



Licence

Environmental Protection Act 1986, Part V

Licensee: Rottnest Island Authority

Licence: L9161/2018/1

Registered office: E Shed, Level 1
 Peter Hughes Drive
 FREMANTLE WA 6160

Premises address: Rottnest Island Landfill
 Forbes Hill
 ROTTNESST ISLAND WA 6161
 Being Part Lot 10976 on Plan 216860 as depicted in Schedule 1.

Issue date: 2 November 2018

Expiry date: 1 November 2033

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	4000 tonnes per annual period
63	Class I inert 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.	500 tonnes or more per year	500 tonnes per annual period

Conditions

Subject to this Licence and the conditions set out in the attached pages.

**A/MANAGER WASTE INDUSTRIES
 REGULATORY SERVICES (ENVIRONMENT)**

.....
 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.

DWER's industry licensing role

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

DWER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DWER works with the business owners, community, consultants, industry and other representatives to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DWER 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

Rottneest Island is located 19km off the coast of Fremantle. It is 11km long, 4-4.5km wide and covers an area of 1900ha. The Rottneest Island Landfill ('the landfill') is operated by the Rottneest Island Authority (RIA) approximately 1.2km west of the main settlement area behind Forbes Hill. The landfill covers an area of 2ha and was originally a sand and limestone quarry until it was converted to a landfill approximately 30 years ago. The Premises is authorised to receive 4,000 tonnes of solid waste per annual period at the waste transfer station (category 62) and landfill 500 tonnes of solid inert material per annual period (category 63).

The landfill consists of 2 unlined waste cells located in the eastern area of the site. One cell was used for putrescible and inert waste material between 1992-1996 after which it was capped with sand and limestone. The second cell is still in operation and currently receives inert waste only.

The waste transfer station on site accepts all putrescible and recyclable waste from the island before being transferred by barge to a licenced landfill on the mainland. The site also accepts used glass (e.g. bottles) which is crushed and stored on site for future reuse (e.g. as fine aggregate in civil construction applications) on Rottneest Island.

On 8 May 2017 Rottneest Island Authority (RIA) (the Licensee) submitted an application to the DWER to amend condition 1.3.1 to allow storage and transfer of all putrescible waste types, including food waste, to accurately reflect current operations relating to the acceptance, temporary storage and transfer of all putrescible waste from Rottneest Island. Also requested the waste type 'Contaminated Solid Waste' and waste type 'Hazardous Waste' to be added to the Licence to bring the Licensee into compliance with hydrocarbon storage pending off-site disposal.

This licence is a replacement of L6994/1997/11 and no environmental risk assessment has been conducted or undertaken.

The licences and works approvals issued for the Premises since 19/09/2000 are:

Instrument Log		
Instrument	Issued	Description
L6994/1997/2	19/09/2000	Licence re-issue
L6994/1997/3	16/07/2001	Licence re-issue
L6994/1997/4	17/07/2002	Licence re-issue
L6994/1997/5	11/09/2002	Licence re-issue
L6994/1997/6	10/09/2003	Licence re-issue
L6994/1997/7	23/12/2004	Licence re-issue
L6994/1997/8	11/08/2005	Licence re-issue



Instrument Log		
Instrument	Issued	Description
L6994/1997/9	28/08/2008	Licence re-issue
L6994/1997/10	30/08/2011	Licence re-issue
	10/01/2014	Licence amendment – conversion to REFIRE format
L6994/1997/11	28/08/2014	Licence re-issue
L6997/1997/11	29/04/2016	Notice of amendment issued to extend the licence duration to 2033
L6994/1997/11	25/08/2017	Amendment Notice 1 was issued for approval of waste acceptance and types
L6994/1997/11	-----	Licence ceased to have effect on non-payment due to system error
L9161/2018/1	02/11/2018	Replacement licence (to replace ceased licence)

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 In the Licence, unless the contrary intention appears:

'**AACR**' means Annual Audit Compliance Report, the template of which can be found on the DWER's website www.dwer.wa.gov.au

'**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);

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

'**AHD**' means the Australian height datum;

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

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

'**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*;

'**AS/NZS 5667.11**' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwater*;

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

'**CEO**' means Chief Executive Officer of the Department of Water and Environmental Regulation;

'**CEO**' for the purpose of correspondence means;

Chief Executive Officer
Department of Water and Environmental Regulation
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@dwer.wa.gov.au;

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

'**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;

'**Contaminated solid waste**' has the meaning of a 'solid' containing a 'contaminant' as per the meanings defined in the Landfill Definitions;



'controlled waste' has the definition in *Environmental Protection (Controlled Waste) Regulations 2004*; **'dangerous goods'** has the meaning defined in the *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007*;

'DER Asbestos Guidelines' means document titled "Guidelines for managing asbestos at construction and demolition waste recycling facilities", published by the Department of Environment and Conservation, as amended from time to time.

'designated burning area' means an area of the premises that has been designated by the occupier of the site as a designated burning area and which:

- (a) is at least 50 metres from the boundary of the premises;
- (b) has no flammable material on it, other than the greenwaste and live trees, for a radius of 50 metres;
- (c) is positioned in the area of the site where waste (other than the greenwaste to be burnt) has not been deposited; and
- (d) is at least 500 metres from any person's residence or place of employment (other than the landfill site) or an educational institution, hospital or other public place;

'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. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

'Fire Control Officer', in relation to the premises, means a person who has such qualifications in firefighting or fire control as are approved, appointed to that position by the occupier of the premises;

'fugitive emissions' means all emissions not arising from point sources identified in Sections 2.2, 2.3, 2.4 and 2.5;

'Glass crusher' mobile glass reprocessing facility

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

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

'HDPE' High density polyethylene;

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

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

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

'Licence' means this Licence numbered L9161/2018/1 and issued under the Act for the replacement of previously ceased licence L6449/1997/11, including previous amendments;

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

'Municipal waste' has the meaning as described in the Landfill Definitions;



'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;

'PC-IR' Possibly contaminated – investigation required;

'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' has the meaning defined in Landfill Definitions;

'quarantined storage area or container' means a hardstand storage area or sealed-bottom container that is separate and isolated from authorised waste disposal areas and is capable of containing all non-conforming waste and its constituents, these areas must be clearly marked and their access restricted to authorised personnel;

'RCG' Recycled crushed glass

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

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

'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 Definitions;

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

'surface water body' means a water course or wetland (as those terms are defined in the *Rights in Water and Irrigation Act 1914*) and any other surface water, whether artificial or natural;

'SWL' means Standing Water Level in metres AHD (prior to sampling);

'Tipping Area' means the area of the premises where waste currently being brought to the premises is being deposited; and

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

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

1.1.4 Any reference to a guideline or code of practice in the Licence means the current version of the 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 General conditions

- 1.2.1 Nothing in this Licence shall be taken to authorise any emission that is not mentioned in this licence, 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 operate and maintain all pollution control and monitoring equipment to the manufacturer’s specification or any relevant and effective internal management system.
- 1.2.3 The Licensee, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous materials 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.
- 1.2.5 The Licensee shall:
 - (a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and
 - (b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.¹

Note1: The *Environmental Protection (Unauthorised Discharges) Regulations 2004* make it an offence to discharge certain materials into the environment.

1.3 Premises operations

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

Table 1.3.1: Waste acceptance		
Waste type	Quantity limit	Specification ¹
Inert Waste Type 1	4450 t/annual period	Waste containing visible asbestos or ACM shall not be accepted
Inert Waste Type 2		Tyres and plastic only
Clean Fill		None specified
Special Waste Type 1		Asbestos and asbestos containing materials must be wrapped to effectively contain asbestos fibres
Putrescible waste		Green waste and municipal waste
Contaminated solid waste	50 t/annual period	None specified ²
Hazardous waste		Empty drums and containers that may have contained hazardous or controlled substances only

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: Waste specification cannot be determined due to the unknown source of potential spills.

- 1.3.2 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1.3.1 it is removed from the Premises by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.



1.3.3 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the processes set out in Table 1.3.2 and in accordance with any process limits described in that Table.

Table 1.3.2: Waste processing		
Waste type	Processes	Process limits
Inert Waste Type 1	Receipt, handling, associated storage and disposal of waste by landfilling	<u>Inert Waste Type 1</u> <ul style="list-style-type: none"> Crushing and screening of Inert Waste Type 1 is not permitted with the exception of recycled glass intended for reuse. No more than 50 t/annual period of recycled glass is to be collected for reuse. Collected glass and crushed glass shall be stored in the concrete holding bays identified on the site plan as 'Glass Recovery' (Schedule 1: Maps).
Clean Fill		<u>All waste types</u> <ul style="list-style-type: none"> Waste shall not be buried within 1.5 m of the highest level of the water table aquifer at the site. Ensure the Tipping Area is restricted to a maximum linear length of 30 m and a height of 2 m. Maintain a minimum distance of at least 100 m between landfilled areas of the Premises and any surface water body. Ensure there is no excavation of areas of the Premises where previously used for landfilling.
Inert Waste Type 2	Receipt, handling and storage prior to disposal or recycling off-site	None specified
Special Waste Type 1	Receipt, handling and storage prior to disposal off-site	<ul style="list-style-type: none"> Asbestos and asbestos containing material must be placed in a dedicated bin for disposal off-site. No asbestos shall be buried at the Premises.
Green waste	Receipt, handling, chipping, and storage prior to disposal by burning or re-use as brushing	<ul style="list-style-type: none"> Green waste is stockpiled for re-use as brushing in dune stabilisation or wood chipped <p>If Green waste is burnt on the Premises, the Licensee, or a person nominated by the Licensee, shall:</p> <ul style="list-style-type: none"> ensure the Greenwaste is dry and seasoned for at least two months before being burnt; ensure the Greenwaste is burnt in a designated burning area; provide an adequate water supply and distribution system to prevent fires from escaping beyond the burning area; burn Greenwaste in a manner to minimise the generation of smoke; burn Greenwaste in windrows or trenches; ensure burning does not commence before 8 a.m. and the Fire Control Officer for the landfill site declares the area safe by 12 noon on the same day; ensure that, from the time burning commences until the Fire Control Officer for the premises declares the area



Table 1.3.2: Waste processing

Waste type	Processes	Process limits
		safe: <ul style="list-style-type: none"> a fire fighting vehicle carrying at least 500 litres of water, fitted with at least 30 metres of 19 mm diameter rubber hose and with a pump capacity capable of delivering a minimum of 250 litres of water per minute at a minimum of 700 kPA through a nozzle capable of projecting water by spray or by jet; and 2 persons, who have such qualifications in firefighting as approved are present at the designated burning area.
Municipal waste	Receipt, handling and storage prior to disposal or recycling off-site	<ul style="list-style-type: none"> Waste shall be transported on to the site via truck, tipped directly into the on-site waste compactor and placed in sealed bins. The sealed bins shall be stored on the hardstand identified on the site plan as 'Full Compactor Bins' (Schedule 1: Maps). Sealed bins shall be regularly monitored to ensure suitability to contain any effluent generated from waste, and any degraded bins to be removed from the premises and replaced with a bin in suitable condition.
Contaminated waste	Receipt, handling and storage prior to disposal off-site	<ul style="list-style-type: none"> Contaminated solid waste is only to be accepted on to the premises as a result of an accidental spill or leak on the Island and not for any other purpose. Contaminated solid waste shall be stored in sealed bins or drums and placed within mobile drum bunds located on the hardstand identified as 'Hazardous Waste Setdown' on the Site Plan in Schedule 1. All contaminated waste is to be stored on the premises for a maximum of 60 (sixty) days.
Hazardous waste	Receipt, handling and storage prior to removal off-site	<ul style="list-style-type: none"> Empty drums and containers to be sealed during receipt, handling, storage and transport off the site. Sealed drums and containers to be placed within mobile drum bunds located on the hardstand area identified as 'Hazardous Waste Setdown' on the Site Plan in Schedule 1. At any one time, storage is not to exceed the hardstand area of 8000mm by 4800mm and must consist of a single layer. Sealed drums and containers shall be regularly monitored to ensure suitable condition to contain any effluent remaining inside, and any degraded drums or containers to be removed from the premises. <p>All hazardous waste is to be stored on the premises for a maximum of 60 (sixty) days.</p>

1.3.4 The Licensee shall manage the landfilling activities to ensure:

- (a) waste is levelled and compacted as soon as practicable after it is discharged;
- (b) waste is placed and compacted to ensure all faces are stable and capable of retaining rehabilitation material; and
- (c) rehabilitation of a cell or phase takes place within 6 months after disposal in that cell or phase has been completed.



- 1.3.5 The Licensee shall implement the following security measures at the site:
- (a) maintain suitable fencing to prevent unauthorised access to the site; and
 - (b) undertake regular inspections of all security measures and repair damage as soon as practicable; and
 - (c) ensure that any entrance gates to the premises are securely locked when the premises are unattended; and
 - (d) prevent fauna access to the site.
- 1.3.6 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 appropriately contained.
- 1.3.7 The licensee shall ensure that no non-green waste is burnt on the premises.
- 1.3.8 The Licensee shall undertake activities on the Premises and manage asbestos and ACM in accordance with 'Asbestos Management Plan, Rottnest Island Authority, 27 March 2014'.

1.4 Infrastructure and equipment

- 1.4.1 The Licence Holder must ensure that the infrastructure and equipment specified in Column 1 of Table 1.4.4 is maintained in good working order and operated in accordance with the requirements specified in Column 2 of Table 1.4.4 and at the location specified in Column 3 of Table 1.4.4.

Table 1.4.4 Infrastructure and equipment requirements		
Column 1	Column 2	Column 3
Infrastructure/ Equipment	Requirements (design and construction)	Site plan reference
Bunded hardstand area for temporary storage of: <ul style="list-style-type: none">• solid contaminated wastes; and• empty drums and containers that may have contained hazardous or controlled substances.	150mm thick concrete floor. 8000mm long and 4800mm wide with 150mm high bund and 250mm 'C'-shaped channel covered by steel grid at entrance to allow access.	As shown as 'Hazardous Waste Setdown' on the Site Plan in Schedule 1.
Hardstand area for tipping of materials to be recycled	6560mm long and 5360mm wide.	As shown as 'Waste Compaction' on the Site Plan in Schedule 1.
Hardstand area for storage of materials to be recycled	14200mm long by 4000mm wide.	As shown as 'Full Compactor Bins' on the Site Plan in Schedule 1.
Hardstand area for putrescible waste tipping	6520mm long and 5500mm wide.	As shown as 'Waste Compaction' on the Site Plan in Schedule 1.
Hardstand area for putrescible waste stored in sealed compactor bins	50mm thick concrete floor. 14200mm long by 4600mm wide.	As shown as 'Full Compactor Bins' on the Site Plan in Schedule 1.
Glass storage bays	50mm thick concrete floor.	As shown as 'Glass Recovery' on the Site Plan in Schedule 1.
Glass crusher storage shed	In close proximity to glass storage bays.	As shown as 'Glass Recovery' on the Site Plan in Schedule 1.



Table 1.4.4 Infrastructure and equipment requirements

Column 1	Column 2	Column 3
Infrastructure/ Equipment	Requirements (design and construction)	Site plan reference
Truck wash down facility	11260mm long and 4800mm wide with 200mm high bund wall. As per requirements in W5139.	As shown as 'Washdown' on the Site Plan in Schedule 1.
HDPE lined evaporation pond	As per requirements in W5139.	As shown as 'Evaporation Pond' on the Site Plan in Schedule 1.

2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit or target specified in any part of section 2 of this Licence.

2.2-2.4 Point source emissions to air, surface water and groundwater

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

2.5 Emissions to land

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

2.6 Fugitive emissions

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

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

2.7 Odour

2.7.1 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.

2.8 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 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.
- 3.1.2 The Licensee shall ensure that :
 - (a) quarterly monitoring is undertaken at least 45 days apart; and
 - (b) annual monitoring is undertaken at least 9 months apart.
- 3.1.3 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 and the requirements of the Licence.
- 3.1.4 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.

3.2 -3.4 Monitoring of point source emissions to air, surface water and groundwater

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

3.5 Emissions to land

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

3.6 Monitoring of inputs and outputs

- 3.6.1 The Licensee shall undertake the monitoring in Table 3.6.1 according to the specifications in that table.

Table 3.6.1 Monitoring of inputs and outputs				
Input/Output	Parameter	Units	Averaging period	Frequency
Waste Inputs	Inert 1, Inert 2, Clean Fill, Putrescible waste, Special Waste Type 1	tonnes (where a weighbridge is present on the site)	N/A	Each load arriving at the Premises
Waste Outputs	Waste type as defined in the Landfill Definitions	m ³ (where no weighbridge is present)		Each load leaving or rejected from the Premises

3.7 Process monitoring

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

3.8 Ambient environmental quality monitoring

- 3.8.1 The Licensee shall undertake the monitoring in Table 3.8.1 according to the specifications in that table and record and investigate results that do not meet any target specified.



Table 3.8.1 Monitoring of ambient groundwater quality

Monitoring point reference and location on Map of monitoring locations (Schedule 1)	Parameter	Units	Averaging period	Frequency ¹
Groundwater Bores: 4, 14, 15, 20	pH	-	Spot sample	Quarterly
	Electrical Conductivity	µS/cm		
	Total Nitrogen	mg/L		
	Nitrate-Nitrogen	mg/L		
	Ammonia –Nitrogen	mg/L		
Groundwater Bores: 4, 5A, 9, 11, 14, 15, 17, 19, 20, 22, 24, 25, 27, 28, 29 and 28/90	Standing Water Level (SWL)	m(AHD)		Quarterly
	pH	-		Annually
	Electrical Conductivity	mg/L		
	Total Nitrogen			
	Nitrate-Nitrogen			
	Ammonia –Nitrogen			
	Total Phosphorus			
	Chloride			
	Potassium			
	Cadmium			
	Copper			
	Chromium			
	Manganese			
	Nickel			
Zinc				

3.9 Meteorological monitoring

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

4 Improvements

There are no specified improvement conditions in this section.

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 or any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect condition of the land or waters.



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

5.2 Reporting

- 5.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 92 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 and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 3.6.1	Summary of inputs and outputs	None specified
Table 3.8.1	Ambient Groundwater Monitoring – parameters as specified in Table 3.8.1	GR1
5.1.3	Compliance	Annual Audit Compliance Report (AACR) A template of the form can be found at www.dwer.wa.gov.au
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 5.2.2 The Licensee shall ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets.
- 5.2.3 The Licensee shall submit the information in Table 5.2.2 to the CEO according to the specifications in that table.

Table 5.2.2: Non-annual reporting requirements

Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form ¹
-	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



5.3 Notification

5.3.1 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 5.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement¹	Format or form²
1.2.2	Any monitoring bore referred to in Table 3.8.1 is destroyed or otherwise made unusable	Within 7 days	None specified
3.1.4	Calibration report	As soon as practicable.	
2.1.1	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.	N1
-	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution	Part B: As soon as practicable	

Note 1: Notification requirements in the licence shall not negate the requirement to comply with s72 of the Act

Note 2: Forms are in Schedule 2



Schedule 1: Maps

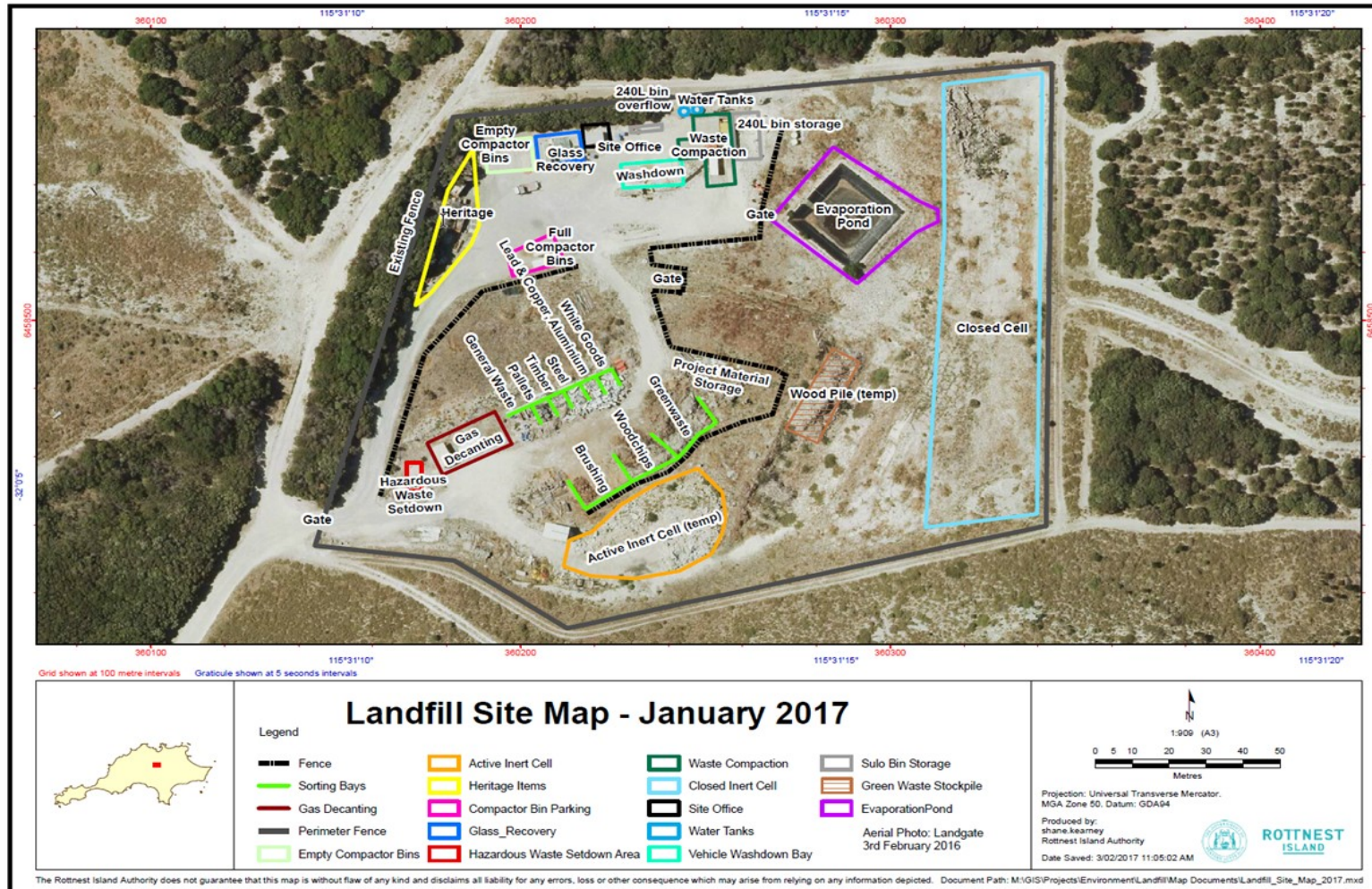
Premise Map - boundary

The Premises is shown in the map below. The blue line depicts the Premises boundary.





Site Plan – Landfill Site Map - January 2017– infrastructure and waste deposition location





Map of monitoring locations

The groundwater monitoring bores for the Rottne Island Authority landfill are shown below.



1: 5,000 (at A4)
0 25 50 100 150 200
Metres
Map Projection: Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

LEGEND
 Groundwater Monitoring Bores
 ● Down-gradient Groundwater Monitor Bore
 ● Up-gradient Groundwater Monitor Bore
 ● Near and down-gradient Groundwater Monitor Bore
 ● Offline Groundwater Monitor Bore
 ■ Landfill Facility Boundary

GHD
 ROTTNE ISLAND AUTHORITY
 SLIP ENABLER

Rottne Island Authority
 Rottne Island AER 2012/13
 Job Number | 61-29781
 Revision | 0
 Date | 17 Sep 2013

Landfill Groundwater Monitoring Bore Locations
Figure 4-1

339 Adelaide Terrace Perth WA 6004 Australia T 61 8 6222 8222 F 61 8 6222 8555 E permail@gnd.com.au W www.gnd.com.au
 © 2013. Whilst every care has been taken to prepare this map, GHD, Rottne Island Authority and Landgate make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.
 Data source: Landgate - Rottne Island Jan 2013 Mosaic - 20120826, Rottne Island Authority: Landfill Facility Boundary - 20110829, Groundwater Monitoring Bores - 20110829. Created by: bforczak



Schedule 2: Forms

Licence: L9161/2018/1
 Form: N1

Licensee: Rottnest Island Authority
 Date of breach:

Notification of detection of the breach of a limit or any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution.

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

Part A

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

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

Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution	
Date and time of event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken , or intended to be taken, to stop any emission	
Description of the failure or accident	



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 Rottnest Island Authority	
Date	



Licence: L9161/2018/1
Form: GR1
Name: Monitoring of ambient groundwater quality

Licensee: Rottnest Island Authority
Period :

Form GR1: Monitoring of ambient groundwater quality						
Emission point	Parameter	Units	Result ¹	Averaging period	Method	Sample date & times
Groundwater Bores: 4, 14, 15, 20	pH	-	Spot sample			
	Electrical Conductivity	µS/cm	Spot sample			
	Total Nitrogen	mg/L	Spot sample			
	Nitrate-Nitrogen	mg/L	Spot sample			
	Ammonia –Nitrogen	mg/L	Spot sample			
Groundwater Bores: 4, 5A, 9, 11, 14, 15, 17, 19, 20, 22, 24, 25, 27, 28, 29 and 28/90	Standing Water Level (SWL)	m(AHD)	Spot sample			
	pH	-	Spot sample			
	Electrical Conductivity	mg/L	Spot sample			
	Total Nitrogen	mg/L	Spot sample			
	Nitrate-Nitrogen	mg/L	Spot sample			
	Ammonia –Nitrogen	mg/L	Spot sample			
	Total Phosphorus	mg/L	Spot sample			
	Chloride	mg/L	Spot sample			
	Potassium	mg/L	Spot sample			
	Cadmium	mg/L	Spot sample			
	Copper	mg/L	Spot sample			
	Chromium	mg/L	Spot sample			
	Manganese	mg/L	Spot sample			
	Nickel	mg/L	Spot sample			
Zinc	mg/L	Spot sample				

Signed on behalf of Rottnest Island Authority:Date: