to north slope. The soils at Lot 1 are described as "Alluvial, shoreline and eolian deposits". The surrounding area is historically farming and has little remnant vegetation of note. The nearest identified threatened or priority flora is located over 1.5km to the south of Lot 1.

The BuayanyupRiver is located 170m to the west of Lot 1. The BuayanyupRiver flows from south to north and is a minor watercourse with intermittent flows.

1.3 PROCESS DESCRIPTION

Composting is a natural biological process, carried out under controlled aerobic conditions. In this process, microorganisms, including bacteria and fungi, break down organic matter into simpler substances. The effectiveness of the composting process is dependent upon the environmental conditions affecting the composting process; i.e. Oxygen, temperature, moisture, organic matter, particle size, disturbance and microbial populations.

Landsave use an open air, turned windrow system of composting (see picture 1). Raw materials are laid out in windrows then mixed and turned using a compost turner. This process allows for the optimum level of oxygen and temperature to be met to ensure the composting process is maximised. Once the compost has matured, it is screened through a trommel screen to remove oversize material which is returned to new windrows and re-composted.

Australian Standard AS4454 – *Composts, soil conditioners and mulches* states that to achieve the description "compost", a product needs to have undertaken the following treatment;

- Appropriate turning of the product to achieve at least three (3) turns that results in the whole mass being subject to a minimum temperature of 55ºC for three (3) consecutive days; and
- Have undergone a period of not less than six (6) weeks of composting plus curing.

Landsave state that their composting process will be managed to achieve ideal moisture, temperature and oxygen levels as according to the Australian Standards.

Picture 1: Compost windrows at Landsave

Landsave use a range of feedstock to produce different compounds of compost, depending on market demand. The major feed stocks used in compost production at the Landsave site include:

- Agricultural straw (carbon)
- Greenwaste from local government (carbon)
- Shredded tree pruning (carbon)
- Horse manure (nitrogen)
- Cattle manure (nitrogen)

Minor feedstock used to create specific compost blends include bentonite clay, rock phosphate and rock dust.

Carbon feedstock makes up 95-98% of the total compost and nitrogen feedstock makes up 2-5%. Minor feedstock makes up less than 0.5% of the total compost blend. Landsave intend on producing up to 7,000 tonnes per year of blended compost.

The layout of the site is depicted in Figure 1. The compost is processed on an impermeable hardstand area of compacted clay and gravel. The hardstand area is bunded on the southern and western boundaries, and has a gentle south-to-north slope. The bunding diverts non contaminated stormwater from entering the hardstand.

Landsave has modelled the Kaloorup Road facility on the document 'Environmental guidelines for composting and other organic recycling facilities' (Vic EPA, 1996). Presently, the site does not fully comply with 'best practice' standards. The Department of Water's 'Water Quality Protection Note' No. 90, *Organic material – storage and recycling* states that the design of a composting facility should have a system to contain all contaminated wastewater. This containment system should be designed to capacitate a 1 in 10 rainfall event over a 72 hour period.

Required Improvements:

The category 67A licence will require Landsave to submit an Environmental Improvement Plan (EIP). This EIP will focus on Landsave designing a plan to ensure that the premises meets best practice, with particular focus on the permeability of the hardstand and the construction of a catchment system for leachate runoff and reuse.

Landsave will be required to construct a catchment drain and settlement pond for their wastewater. The construction of the drain and storage pond will need to be in accordance to the requirements set out in the Department of Water's 'Water Quality Protection Note' No. 27, *Liners for containing pollutants, using engineered soils.*

The hardstand used in the composting process has a permeability of 8.1 x (10^{-8}) meters/sec. The sample for this test was taken on 13 November 2012. This level is below the permeability recommended in the Department of Water's 'Water Quality Protection Note' No. 27, *Liners for containing pollutants, using engineered soils*, which requires a minimum of 1 x 10^{-9} m/sec. Landsave will be required to undertake works to ensure that the permeability meets the required standard.

Landsave are intending on constructing a contaminated water drain and settlement pond to cater for a rainfall event of over 1 in 100. This figure was based on the historical rainfall in the Kaloorup area over a 130 year period and relates to a rainfall event of 145mm over 24 hours. The plan with the catchment system is to divert all dirty water running off the hardstand area into a lined 'spoon drain' which feeds into a lined 'settlement pond'. The spoon drain and the settlement pond will be lined with compacted clay, with a permeability of less than 1 x 10^{-9} m/sec. The spoon drain will be constructed immediately north of the hardstand pad and designed to divert all of the runoff from the pad into the settlement pond.

In normal weather conditions, the water collected into the settlement pond is recycled onto the compost. In high rainfall events, excess water flowing into the settlement pond is diverted to a bunded, 'nutrient stripping zone', which consists of 2 hectares of planted vegetation. These plants consist of mixed species that thrive in waterlogged conditions, surrounded by grasses that will be harvested regularly to remove nutrients. The location of the proposed drain, pond and nutrient stripping area is shown in Figure 2.

The nutrient stripping area is designed to accept excess water generated from storm events that overflow the settlement pond. The settlement pond will be designed to have a storage capacity able to take the annual mean rainfall in the area, plus a 300mm freeboard. In addition to this, the system will be bunded to avoid surface flow of clean water into the pond. The main purpose of the settlement pond will be to provide water for the composting process. Composting sites around the South West typically have high water consumption and suffer from a lack of water. The settling pond will recycle water back onto the composting process and water will also be sourced from a groundwater bore.

Any impact from discharges to the nutrient stripping area will be via nutrient infiltration into the groundwater. The nutrient stripping area will be maintained to allow a year-round uptake of nutrients. This is achieved by the planting of a variety of vegetation in the area to ensure that the receiving environment stays green and healthy. Any discharges from the settlement pond to the nutrient stripping area will be in high rainfall events only and will contain highly diluted waters.

Figure 1: Water Lagoon Calculations

	Average rainfall (mm)	Average evaporation (mm)	Total runoff into lagoon (m^3)	Total water loss (evaporation and process m^3)	Net water into lagoon (m^3)
Annual	809.1	1465	16,730	39,324	-22,595

Landsave has provided a comprehensive water balance of the "dirty water" catchment and pathway to ensure that the capacity of the settling pond is sufficient (Figure 1). Using the average monthly rainfall and evaporation data for the Vasse area, the water uptake of the windrow composting process and the total runoff from the 18,000m^2hardstand areas, the settlement pond needs to have a minimum capacity of 2,382m^3. This number is the amount needed to store the winter rainfall after evaporation and product usage has been factored for, while still allowing for a 300mm freeboard. This data will be the basis for Landsave to the

settlement pond with dimensions of 38 meters x 38 meters at 1.65 meters depth. This would give a total storage capacity of 2400m^3, which equates to at least 30 days of average winter rainfall.

For the 2011/2012 financial year, Landsave had a total water usage of 2172 kL of water, supplied from the on site groundwater bore. The monthly usage is dependent on the amount of compost being manufactured as well as the rainfall, but water is used for all 12 months of the year. Landsave estimate that 75% of the total water usage can be sourced from the settlement pond with the remaining 25% coming from the bore. This is because the composting process requires clean water to finish the maturing process and ensure complete pasteurisation.

Noise:

Machinery used in the composting process is listed as follows:

- Case tractor with windrow turner;
- Cat loader;
- Extec screener;
- Tub grinder;
- Bobcat; and
- Truck.

Machinery is used individually, so there will be no combined noise factor from multiple point sources. Landsave have provided manufactures data for the loader/turner and screener, and they have taken basic decibel readings of each piece of machinery with a hand-held digital noise monitor. The resulting noise readings found that the two highest decibel emitters were the combined tractor/turner and the tub grinder, at 95 and 92 decibels respectively. Australian Standard 2436-2010, *Guide to noise and vibration control on construction, demolition and maintenance sites* uses an estimation formula to calculate the noise at a given receiving position. The formula is a basic calculation and gives decibel estimation for situations where the surrounding ground is of a hard surface as well as being a straight line reading, with no noise-buffering factors taken into consideration.

The noise estimation equation is:

$$L_{pA} = L_{WA} - 20 \log_{10} R - 8$$

Where:
L_{pA}= A-weighted sound pressure level at the source in dB;
L_{WA} = A-weighted sound power level of the source in dB; and
R = distance from the source in meters.

The closest sensitive receptor is 150 m to the SW, across Kaloorup road. Using this formula with the highest noise producing machine (tractor/turner, 95dB), the noise at the receptor would be 43.5dB. This level is below the maximum daytime $L_{A\,10}$ assigned level of 45dB as outlined in the Environmental Protection (Noise) Regulations 1997. This level is the estimated noise level providing there is no noise obstruction or barrier. Landsave has constructed a 3 meter high soil bund along the eastern side of Kaloorup road that intercepts the noise generated from the composting activities, reducing the noise impact at the nearest sensitive receptor.

In addition to this data, Landsave has been operating for the past 2 years with no complaints received regarding noise. This along with the estimated noise levels at the nearest sensitive receptor would suggest that the noise emanating from the composting activities at Landsave will not cause any unreasonable noise emissions.

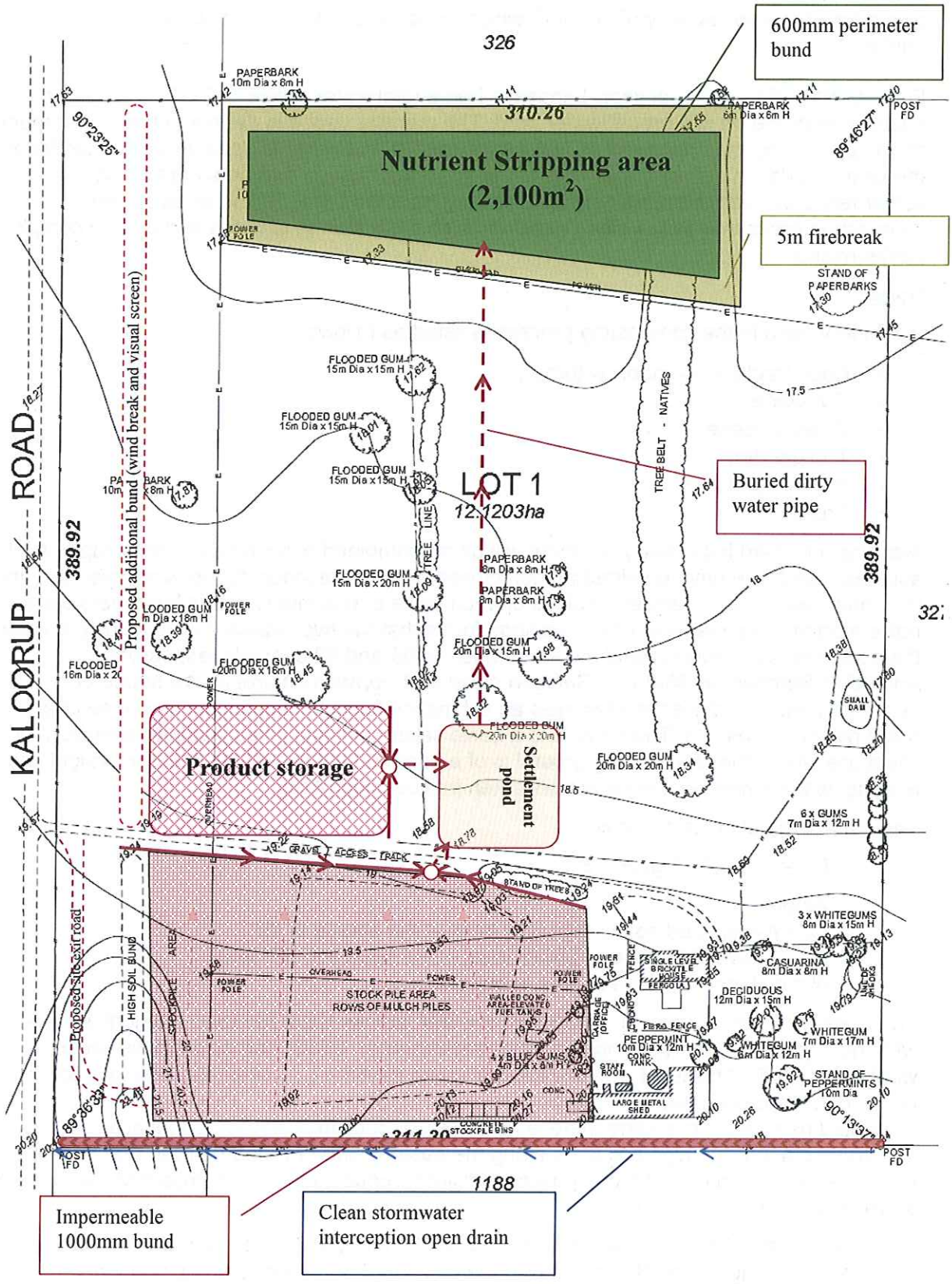


Figure 2: Schematic of the clean stormwater and dirty water drainage system

1.4 REGULATORY CONTEXT

1.4.1 Part IV *Environmental Protection Act 1986*, Environmental Impact Assessment

Part IV approval was not required for the establishment of the Landsave composting facility due to its relatively small size and low potential impact.

1.4.2 Part V *Environmental Protection Act 1986*, Environmental Management

Landsave have been operating the composting facility since late 2010, without a valid licence as required under Part V of the *Environmental Protection Act 1986*.Shire planning approval was granted in August 2010 (Development Approval: DA10/0180), but the company did not apply for a DEC licence until after the construction was complete.

A site inspection concluded that the Landsave facility did not meet the standards required in the Department of Water's 'Water Quality Protection Note' No. 90, *Organic material – storage and recycling*. The licence will include an Environmental Improvement Plan (EIP) as described in section 62A(1)(q) of the *Environmental Protection Act 1986*. The EIP will need to include all aspects of the premises that do not currently meet the minimum requirements for this type of premises. The premise needs the following improvements to meet minimum standards:

- Contaminated water catchment drain;
- Contaminated water settlement pond;
- Hardstand area to meet acceptable permeability level; and
- An adequate management program for recycling contaminated waters.

1.4.3 Other Decision Making Authorities' Legislation which applies

No other authorisation is needed.

1.4.4 Rights in Water Irrigation Act 1914

A-Cut Tree Service has an onsite groundwater bore licensed under *the Rights in Water Irrigation Act1914*. Licence number AGR171975 has an extraction limit of 20,000 kL.

1.4.5 Local Government Authority

The Shire of Busselton granted planning approval for the construction of the Landsave composting facility on 17 August 2010 (DA10/0180). On 31 January 2011, the shire sent a letter to the owner of Landsave (Brent Burns) stating that the composting facility was to be no greater than 45,000 tonnes per annum, and that the company had to seek all relevant approvals from the Department of Environment and Conservation.

2.0 STAKEHOLDER AND COMMUNITY CONSULTATION

SUBMISSIONS RECEIVED DURING 21 DAY PUBLIC COMMENT PERIOD

The Application for Licence details for this facility was advertised in the West Australian newspaper on 25 March 2013 as a means of advising stakeholders and to seek public comments. No submissions were received.

3.0 EMISSIONS AND DISCHARGES RISK ASSESSMENT

The DEC considers that conditions should focus on regulating emissions and discharges of significance. Where appropriate, emissions and discharges which are not significant should be managed and regulated by other legislative tools or management mechanisms.

The following section assesses the environmental risk of potential emissions from the Landsavefacility. In order to determine the site's appropriate environmental regulation, an emissions and discharges risk assessment was conducted of the Landsavefacility using the environmental risk matrix outlined in Appendix B. The results of this are summarized in Table 2.

Table 2: Risk assessment and regulatory response summary table.

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DEC Regulation (EP Act - Part V)	EAR Reference	Other management (legislation, tools, agencies)
Air emissions (point source)	N/A. No point air source emissions expected from composting activities.	No. No community concern	E – No regulation required	N/A	N/A	General provisions of *the Environmental Protection Act 1986* (EP Act).
Dust emissions	2. Poorly managed compost activities have the capacity to generate dust through low moisture levels. There is the capacity to generate dust through vehicle movement.	Low. No community concern	D – Potential dust problems will be managed through the company's general site management to ensure compost moisture levels are optimum and fugitive dust from vehicle movement is minimised.	N/A	N/A	Environmental Protection (Unauthorised Discharges) Regulations 2004 (UDR's), Victorian EPA guidelines, general provisions of the EP Act, Company EMS, AS 4454 - *Composts, soil conditioners and mulches.*
Odour emissions	2. Poorly managed compost activities have the capacity to generate odour through decomposing putrescible materials.	Low. No community concern	D – Odour management conditions will be implemented in the licence. Conditions will include management measures to ensure the composting activities meet relevant guidelines.	N/A	N/A	State Guidelines, Victorian EPA guidelines, general provisions of the EP Act, Company EMS, AS 4454.
Noise emissions	2. Machinery used is infrequent and non-cumulative.	Low. No community concern	D – Noise estimations show that the impact at sensitive receptors will be low.	N/A	N/A	Environmental Protection (Noise) Regulations 1997 (Noise Regs), Victorian EPA guidelines, Company EMS, AS 4454, AS 2436.
Light emissions	N/A. No light emissions are expected from operation – daytime operation only.	No. No community concern	E – No regulation required	N/A	N/A	General provisions of the EP Act
Discharges to water	N/A. No discharge to waters emissions expected during operations.	No. No community concern	E – No regulation required	N/A	N/A	Environmental Protection (Unauthorised Discharges) Regulations 2004 (UDR's), Victorian EPA guidelines, general provisions of the EP Act.
Discharges to land	2. Poorly managed compost activities have the potential to discharge contaminated stormwater and leachate into the environment.	Low. No community concern	D – Due to there not being an adequate contaminated water containment system, the licence will require Landsave to undertake works to ensure the site meets relevant guidelines.	N/A	N/A	UDR's, Victorian EPA guidelines, general provisions of the EP Act, Company EMS, AS 4454.
Solid / liquid wastes	N/A. All solid/liquid wastes are recycled back onto the composting. No discharges.	No. No community concern	E – No regulation required	N/A	N/A	Controlled Waste Regs, general provisions of the EP Act.

Hydrocarbon/ chemical storage	2. Hydrocarbon storage includes small quantities of diesel and unleaded petrol.	Low. No community concern	D – Hydrocarbon storage is contained and bunded as per relevant Australian Standards.	N/A	N/A	Dangerous Goods storage licence and relevant legislation (DOCEP), AS 1940 – *The storage and handling of flammable and combustible liquids*, general provisions of the EP Act.
Native vegetation clearing	N/A. No vegetation cleared	No. No community concern	E – No regulation required	N/A	N/A	General provisions of the EP Act
Contaminated site identification	N/A. Site is not identified as being contaminated	No. No community concern	E – No regulation required	N/A	N/A	Contaminated Sites Branch (DEC), general provisions of the EP Act.

4.0 GENERAL SUMMARY AND COMMENTS

KBB Pty Ltd has applied for a category 67A licence for a 7,000 tonne per year composting facility on Kaloorup Road in Vasse. The facility has been operating since late 2010 without a valid licence. The composting is intensely managed to ensure the thermal process is controlled in order to achieve a premium grade humified product containing trace minerals and a balanced microbial biomass for ideal plant growth.

Originally, Landsave were planning on expanding the current operation to the 45,000 tonne limit. The owned contacted DEC in late 2010 to begin the process for works approval, but the plans to upgrade were shelved and the owner decided to keep the current capacity of 7,000 tonnes. Landsave contacted DEC in January 2012 to begin the process to licence the site. Currently, the site does not meet best practice standards and

OFFICER PREPARING REPORT

Jamie Piotrowski

Position: Environmental Officer
South West Region
Department of Environment and Conservation
9725 4300

29 April 2013

ENDORSEMENT

Neville Welsh

Position: Regional Leader
South West Regional Office
Department of Environmentand Conservation
9725 4300

29 April 2013

APPENDIX A: EMISSIONS AND DISCHARGES RISK ASSESSMENT MATRIX

Table 3: Measures of Significance of Emissions

Emissions as a percentage of the relevant emission or ambient standard		Worst Case Operating Conditions (95th Percentile)			
		>100%	50 – 100%	20 – 50%	<20%*
Normal Operating Conditions (50th Percentile)	>100%	5	N/A	N/A	N/A
	50 – 100%	4	3	N/A	N/A
	20 – 50%	4	3	2	N/A
	<20%*	3	3	2	1

*For reliable technology, this figure could increase to 30%

Table 4: Socio-Political Context of Each Regulated Emission

		Relative proximity of the interested party with regards to the emission				
		Immediately Adjacent	Adjacent	Nearby	Distant	Isolated
Level of Community Interest or Concern*	5	High	High	Medium High	Medium	Low
	4	High	High	Medium High	Medium	Low
	3	Medium High	Medium High	Medium	Low	No
	2	Low	Low	Low	Low	No
	1	No	No	No	No	No

Note: These examples are not exclusive and professional judgement is needed to evaluate each specific case

*This is determined by DEC using the DEC "Officer's Guide to Emissions and Discharges Risk Assessment" May 2006.

Table 5: Emissions Risk Reduction Matrix

		Significance of Emissions				
		5	4	3	2	1
Socio-Political Context	High	A	A	B	C	D
	Medium High	A	A	B	C	D
	Medium	A	B	B	D	E
	Low	A	B	C	D	E
	No	B	C	D	E	E

PRIORITY MATRIX ACTION DESCRIPTORS
A = Do not allow (fix)
B = licence condition (setting limits + EMPs - short timeframes)(setting targets optional)
C = licence condition (setting targets + EMPs - longer timeframes)
D= EIPs, other management mechanisms/licence conditions (monitoring/reporting)/other regulatory tools
E = No regulation, other management mechanisms

Note: The above matrix is taken from the DEC Officer's Guide to Emissions and Discharges Risk Assessment May 2006.