



Licence

Environmental Protection Act 1986 (WA)(CKI), Part V

Licensee: Shire of Cocos (Keeling) Islands

Licence: L8685/2012/2

Registered office: Shire of Cocos (Keeling) Islands
Lot 256 Jalan Melati West Island
Cocos (Keeling) Islands
Indian Ocean Territories WA 6799

Premises name: West Island Sludge Disposal Facility

Premises address: Airforce Road
WEST ISLAND WA 6799
Being portion of Lot 100 on Plan 18500 as depicted in Schedule 1.

Issue date: Thursday, 3 September 2015

Commencement date: Monday, 18 September 2015

Expiry date: Thursday, 17 September 2020

Prescribed activity Category

Schedule 1 of the *Environmental Protection Regulations 1987(WA)(CKI)*

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
64	Class II 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	1,800 tonnes per annual period

Date signed: 3 September 2015

.....
Steve Checker
Manager Licensing (Waste Industries)
Officer delegated under section 20
Of the *Environmental Protection Act 1986 (WA)(CKI)*



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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 (WA) (CKI)* (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 granted 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 (WA)(CKI)* – 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 (WA)(CKI)* - these Regulations place obligations on you if you produce, accept, transport or dispose of Controlled waste.

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 granted for more than one year, you may be 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.

If you are concerned about, or object to any aspect of the Licence, you may lodge an appeal within 21 days from the date on which this licence is received. To lodge an appeal please direct all correspondence to:

The Hon Jamie Briggs MP
Assistant Minister for Infrastructure and Regional Development
M1 26 Parliament House
Canberra ACT 2600

Premises description and Licence summary

West Island Sludge Disposal Facility (also known as 'Elephants Graveyard') consists of an unmanned landfill that is owned by the Shire of Cocos Keeling and managed by Water Corporation for the disposal of biosolids from West Island Wastewater Treatment Plant (R1841/2006/1). The Premises receives approximately 20 cubic meters of biosolids on an annual basis, with the premises design capacity being 1,800 tonnes per annual period.

The site is fenced across the main access point and gated with Water Corporation being the sole operator and the only persons with access to the site. The sides and back of the site are not fenced however this area is densely surrounded with native vegetation (Cabbage bush) which grows in excess of 1.8m high.

The deposited sludge is spread out evenly across an area of approximately 3 meters wide by 10 meters in length. The sludge is then covered with clean fill (approximately 300mm) and left undisturbed for a minimum of three years.

The Premises is affected by tidal movement where, on high tide, fresh water is pushed to the surface in low lying areas. Depth to groundwater is approximately 0.5m below surface. The Premises is not located on any of the freshwater drinking lenses that are utilised for the island. Sludge is tested for pathogens and held at the West Island Wastewater Treatment Plant prior to being sent to the disposal facility.

The distance to the closest surface water body (Indian Ocean) is approximately 44m south of the Premises.

A monitoring bore (WI10E) exists approximately 100m north of the premises and another bore (WI13E) within the premises which are managed and operated by Water Corporation on the island, for the purposes of monitoring ambient groundwater quality. The water quality at 'WI10E' is considered as 'brackish' according to Water Corporation. Freshwater lenses on West Island are strongly influenced by ocean tidal movement (ingress/ egress) south of the Premises (Pers. comm. D. Scott).

The main potential emission risk from the premises is emission to groundwater due to the high water table on the island and the influence of tidal action.



This Licence is the successor to L8685/2012/1 and includes administrative changes to the Licence to convert it to new format with the addition of an improvement plan for the development of a post closure management plan, and assessment of ambient groundwater monitoring bore parameters for the premises.

The licences and works approvals issued for the Premises, since 17/09/2012, are:

Instrument log		
Instrument	Issued	Description
L8685/2012/1	17/09/2012	New application
L8685/2012/2	03/09/2015	Licence re-issue and conversion to new format

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

The Licensee must ensure that the following conditions are complied with:

1 General

1.1 Interpretation

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

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

'Act' means the *Environmental Protection Act 1986 (WA)(CKI)*;

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

'AS/NZS 5667.1' means the current version of 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 current version of Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

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

'Authorised Activities' means activities authorised by Condition 1.2 of this Licence;

'biosolids waste disposal' means *Western Australian guidelines for biosolids management, December 2012* (as amended);

'Category' means category as described in Schedule 1 of the *Environmental Protection Regulations 1987 (WA)(CKI)*;

'CEO' has the same meaning as defined in the Act;

'CEO' for the purpose of correspondence means:

Chief Executive Officer
Department Administering the Environmental Protection Act 1986 (WA)(CKI)
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au;

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

'Contaminated Solid Waste' has the meaning defined in Landfill Definitions;

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

'cover material' means subsoil or other approved inert waste used for covering of waste;

'Hazardous waste' has the meaning defined in Landfill Waste Classification and Waste Definitions 1996 (As amended December 2009), published by the CEO and as amended from time to time;



'Landfill Definitions' means the document entitled "Landfill Waste Classification and Waste Definitions 1996", published by the Chief Executive Officer as amended from time to time;

'Licence' means this Licence numbered L8685/2012/2 and issued under the Act;

'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 the submission of a sample to a laboratory which is NATA accredited for the analysis specified 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' has the meaning defined in Landfill Definitions;

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

'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;

'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 (WA)(CKI)*) and any other surface water, whether artificial or natural; and

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

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

1.1.5 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the 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 General conditions

1.2.1 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.

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



1.2.3 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 (WA)(CKI)* make it an offence to discharge certain materials into the environment.

1.3 Premises operation

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;
- (c) it meets any specification listed in Table 1.3.1; and
- (d) in the case of contaminated solid waste is supported by documentation that demonstrates compliance with the acceptance criteria for Class II landfills.

Table 1.3.1: Waste acceptance		
Waste	Quantity Limit	Specification
Clean fill	N/A	None specified
Putrescible waste	1,800 tonnes per annual period	<ul style="list-style-type: none"> • Biosolids tested and compliant for biosolids waste disposal prior to receiving and disposal; • Biosolids other than those categorised for unrestricted use; • Biosolids received from Water Corporation facility, 'Home Island WWTP'; and • Sewage treatment plant grits and screenings.

1.3.2 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in conditions 1.3.1 it is removed from the Premises by the delivery vehicle or, where that is not possible, the Licensee shall contact the CEO to agree a course of action in relation to the waste.

1.3.3 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the process(es) 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(s)	Process	Process limits ¹
All buried or stored wastes	Disposal of waste	<ul style="list-style-type: none"> • Maintain an undisturbed separation distance of at least one metre between the waste and the highest level of the water table aquifer. • Shall only take place within the landfill area shown on the Landfill Area Map in Schedule 1. • Ensure that the tipping area is no greater than two metres in height, with a maximum linear length of 30 metres. • No burning of any waste at the Premises.
Clean Fill	Receipt, handling and disposal by landfilling	No additional process limits.



Putrescible Waste	Receipt, handling, storage prior to disposal by landfilling.	<ul style="list-style-type: none"> • Receipt and disposal of dried and tested sewage sludge waste from West Island Waste Water Treatment Plant only; • Maintain a minimum distance of at least 10 metres between the previously filled areas of the premises and any surface water body; and • Waste is totally covered on the same day of disposal.
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Note 1: Additional requirements for the acceptance and landfilling of controlled waste are set out in the *Environmental Protection (Controlled Waste) Regulations 2004 (WA)CKI*.

1.3.4 The Licensee shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 1.3.3 and that sufficient stockpiles of cover are maintained on site at all times.

Table 1.3.3: Cover requirements	
Waste Type	Cover requirements
Putrescible wastes	To be covered (if not disposed of) by the end of the working day in which the waste is deposited with sufficient quantities of Type 1 inert waste, clean fill or other appropriate cover material to prevent the spread of fire or harbouring of disease vectors.

1.3.5 The Licensee shall implement the following security measures at the site:

- erect and maintain suitable fencing to prevent unauthorised access to the site as far as is practicable; and
- ensure that the premises is locked at all times when the premises is unattended.

1.3.6 The Licensee shall install and maintain a sign at the entrance to the Premises which clearly displays the following information:

- hours of operation;
- contact telephone number for information or complaints;
- a warning indicating penalties for people lighting fires; and
- the types of waste that must not be deposited on the premises.

1.3.7 The Licensee shall ensure that there are appropriate procedures in place at the premises so that any unauthorised fire is promptly extinguished.

2 Monitoring

2.1 General monitoring

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

2.1.2 The licensee shall ensure that:

- all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- all groundwater sampling is conducted in accordance with AS/NZS 5667.11;
- all microbiological samples are collected and preserved in accordance with AS/NZS 2031; and
- all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.

2.1.3 The Licensee shall ensure that :

- monthly monitoring is undertaken at least 15 days apart; and
- annual monitoring is undertaken at least 9 months apart.

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	Clean fill and Putrescible waste.	m ³	Monthly	Weekly assessment of the Premises for received items.
Waste Outputs	Waste type as defined in the Landfill Definitions.			Weekly assessment of received items leaving or rejected from the Premises.

2.3 Ambient environmental quality monitoring

2.3.1 The Licensee shall undertake the monitoring in Table 2.3.1 according to the specifications in that table and record and investigate results that do not meet any limit specified.

Table 2.3.1: Monitoring of ambient groundwater quality				
Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
WI13E	Standing water level	m(AHD)	Spot sample	annually
	pH	pH		
	Electrical conductivity	µS/cm		
	Total Dissolved Solids	mg/L		
	Surfactant (MBAS)			
	BTEX			
	Ammonia (as N)			
	Total Nitrogen			
	Total Phosphorus			
	Nitrate-N			
	Nitrite-N			
	Chlordane			
	Dieldrin			
	Copper			
	2,4-D			
	Glyphosate			
Lead				
Arsenic				

3 Improvements

3.1.1 The Licensee shall complete the improvements in Table 3.1.1 by the date specified.

Table 3.1.1: Improvement Program		
Improvement Reference	Improvement	Date of completion
IR1	<p>The Licensee shall prepare and submit a post closure rehabilitation plan for the Premises.</p> <p>The post closure rehabilitation (or phased restoration) plan shall set out a plan for the rehabilitation of the site and shall include, as a minimum:</p>	<p>Within six months prior to final closure</p>



	<ul style="list-style-type: none">• options (including the preferred option) for the use of the site after it has ceased to be a landfill site;• a conceptual design of the infrastructure needed for the preferred option for the use of the site after it has ceased to be a landfill site;• the estimated final contours of the site, after allowing for settlement, and specifying to what extent settlement has been allowed for;• the capping materials proposed to be used on the site;• measures proposed for the protection of the environment and the monitoring of the site post closure;• timeframe for implementing the plan; and• the estimated period for which the site will require protection and monitoring.	
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4 Information

- 4.1.1 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 4.1.1(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.
- 4.1.2 The Licensee shall ensure that:
- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
 - (b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.
- 4.1.3 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.
- 4.1.4 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.

4.2 Reporting

- 4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report by no later than 1 September after the end of the annual period. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

Table 4.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form¹
-	Analysis of ambient groundwater monitoring data for bore W113E, with any actions undertaken by the Shire as a result of the assessment.	None specified
Table 1.3.1	Summary of annual waste acceptance	None specified
	Submission of copies of biosolid testing results and confirmation of compliance to class II landfill.	None specified
Table 2.2.1	Monitoring of inputs and outputs	None specified
Table 2.3.1	Summary of annual ambient groundwater quality monitoring data parameters for bore 'W113E'.	None specified
4.1.3	Compliance report.	Annual Audit Compliance Report (AACR)
4.1.4	Complaints summary.	None specified

Note 1: Forms are in Schedule 2

- 4.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- (a) any relevant process, production or operational data recorded;
 - (b) an assessment of the information contained within the report against previous monitoring results and Licence limits; and



- (c) a list of any original monitoring reports submitted to the Licensee from third parties for the annual period and make these reports available on request.

4.3 Notification

4.3.1 The Licensee shall ensure that the parameters listed in Table 4.3.1 are notified to the CEO at the Contact Address and in accordance with the notification requirements of the table.

Table 4.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement¹	Format or form²
-	Any unauthorised fire at the premises.	Provide the CEO with a report within 14 days of the fire. The report shall include: <ul style="list-style-type: none">• details of the date, time and location of the fire;• the time the fire was declared safe; and• the cause or suspected cause of the fire.	None specified
1.3.2	Waste that does not meet the waste acceptance criteria set out in condition 1.3.1	Contact the CEO within 24 hours of receiving that waste to agree a course of action in relation to the waste.	None specified
2.1.1	Breach of any limit specified in the Licence.	As soon as practicable but no later than 5pm of the next usual working day.	N1

Note 1: No notification requirement in the Licence shall negate the requirement to comply with s72 of the Act.

Note 2: Forms are in Schedule 2.



Schedule 1: Maps

Premises map

The Premises is shown in the map below. The red/ yellow line depicts the Premises boundary.





Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by 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

- 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) may 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 No: L8685/2012/2
 Form: N1

Licensee: Shire of Cocos (Keeling) Islands
 Date of breach:

Notification of detection of the breach of a limit.

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

Part A

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

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



Part B

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

Name	
Post	
Signature on behalf of Shire of Cocos (Keeling) Islands	
Date	



Decision Document

Environmental Protection Act 1986 (WA)(CKI), Part V

Proponent: Shire of Cocos (Keeling) Islands

Licence: L8685/2012/2

Registered office: Shire of Cocos (Keeling) Islands
Lot 256 Jalan Melati Home Island
Cocos (Keeling) Islands
Indian Ocean Territories WA 6799

Premises address: West Island Sludge Disposal Facility
Airfield Road
WEST ISLAND WA 6799
Being portion of Lot 100 on Plan 18500 as depicted in Schedule 1.

Issue date: Thursday, 3 September 2015

Commencement date: Friday, 18 September 2015

Expiry date: Thursday, 17 September 2020

Decision

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

Decision Document prepared by: Caroline Conway-Physick
Licensing Officer

Decision Document authorised by: Steve Checker
Delegated Officer



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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 (WA)(CKI)*. 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 checked="" type="checkbox"/>	
	Licence amendment <input type="checkbox"/>	
	Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	64 – Class II putrescible landfill	1,800 tonnes per annual period.
Application verified	Date: 13/07/2015	
Application fee paid	Date: N/A	
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	N/A	
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 type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986 (WA)(CKI)</i>)?	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"/>
If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.		



3 Executive summary of proposal and assessment

West Island Sludge Disposal Facility (also known as 'Elephants Graveyard') consists of an unmanned landfill that is owned by the Shire of Cocos Keeling and managed by Water Corporation for the disposal of biosolids from West Island Wastewater Treatment Plant (R1841/2006/1). The site receives approximately 20 cubic meters (three tonnes) of biosolids on an annual basis with the premises design capacity being 1,800 tonnes per annual period.

The site is fenced across the main access point and gated with Water Corporation being the sole operator and the only persons with access to the site. The sides and back of the site are not fenced however this area is densely surrounded with native vegetation (Cabbage bush) which grows in excess of 1.8m high. The premises are locked at all times when not manned.

The deposited sludge is spread out evenly across an area of approximately 3 meters wide by 10 meters in length. The sludge is then covered with clean fill (approximately 300mm) and left undisturbed for a minimum of three years.

The Premises is affected by tidal movement where, on high tide, fresh water is pushed to the surface in low lying areas. Depth to groundwater is approximately 0.5m below surface. The Premises is not located on any of the freshwater drinking lenses that are utilised for the island. Sludge is tested for pathogens and held at the West Island Wastewater Treatment Plant prior to being sent to the disposal facility.

The distance to the closest surface water body (Indian Ocean) is approximately 44m south of the Premises.

A monitoring bore (WI10E) exists approximately 100m north of the premises and another bore (WI13E) within the premises which are managed and operated by Water Corporation on the island, for the purposes of monitoring ambient groundwater quality. The water quality at 'WI10E' is considered as 'brackish' according to Water Corporation. Fresh water lenses on West Island are strongly influenced by ocean tidal movement (ingress/ egress) south of the Premises (Pers. comm. D. Scott). Currently, monitoring is only being undertaken at monitoring bore 'WI13E'.

The main potential emission risk from the premises is emission to groundwater due to the high water table level on the island and the influence of tidal action.

This Licence has been reassessed as part of the reissue process, and is the successor to L8685/2012/1. It includes administrative changes to the Licence to convert it to new format with the addition of an improvement plan for the development of a post closure management plan and assessment of ambient groundwater monitoring bore parameters for the premises.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987 (WA)(CKI)*, 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			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.2	No additional conditions have been included within this section of the Licence through the reissue process.	
Premises operation	L1.3.1-L1.3.7	<p>Operation</p> <p>Condition 1.3.1 replaces old condition 1 for 'waste acceptance'. Specifications for waste disposal and compliance, and types of wastes that can be received have been defined.</p> <p>The acceptance of type 1 and 2 inert wastes has been removed from the licence (old condition 1(b) & 1(c)) as the facility is only used for biosolid waste disposal. Landfilling capacity is limited on the island and the location is unsuitable for any other types of waste disposal due to proximity of surface water and groundwater.</p> <p>Condition 2 of the old licence has been removed from the Licence in relation to 'Type 1 special waste'. The Premises receives biosolids only.</p> <p>Condition 1.3.2 requires the licensee to manage / dispose of wastes received on site that do not meet the waste acceptance criteria.</p> <p>Condition 1.3.3 has been updated to include additional process limits within Table 1.3.2.</p> <p>Condition 3 of the old licence has been incorporated within Table 1.3.2.</p> <p>Condition 1.3.4 has replaced condition 3, Table 1 of the old Licence in relation to cover requirements for the Premises.</p>	<p>Application supporting documentation.</p> <p>General provisions of the <i>Environmental Protection Act 1986 (WA)(CKI)</i>.</p> <p><i>Environmental Protection (Rural Landfill) Regulations 2002 (WA)(CKI)</i>.</p>



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>Condition 1.3.5 has replaced condition 4 of the old Licence.</p> <p>Condition 5 and 6 of the old licence have been removed as they are not relevant and relate to windblown putrescible waste.</p> <p>Condition 1.3.6 replaces condition 7 of the old Licence.</p> <p>Condition 1.3.7 replaces condition 10 of the old Licence.</p> <p>Conditon 9 of the old Licence has been removed as burning of waste materials is not carried out at the Premises and is not considered appropriate for the operation of the premises which only received tested biosolids which are buried.</p>	
Monitoring general	L2.1.1-L2.1.2	<p>Operation Condition 2.1.1 includes administrative changes within the Licence in relation to approved sampling standards and frequencies to be used.</p>	
Monitoring of inputs and outputs	L2.2.1	<p>Operation Condition 2.2.1 has been included within the Licence to record the receipt and or removal of any waste from the Premises, and will improve record keeping in relation to volumes and waste types.</p>	
Monitoring of ambient environmental quality	L2.3.1	<p>Operation <u>Emission Description</u> <i>Emission:</i> Biosolids disposed of to ground with the potential for Nutrients, heavy metals and pesticides (chemicals) to leach into groundwater. <i>Impact:</i> Contamination of surrounding groundwater systems. Potential impacts on ecology of groundwater and surface water (Indian Ocean) from the addition of nutrients, heavy metals and pesticides (chemicals). The groundwater is approximately 0.5 meters below ground level with strong tidal influence on the island. <i>Controls:</i> Water Corporation own, maintain and sample from the monitoring bore (WI13E) for a range of 77 different parameters (nutrients, heavy metals and chemicals) on an annual basis. The waste disposal facility is not located on or adjacent to any of the islands drinking water lenses reducing the ability of</p>	<p>Australian and New Zealand guidelines for fresh and marine water quality, (ANZECC) 2000.</p> <p>Western Australian Guidelines for Biosolids Management, Department of Environment and Conservation, December 2012.</p>



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>contamination of the drinking water supply. Water Corporation is the only user of the facility which disposes of small amounts of biosolids from the WWTP which is tested against required guidelines for biosolids. The low volumes received at the facility will assist in minimising potential risk to groundwater and surface water bodies (Indian Ocean).</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition 2.3.1 has been added to the licence to require the operator to ensure monitoring from groundwater monitoring bore 'W113E' takes place for the Premises, and that it occurs annually to ensure that there is no influence to groundwater from the disposal of the biosolids at the facility. The parameters identified are currently part of Water Corporation's sampling routine for the premises.</p> <p>The Shire was informed of the details of the inclusion of monitoring through discussions with Aaron Bowman (CEO), and Water Corporation (Danielle Scott) has been informed of the requirement to submit monitoring data results to the Licensee.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p>	
Improvements	L3.1	Condition 3.1, Table 3.1.1 has been included with an improvement programme for a 'post closure rehabilitation plan' for the Premises under IR1.	General provisions of the <i>Environmental Protection Act 1986 (WA)(CKI)</i> .



DECISION TABLE			
Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Information	L4.1.3 L4.1.4 L4.2.1	<p>Operation Condition 4.1.3 has replaced condition 15 of the old Licence.</p> <p>Condition 4.1.4 has been included to ensure that a complaints register is held by the Shire for the purposes of recording any complaints with regards to the operation and maintenance of the Premises.</p> <p>Condition 4.2.1 has been included to require the Licensee to submit an Annual Environmental Report. The old Licence did not have this requirement for annual reporting.</p> <p>Table 4.2.1 has a reporting requirement for the Licensee to obtain annual sampling results from Water Corporation for the ambient groundwater quality monitoring for groundwater monitoring bore W113E. The bore is monitored for pesticides, heavy metals and nutrients (77 parameters) by Water Corporation. An additional bore (W110E), 100m north of the premises, is also managed by Water Corporation but is not currently being sampled from.</p> <p>Additional reporting requirements for submission within the Annual Environmental Report have been defined within Table 4.2.1 for the submission of bisolid testing results as defined within condition 1.3.1.</p>	
Licence Duration	N/A	<p>The Licence is being proposed for a five year period. There are no current issues of concern or known complaints with regards to the premises operation.</p> <p>The facility is considered low risk due to the low volumes received (actual annual tonnage from Water Corporation is three tonnes) and has adequate monitoring parameters and management practices in place.</p>	Government of Western Australia, Department of Environment Regulation, Licence duration, Guidance statement, May 2015.



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
20/07/2015	Application advertised in West Australian (or other relevant newspaper)	Nil	N/A
20/05/2015	Application referred to interested parties listed	Water Corporation contacted via telephone (D. Scott) for information regarding premises operation and groundwater monitoring bore sampling.	Information included within premises summary and sampling parameters.
25/08/2015	Proponent sent a copy of draft instrument	Comment received from Aaron Bowman (Shire CEO) on 28/08/2015.	No significant changes requested. Minor change included: Reporting period from '63 days' to '1 September'.
26/08/2015		Draft also sent through to Water Corporation (Danielle Scott) for consideration.	Danielle Scott confirmed (via email on 28/08/2015) that they would discuss the changes in the Licence with the Shire to ensure compliance. No issues were raised.



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