



Licence

Environmental Protection Act 1986, Part V

Licensee: City of Rockingham

Licence: L7064/1997/11

Registered office: City of Rockingham
Civic Boulevard
ROCKINGHAM WA 6168

Premises address: Millar Road Landfill Facility
Lot 2170 on Plan 211650 Millar Road
BALDIVIS WA 6176

Issue date: Friday, 4 September 2015

Commencement date: Sunday, 6 September 2015

Expiry date: Saturday, 5 September 2020

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
62	Solid waste depot: premises on which waste is stored, or sorted, pending final disposal or re-use.	500 tonnes or more per year	50,000 tonnes per annual period
64	Class II Class III putrescible landfill site: premises on which waste (as determined by reference to the waste types set out in the document entitled 'Landfill Waste Classification and Waste Definitions 1996' published by the CEO and as amended from time to time) is accepted for burial.	20 tonnes or more per year	450,000 tonnes per annual period

Conditions

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

Date signed: 30 March 2016

.....
Caron Goodbourn
A/Manager Licensing (Waste Industries)
Officer delegated under section 20
of the *Environmental Protection Act 1986*



Contents

Licence	1
Contents	2
Licence Conditions	5
1 General	5
2 Monitoring	11
4 Information	15
Schedule 1: Maps	17
Schedule 2: Reporting & Notification Forms	19

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

The Miller Road Landfill Facility (MRLF), located on Lot 2170 Millar Road, Baldivis is owned and managed by the City of Rockingham. The MRLF has been in operation since 1993.

The MRLF accepts Class I, II and III landfill waste from municipal, commercial and residential sources. The premises was originally approved to accept 20,000 tonnes per annum for storage and transfer, 50,000 tonnes per annum Class I inert landfill and each cell has a design capacity of 400,000 tonnes per year of Class II or III putrescible landfill waste. The facility has a nominated throughput of 390,000 tonnes per annum.

Initial construction of the landfill began in 1993 with the facility opening that same year. Since then 15 cells have been commissioned. The only currently active cells are Cells 14 and 15 which are due for closure in February 2017, as well as a small portion of available void space within Cell 13. All cells have been constructed with either compacted low permeability clay or geo-synthetic composite lining and capping systems with leachate collection systems and evaporation ponds.

The MRLF is located on the Swan Coastal Plain within the Spearwood Dune System and the site geology largely comprises of siliceous sands. The closest sensitive receptors are single residences on lots zoned semi-rural approximately 230m and 250m to the east of the landfill. Beyond this 2 farmhouses are located approximately 420m and 470m from the south eastern boundary of the landfill within the same land use zone. The next closest receptor is a residential subdivision located approximately 500m to the north east of the site boundary in Wellard zoned 'Existing Urban Expansion'. Progressive filling towards the northern most point of the boundary brings landfill operations closer to the Wellard subdivision but will not encroach further than to within 500m of the existing development. Lot 2170 is located adjacent to Bush Forever Site 349 Leda and Adjacent Bushland, being separated from the site by Millar Road.

The MRLF has a Methane Gas Power Generation Facility (MGPF) operated by AGL Energy to harvest methane produced during the waste decomposition process. A recycling area is located at the entrance and a green waste recycling area is located adjacent to Cell 3. Based on void space and expected tonnages, landfilling at the site is expected to cease in 2035.

This licence amendment relates to the increase in approved volumes of Inert Waste for storage, transfer and reuse under Category 62 from 20,000 to 50,000 tonnes per annum.

Instrument Log		
Instrument	Issued	Description
L7064/1997/4	29/08/2000	Licence reissue
L7064/1997/5	05/09/2001	Licence reissue
L7064/1997/6	18/09/2002	Licence reissue
L7064/1997/7	06/10/2003	Licence reissue
L7064/1997/8	08/09/2004	Licence reissue
L7064/1997/9	28/07/2005	Licence reissue. Issued for 5 years following DER policy change on landfill licence duration.
L7064/1997/10	19/08/2010	Licence reissue
L7064/1997/11	04/09/2015	Licence reissue and amendment to convert Licence to new format.
L7064/1997/11	01/10/2015	Licence amendment to correct conditions
L7064/1997/11	24/03/2016	Licence amendment to increase cat 62 throughput

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:

'AS/NZS 5667.1' means AS/NZS 5667.1:1998 Water quality - Sampling - Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples;

'AS/NZS 5667.11' means AS/NZS 5667.11:1998 Water quality - Sampling - Guidance on sampling of groundwaters;

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

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

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

'AHD' means the Australian Height Datum;

'annual period' means the inclusive period from 1 January until 31 December in the same 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, chrysotile, crocidolite, tremolite and any mixture containing 2 or more of those;

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

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

'CEO' for the purposes of correspondence means:

Chief Executive Officer
Department Administering the Environmental Protection Act 1986
Locked Bag 33 Cloisters Square
PERTH WA 6850
Telephone: (08) 9725 4300
Facsimile: (08) 9725 4351
Email: info@der.wa.gov.au;

'Clean Fill' has the meaning defined in Landfill Waste Definitions;

'Contaminated Solid Waste' means contaminated solid waste meeting the Acceptance Criteria for Class II landfills, as specified in the Landfill Definitions;

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

'DER Asbestos Guideline' means *DER Guidelines for managing asbestos at construction and demolition waste recycling facilities 2012*;



'DoA PMS 2015' means the Australian Government Department of Agriculture Process Management System for the Burial of Quarantine Waste 2015;

'GCL' means Geosynthetic Clay Liner;

'Green Waste' means waste that originates from flora and does not contain or has not been treated or coated with, preserving agents, biocides, fire retardants, paint, adhesives or binders;

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

'Hazardous waste' has the meaning defined in Landfill Waste Definitions;

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

'Inert Waste Type 2' has the meaning defined in Landfill Waste 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 L7064/1997/11 and issued under the *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;

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

'Putrescible Waste' has the meaning defined in Landfill Definitions;

'Quarantine Waste' has the meaning as defined in the *Quarantine Act 1908*;

'quarterly' means the 4 inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September and 1 October to 31 December in the same year;

'Rehabilitation' means the completion of the engineering of a landfill cell and includes capping and/or final cover;

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

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

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

'Special Waste Type 2' has the meaning defined in Landfill Waste Definitions;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken;

'suitably qualified engineer' means an engineer with demonstrated competence in the design and construction of landfills;

'tipping area' means the area of the landfill in which waste other than cover material is being deposited;



'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 ensure that waste accepted at the premises is disposed of in landfill infrastructure in accordance with Table 1.2.1:

Table 1.2.1: Landfill Infrastructure		
Cell Number	Class of Cell or Phase	Infrastructure requirements
All cells	Class III (Putrescible)	<ul style="list-style-type: none"> Lined to achieve a permeability of less than 1×10^{-9} meters per second or equivalent Leachate collection system including lined sumps connected to evaporation ponds Landfill gas collection and management system.

1.2.2 The Licensee shall manage the infrastructure listed in Table 1.2.2 such that the integrity of the containment infrastructure is maintained

Table 1.2.2: Containment infrastructure		
Vessel or compound	Material	Infrastructure requirements
Leachate ponds	Landfill leachate from active and/or closed cells	<ul style="list-style-type: none"> Composite lining system to achieve a permeability of less than 1×10^{-9} metres per second or equivalent A freeboard of no less than 300mm shall be maintained

1.2.3 The Licensee shall only accept waste on to the Premises if:

- it is of a type listed in Table 1.2.3;
- the quantity accepted is below any quantity limit listed in Table 1.2.3 and;
- it meets any specification listed in Table 1.2.3; and
- in the case of contaminated solid waste is supported by documentation that demonstrates compliance with the acceptance criteria for Class III Landfills.

Table 1.2.3: Waste acceptance		
Waste type	Quantity limit tonnes/ year	Specification ¹
Inert Waste Type 1	Combined total of 50,000 tonnes per annual period	Waste containing visible asbestos or ACM shall not be accepted
Inert Waste Type 2		No more than 100 tyre units stored on the premises
Special Waste Type 1	Combined total of 450,000 tonnes per annual period	Non-friable asbestos, friable asbestos and asbestos contaminated soil
Special Waste Type 2		Biomedical/clinical waste which is radioactive must not be accepted ²
Clean Fill		None specified
Contaminated Solid Waste		Must meet the Acceptance Criteria for Class III



Putrescible Waste		landfills, as specified in the Landfill Definitions.
Quarantine Waste		Must be accepted in accordance with the DoA PMS 2015

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

Note 2: Information relating to the classification of radioactive waste can be found in the Western Australian Radiation Safety Act 1975.

1.2.4 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1.2.3 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.

1.2.5 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the processes set out in Table 1.2.4 and in accordance with any process limits described in that Table.

Table 1.2.4: Waste processing		
Waste type(s)	Process	Process limits ^{1,2}
All	Disposal of waste by landfilling	<ul style="list-style-type: none"> Shall only take place within the area depicted in Cells 12 to 28 shown on the Map of Site Features in Schedule 1. The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2.6m.
Clean Fill	Receipt and handling prior to disposal by landfilling	None specified
Contaminated Solid Waste	Disposal of waste by landfilling	
Inert Waste Type 1	Receipt, handling, storage prior to removal offsite or disposal by landfilling	<ul style="list-style-type: none"> Crushing and screening of Inert Waste Type 1 is not permitted
Inert Waste Type 2	Receipt, handling, storage prior to disposal by landfilling or removal offsite	None specified
Putrescible Waste	Receipt, handling, storage prior to disposal by landfilling	<ul style="list-style-type: none"> Only to be stored and sorted on a hardstand area bunded to prevent run-off; Shall not be stored on the site for longer than 24 hours
Green Waste	Receipt, handling, storage prior to removal offsite or disposal by landfilling	<ul style="list-style-type: none"> Shall not be burned
Special Waste	Receipt and	<ul style="list-style-type: none"> Only to be disposed of into a designated asbestos



Type 1 (Asbestos Waste)	handling prior to disposal by landfilling	disposal area within the landfill; <ul style="list-style-type: none"> Not to be deposited within 2m of the final tipping surface of the landfill; and No works shall be carried out on the landfill that could lead to a release of asbestos fibres.
Special Waste Type 2		<ul style="list-style-type: none"> Only to be disposed of into a designated biomedical waste disposal area within the landfill cells as defined in Schedule 1; and Not to be disposed within 2m of the final tipping surface of the landfill; and No works shall be carried out on the landfill that could lead to biomedical wastes being excavated or uncovered
Quarantine Waste	Receipt and handling prior to disposal by landfilling	<ul style="list-style-type: none"> Shall be managed in accordance with the DoA <i>PMS 2015</i>

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

Note 2: Additional requirements for the acceptance and landfilling of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

1.2.6 The Licensee shall manage the landfilling activities to ensure:

- the size of the tipping face is kept to a minimum and not larger than 40m (width) x 30m (breadth) x 3m (height);
- waste is levelled and compacted to ensure all faces are stable;
- waste is covered as soon as possible after it is discharged and not later than by the end of the working day;
- rehabilitation of a cell or phase takes place within 6 months after disposal in that cell or phase has been completed;
- No waste is disposed within 40 metres from the boundary of Millar Road and 20 metres from all other boundaries at the premises

1.2.7 The Licensee shall ensure that cover is applied to waste in accordance with Table 1.2.5 and that sufficient stockpiles of cover are maintained on site at all times.

Table 1.2.5: Cover requirements ¹

Waste Type	Cover requirements
Inert Waste Type 1	No cover required
Inert Waste Type 2	To be covered by the end of the working day in which the waste was disposed with 100mm of Inert Waste Type 1 or soil
Special Waste Type 1	To be covered with 300mm of soil or 1000mm of inert waste type 1 as soon as practicable and before compaction
Special Waste Type 2	To be covered with 300mm of soil or 1000mm of inert waste type 1 as soon as practicable and before compaction
Putrescible waste and Contaminated Solid Waste	<ul style="list-style-type: none"> To be covered with 150mm of Inert Waste Type 1 or soil as soon as practicable and not later than the end of the working day; and To be covered with 1,000mm of Inert Waste Type 1 or soil within 3 months of achieving final waste contours
Quarantine Waste	In accordance with DoA <i>PMS 2015</i>

Note 1: Additional requirements for the covering of tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.



- 1.2.8 The Licensee shall take all practical measures to ensure that the leachate management parameters in Table 1.2.6 comply with the limit specified in that table.

Table 1.2.6: Leachate management			
Reference	Parameter	Limit	Averaging period
Leachate ponds	Leachate pond freeboard	Must be maintained at greater than or equal to 300mm	Instantaneous

- 1.2.9 The licensee shall undertake inspection of the leachate collection pipes and notify any blockage or other malfunction in accordance with Schedule 2, Part A of this Licence within 1 week of observing the issue.
- 1.2.10 Where inspection and monitoring indicate inundation or blockage of the leachate collection system, the Licensee shall remove leachate from the system via liquid waste transport to a licenced liquid waste facility within 72 hours of observing the issue.
- 1.2.11 The Licensee shall submit capping information and undertake capping works in accordance with the requirements in table 1.2.7.

Table 1.2.7: Capping requirements		
Cell Numbers	Specification	Timescales
Each landfill cell	A capping plan is to be submitted to the CEO including detailed design, material specifications, gas collection, current and finished surveyed levels, construction quality assurance planning	At least 3 months prior to the completion of waste disposal in each cell
Each landfill cell	Complete capping works in accordance with Capping Plan submitted to the CEO	No later than 6 months after the completion of waste disposal in each cell

- 1.2.12 The Licensee shall take all practical measures to;
- (a) collect landfill gas;
 - (b) control the lateral migration of landfill gas offsite.
- 1.2.13 The Licensee shall ensure that stormwater does not pond on any surface of the landfill.
- 1.2.14 The Licensee shall implement the following security measures at the site:
- (a) erect and maintain suitable fencing to prevent unauthorised access to the site as far as is practicable;
 - (b) ensure that any entrance gates to the premises are securely locked when the premises are unattended;
 - (c) undertake regular inspections of all security measures and repair damage as soon as practicable.
- 1.2.15 The Licensee shall ensure that no waste is burnt on the premises.
- 1.2.16 The Licensee shall install and maintain a sign at the entrance to the Premises which clearly displays the following information:
- (d) hours of operation;
 - (e) contact telephone number;
 - (f) a warning indicating penalties for people lighting fires;
 - (g) list of materials accepted for recycling and the location of where they can be deposited on the premises.



1.2.17 The Licensee shall take all reasonable and practical measures to ensure that no windblown waste escapes from the Premises and that windblown waste is collected on at least a weekly basis and returned to the tipping area or appropriately contained.

1.2.18 The Licensee shall ensure that vermin, birds, flies and other insects do not give rise to nuisance at the premises or in the immediate area of the premises. Any method used by the licensee shall not cause environmental pollution.

1.3 Rehabilitation and post closure management

1.3.1 The Licensee shall complete the rehabilitation and post closure activities in Table 1.4.1 by the date of completion in Table 1.3.1.

Table 1.3.1: Rehabilitation and Post Closure Management		
Activity reference	Activity	Date of completion
R1	<p>The Licensee shall submit to the CEO a Rehabilitation and Post-Closure Management Plan including but not limited to:</p> <ul style="list-style-type: none">a) Proposed future use of the site;b) Conceptual topographic contour plans showing proposed final levels pre and post settlement;c) Estimated closure time frames for cells and cessation of landfill disposal based on estimated tonnages and available void space; andd) Measures to deal with leachate and landfill gas production after closure.	18 December 2015

2 Monitoring

2.1 General monitoring

2.1.1 The licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
- (c) all laboratory samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured unless indicated otherwise in relevant table.

2.1.2 The Licensee shall ensure that :

- (a) Six monthly monitoring is undertaken at least 90 days apart; and
- (b) annual monitoring is undertaken at least 9 months apart.

2.1.3 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

2.1.4 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.



2.2 Monitoring of inputs and outputs

2.2.1 The Licensee shall undertake the monitoring in Table 2.2.1 according to the specifications in that table.

Table 2.2.1: Monitoring of inputs and outputs				
Input/Output	Parameter	Units	Averaging period	Frequency
Waste Inputs	Inert Waste Type 1, Inert Waste Type 2, Special Waste Type 1, Special Waste Type 2, Clean Fill, Solid Contaminated Waste, Putrescible Waste and Quarantine Waste	m ³	N/A	Weekly (estimates recorded during weekly inspections)
Waste Outputs	Waste type as defined in the Landfill Definitions			Each load leaving or rejected from the Premises

2.3 Process monitoring

2.3.1 The Licensee shall undertake the monitoring in Table 2.3.1 according to the specifications in that table.

Table 2.3.1: Process monitoring					
Monitoring point reference	Process description	Parameter	Units	Frequency	Method
Leachate 1 Leachate 2 Leachate 3	Leachate extracted from leachate ponds as depicted in Schedule 1	pH	None specified	Six monthly	As specified in condition 2.1.1
		Electrical conductivity	µS/cm		
		Arsenic (total), cadmium, chromium, copper, iron (total), lead, manganese, mercury, molybdenum, nickel, zinc	mg/l		
		Ammoniacal nitrogen, nitrate-nitrogen, total nitrogen, total phosphorus			
		Total potassium, chloride and sulphate Total soluble solids, total organic carbon and chemical oxygen demand			
		<u>Monocyclic Aromatic Hydrocarbons:</u> Benzene, toluene methylbenzene, xylene (total)	µg/l	Annually	
		<u>Polycyclic Aromatic Hydrocarbons:</u> acenaphthene,			



		<p>anthracene, ben(a)pyrene, fluroanthene, naphthalene, pyrene</p> <p><u>Organochlorine pesticides:</u> aldrin, chlordane (and metabolites), DDT (and metabolites), dieldrin, chlorpyrifos, HCB, heptachlor (and its epoxide), lindane</p> <p><u>Organophosphates:</u> parathion, demeton-S-methyl, maldison, diazinon, demethoate, fenamiphos, fenthion</p> <p><u>Other:</u> atrazine, TCE, PCE and polychlorinated biphenyls (total)</p>			
--	--	--	--	--	--

2.4 Ambient environmental quality monitoring

2.4.1 The Licensee shall undertake the monitoring in Table 2.4.1 according to the specifications in that table.

Table 2.4.1: Monitoring of ambient groundwater quality

Monitoring point reference and location	Parameter	Units	Averaging period and Frequency
<p>Monitoring Bores</p> <p>MR 1 (S, M, D) MR 2 (S, M, D) MR 3 (S, M, D) MR 4 (S, M, D) MR 5 (S, M, D) MR 6 (S, M, D) MR 7 (S, M, D) MR 19 MR 20</p> <p>As depicted in Schedule 1</p>	<p><u>Monocyclic Aromatic Hydrocarbons</u> Benzene, Ethyl benzene, Toluene and Xylenes.</p> <p><u>Polycyclic Aromatic Hydrocarbons (PAHs):</u> Acenaphthene, Anthracene, Benz(a)pyrene, Fluroanthene, Naphthalene and Pyrene.</p> <p><u>Organochlorine pesticides:</u> Aldrin, Chlorpyrifos, Chlordane and its metabolites, DDT and metabolites, Dieldrin, HCB, Heptachlor and its</p>	µg/L	<p>Annually (During August or September)</p>



Table 2.4.1: Monitoring of ambient groundwater quality

Monitoring point reference and location	Parameter	Units	Averaging period and Frequency
	epoxide and Lindane. <u>Organophosphates:</u> Parathion, Demeton-S-methyl, Maldison, Diazinon, Dimethoate, Fenamiphos and Fenthion. <u>Other:</u> Atrazine, TCE, PCE and Polychlorinated Biphenyls (PCBs).		
	Ammonia-Nitrogen (NH ₃ -N), COD (Chemical Oxygen demand), Nitrate Nitrogen (NO ₃ -N), Total Phosphorus, Total Nitrogen, TDS (Total Dissolved Solids) and TOC (Total Organic Carbon). <u>Major cations and anions:</u> Total Potassium, Chloride and Sulphate. <u>Metals:</u> Total Arsenic, Cadmium, Chromium, Copper, Iron (total), Lead, Manganese, Nickel and Zinc	mg/L	Six-monthly (During February or March and August or September)
	pH ¹	pH units	
	Electrical Conductivity ¹	µS/cm	
	Standing Water Level (SWL) ^{1,2}	m AHD	
	Dissolved Oxygen (DO)	Mg/L	

Note 1: In-field non-NATA accredited analysis permitted.

Note 2: SWL shall be determined prior to collection of other water samples.



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 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 annual period.
- 3.1.3 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.
- 3.1.4 The Licensee shall maintain a register of Special Waste Type 1 and Special Waste Type 2 disposed at the Premises which shall include a plan detailing:
- (a) the position of Special Waste Type 1 (Asbestos waste) and Special Waste Type 2 (Biomedical and clinical waste) disposed of at the Premises;
 - (b) the date of disposal;
 - (c) the name of the person that deposited the waste.

3.2 Reporting

- 3.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 91 calendar days of the end of the annual period. The report shall contain the information listed in Table 3.2.1 in the format or form specified in that table.

Table 3.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form ¹
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 2.2.1	Monitoring of inputs and outputs	None specified
Table 2.4.1	Ambient monitoring	None specified
Table 2.3.1	Process monitoring	None specified
4.1.3	Compliance	Annual Audit Compliance Report (AACR)
4.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 3.2.2 The Licensee shall ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results, site hydrogeological information and Licence limits.



3.2.3 The Licensee shall submit the information in Table 3.2.2 to the CEO according to the specifications in that table.

Table 3.2.2: Non-annual reporting requirements				
Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties

3.3 Notification

3.3.1 The Licensee shall ensure that the parameters listed in Table 3.3.1 are notified to the CEO and 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
1.3.9	Leachate drainage malfunction	Within 7 days of observing the issue	N1
-	Unauthorised fire	Within 14 days of unauthorised fire	ET1
-	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
2.1.4	Calibration report	As soon as practicable	None specified
2.4.1	Any bores listed in Table 2.4.1 are destroyed or otherwise made unserviceable	Within 7 days of the event	None specified

Note 1: Notification requirement 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

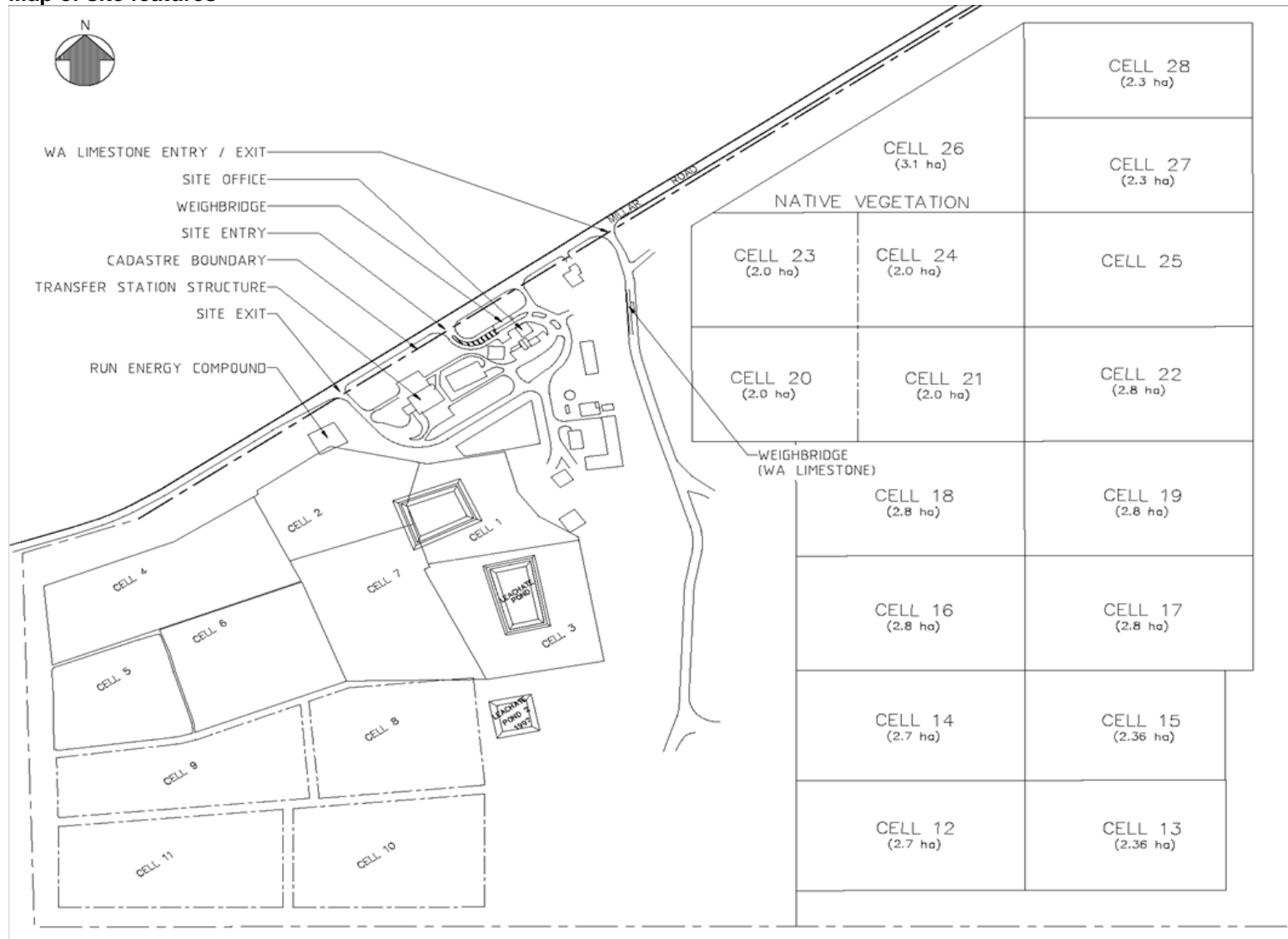
Premises Map

The Premises is shown in the map below including premises boundary (red line) and monitoring points.





Map of site features





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.

ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

SECTION A

LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name: Trading as:	ABN:
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes ☐ Please proceed to Section C

No ☐ Please 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.

Please use a separate page for each licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____	<input type="checkbox"/> No
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the 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:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:



SECTION C

SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) must only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out 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 Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	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 Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; 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 Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	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 Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	by the chief executive officer 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 annual audit compliance report 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: L7064/1997/11
Form: ET1
Name: Unauthorised Fire

Licensee: City of Rockingham
Period:

Form ET1: Unauthorised Fire

Please provide details of unauthorised fire on the premises, including but not limited to:

- (a) details of the date, time and location of the fire;
- (b) the time the fire was declared safe by the Fire Control Officer for the premises;
- (c) the cause, or suspected cause, of the fire; and
- (d) a description measures taken or planned to be taken, to prevent recurrence of the unauthorised fires.

Signed on behalf of City of Rockingham: Date:



Licence: L7064/1997/11
Form: N1

Licensee: City of Rockingham
Date of breach:

Notification of detection of malfunction or 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 leachate system malfunction

Date and time of event	
Reference or description of the location of the event	
Measures taken to detect the malfunction	
Measures taken and measures proposed to stop any emission to surface water and groundwater	
Description of the malfunction	

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 City of Rockingham	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Licensee: City of Rockingham

Licence: L7064/1997/11

Registered office: City of Rockingham
Civic Boulevard
ROCKINGHAM WA 6168

Premises address: Millar Road Landfill Facility
Lot 2170 on Plan 211650 Millar Road
BALDIVIS WA 6176

Issue date: Friday, 4 September 2015

Commencement date: Sunday, 6 September 2015

Expiry date: Saturday, 5 September 2020

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
62	Solid waste depot: premises on which waste is stored, or sorted, pending final disposal or re-use.	500 tonnes or more per year	50,000 tonnes per annual period
64	Class II or III putrescible landfill site: premises on which waste (as determined by reference to the waste types set out in the document entitled 'Landfill Waste Classification and Waste Definitions 1996' published by the CEO and as amended from time to time) is accepted for burial.	20 tonnes or more per year	450,000 tonnes per annual period

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue an amended licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by: Thomas Kaethner
Licensing Officer

Decision Document authorised by: Caron Goodbourn
Delegated Officer



Contents

Decision Document	1
Contents	2
1 Purpose of this Document	2
2 Administrative summary	2
3 Executive summary of proposal and assessment	3
4 Decision table	4
5 Advertisement and consultation table	7
6 Risk Assessment	8

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 <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	62	50,000 tonnes per annual period
	64	450,000 tonnes per annual period
Application verified	Date: NA	
Application fee paid	Date: NA	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Referral decision No: Managed under Part V <input checked="" type="checkbox"/> Assessed under Part IV <input checked="" type="checkbox"/>



Is the proposal subject to Ministerial Conditions?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: 271 EPA Report No: Bulletin 596
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

3 Executive summary of proposal and assessment

The Miller Road Landfill Facility (MRLF), located on Lot 2170 Millar Road, Baldivis is owned and managed by the City of Rockingham. The MRLF has been in operation since 1993.

The MRLF accepts Class I, II and III landfill waste from municipal, commercial and residential sources. The premises was originally approved to accept 20,000 tonnes per annum for storage and transfer, 50,000 tonnes per annum Class I inert landfill and each cell has a design capacity of 400,000 tonnes per year of Class II or III putrescible landfill waste. The facility has a nominated throughput of 390,000 tonnes per annum.

Initial construction of the landfill began in 1993 with the facility opening that same year. Since then 15 cells have been commissioned. The only currently active cells are Cells 14 and 15 which are due for closure in February 2017, as well as a small portion of available void space within Cell 13. All cells have been constructed with either compacted low permeability clay or geo-synthetic composite lining and capping systems with leachate collection systems and evaporation ponds.

The MRLF is located on the Swan Coastal Plain within the Spearwood Dune System and the site geology largely comprises of siliceous sands. The closest sensitive receptors are single residences on lots zoned semi-rural approximately 230m and 250m to the east of the landfill. Beyond this 2 farmhouses are located approximately 420m and 470m from the south eastern boundary of the landfill within the same land use zone. The next closest receptor is a residential subdivision located approximately 500m to the north east of the site boundary in Wellard zoned 'Existing Urban Expansion'. Progressive filling towards the northern most point of the boundary brings landfill operations closer to the Wellard subdivision but will not encroach further than to within 500m of the existing development. Lot 2170 is located adjacent to Bush Forever Site 349 Leda and Adjacent Bushland, being separated from the site by Millar Road.

The MRLF has a Methane Gas Power Generation Facility (MGPF) operated by AGL Energy to harvest methane produced during the waste decomposition process. A recycling area is located at the entrance and a green waste recycling area is located adjacent to Cell 3. Based on void space and expected tonnages, landfilling at the site is expected to cease in 2035.

This licence amendment relates to the increase in approved volumes of Inert Waste for storage, transfer and reuse under Category 62 from 20,000 to 50,000 tonnes per annum.



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 W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Prescribed premises category	N/A	<p>The approved production and design capacity on the cover page of the licence has been amended from 20,000 to 50,000 tonnes per annual period to increase the amount of inert waste approved for onsite storage prior to disposal, transfer or reuse. No change is required to waste acceptance condition L1.2.3 as the approved volumes are suited to proposed activities onsite for each waste type.</p> <p>The previous version of the licence (L7064/1997/10) included Category 63 Volumes of up to 50,000 tonnes of inert waste but this was removed from the licence in recent amendment as the appropriate provisions are covered by Category 64.</p>	Schedule 1 of the <i>Environmental Protection Regulations 1987</i>
General Conditions		<p>Previous condition 1.1.5 has been removed as it is not a condition, but an explanatory statement therefore considered redundant.</p> <p>The conditions previously numbered 1.2.1 to 1.2.3 have been removed from the Licence. These are redundant conditions in accordance with current licensing process, as they are not valid, not enforceable or not risk-based.</p> <p>In regards to the management of environmentally hazardous materials and stormwater management, these are still subject to the <i>Environmental Protections (Unauthorised Discharges) Regulations 2004</i> and the general provisions of the <i>Environmental Protection Act 1986</i>.</p>	<p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i></p> <p><i>Environmental Protection Act 1986</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Premises Operation	N/A	<p>Operation</p> <p><u>Emission description:</u> <i>Emission:</i> Dust arising from stockpiles and vehicle movements during operations and storage. <i>Impact:</i> Reduced local air quality from airborne particulates is possible. The closest receptors are approximately 500m from the proposed storage area. Additional receptors adjacent and nearby the Premises include roads and public spaces. <i>Controls:</i> The proponent has a dedicated water cart on site for dust suppression. All internal roads (excluding those on the landfill) consist of a crushed limestone surface layer (wearing course). This road construction material limits dust being generated by vehicle movements along internal access roads; A maximum site speed limit of 40 km per hour is enforced. Source segregation of material is well controlled i.e. footpath construction waste, not inherently dusty. If a particular dusty load of waste material were received wet down by the water cart would be used to control dust during unloading.</p> <p><u>Risk assessment:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory controls:</u> It is considered that the provisions of Section 49 of the <i>Environmental Protection Act 1986</i> are sufficient to regulate dust emissions during operation.</p> <p><u>Residual risk:</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Information		Previously numbered L3.1.2 has been removed. This is a redundant condition in accordance with the DER's current licensing process, as the requirements for compliance are not clear and it is therefore not enforceable.	None Specified



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
1 March 2016	Proponent sent a copy of draft instrument	Signed waiver received 22 March 2016	No comments provided



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