Government of Western Australia
Department of Environment Regulation

Licence

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

Licensee: Shire of Cocos (Keeling) Islands

Licence: L8684/2012/2

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

Premises address: Home Island Transfer Station
Jalan Balok Mem Home Island
Cocos (Keeling) Islands
Indian Ocean Territories WA 6799
Being Part of Lot 1106 on Plan 30520 as depicted in Schedule 1.

Issue date: Monday, 8 September 2014

Commencement date: Thursday, 18 September 2014

Expiry date: Tuesday, 17 September 2019

Prescribed premises 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
60	Incineration: premises (other than premises within category 59) on which waste, excluding clean paper and cardboard, is incinerated.	100 kilograms or more per hour	1,000 kilograms per hour
59	Biomedical waste incineration: premises on which – (a) infectious or potentially infectious waste produced by health care establishments, or by pathology, dental, or veterinary practices, or by laboratories, is incinerated; (b) quarantine waste is incinerated; or (c) cytotoxic waste is destroyed, but not including premises on which there are only facilities used exclusively for human or animal cremation.	Not applicable	1,000 kilograms per hour

57	Used tyre storage (general): premises (other than premises within category 56) on which used tyres are stored.	100 tyres or more	500 tyres

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

Melissa Chamberlain

Digitally signed by Melissa Chamberlain
Date: 2024.04.03 11:27:36 +08'00'

A/MANAGER WASTE INDUSTRIES
REGULATORY SERVICES
Officer delegated under section 20 of the *Environmental Protection Act 1986 (WA)(CKI)*

Contents

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. The 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 (WA)(CKI)* (the Act) for the licensing of prescribed premises. Through this process DWER regulates 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.

Other guidelines which you should be aware of include:

- *Western Australian Guidelines for Biosolids Management*, Department of Environment and Conservation, December 2012 (as amended from time to time).

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

Premises Description and Licence Summary
The Shire of Cocos (Keeling) Islands (Shire) manages the Home Island Transfer Station which is located on Lot 1106 on Plan 30520, Cocos (Keeling) Home Island, Indian Ocean Territories and services approximately 600 people. Wastes may also be brought over from Cocos Keeling West Island for incineration at the Transfer Station.

Home Island Transfer Station consists of an unmanned, unlocked landfill site that is open seven days per week. Shire staff visit the site daily to assess usage at the premises and to identify any issues of concern. The landfill accepts putrescible waste for burial after incineration, inert waste for disposal and other waste streams for storage for later disposal offsite. Public disposal of waste at the Premises is of small volumes due to the type of transportation available on Island (small electric vehicles only, except for vehicles operated by the Shire). Waste collection is carried out by the Shire weekly.

Waste is generally not buried at the premises but disposed of above ground. This is due to the high groundwater levels at Cocos Islands and the influences of seawater ingress. Sludge biosolids are currently the only waste type that is trenched and buried at the landfill, after it has been tested prior to being received from Water Corporation. The green waste is burned in a designated area well away from all other waste streams. Asbestos waste is wrapped, labelled and crated for export for off-island disposal. This waste is shipped to Perth for appropriate disposal to a licenced facility.

An incinerator (WR1T) was purchased in 2015 for the incineration of general, industrial and medical waste at the premises. The incinerator consists of a multi-chamber construction which operates in a “controlled excess air mode” with fan-forced air supplied to the primary chamber at pre-set cycle times which is then fed into the secondary chamber under the same conditions.

The incinerator is fitted with one two-stage (High-Low) primary burner and two two-stage (High-Low) secondary burners. A Programmable Logic Control system is linked to thermocouples in the primary and secondary chambers and maintains the burners in their correct operating stage (modulating high or low) to ensure optimum pre-set temperatures and fuel economy are maintained during the combustion process. Two water spray nozzles are fitted to the primary chamber roof (lid) to optimize combustion control and performance when destroying highly volatile chemical and synthetic waste. The incinerator is designed to maintain a secondary chamber operating temperature of not less than 850ºC and up to 1400ºC, with secondary chamber gas retention time of not less than two (2) seconds. The stack maintains a temperature of 400+ ºC to inhibit the reformation of dioxins and furans held within any minute particulates (Scholer Industries).

The incinerator has a burning rate of 1,000kg/ hour with a load capacity within the primary chamber of up to 3,000kg.

A 2,000 litre self bunded diesel fuel tank is located on the premises to supply fuel for the ignition and operation of the incinerator.

Groundwater on Home Island consists of a series of freshwater lenses which are recharged via rainfall infiltration, and with a depth to groundwater varying between 1 to 2 metres below ground level. This is the main drinking supply for the Island which is very susceptible to contamination.

A number of groundwater monitoring bores have been placed on the Island by Water Corporation to monitor groundwater parameters.

The distance to surface water from the premises is approximately 33m (Indian Ocean).

The method of disposal of waste on the Island has been an issue of concern due to the difficulty of managing waste within a finite area of space, the inability to effectively dispose of waste through burial and the financial and logistical limitations of removing waste types from the Island.

The most significant risks from the Premises operation are the contamination of groundwater (through disposal of ash waste) and emissions to air (from the stack).

This Licence is the result of an amendment sought by the Licensee for the operation of an incinerator within the prescribed premises Home Island Transfer Station. The Licence includes additional categories - Category 59 (Biomedical waste incineration) and Category 60 (Incineration) as a result of the waste type incineration requirements within the Cocos Keeling Islands, and the design of the WR1T Incinerator.

An improvement condition has been included in the Licence for the management and disposal of ash from the incineration of waste at the premises.

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

Instrument Log		
Instrument	**Issued**	**Description**
L8684/2012/1	17/09/2012	New application
L8684/2012/2	08/09/2014	Licence re-issue
L8684/2012/2	05/02/2015	Licence amendment to new format
L8684/2012/2	10/12/2015	Licence amendment for installation and operation of incinerator and to include Categories 59 and 60
L8684/2012/2	03/04/2024	Licence amendment for the extension of the prescribed premises boundary for the burial of biosolids.

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 (WA)(CKI)* apply unless the contrary intention appears.

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

'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);

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

'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, chrysotile, crocidolite, tremolite and any mixture containing 2 or more of those;

'AS1726' means the Australian Standard AS1762 *Geotechnical site investigations*, as amended from time to time;

'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*;

'Assessment of Site Contamination NEPM' means the *National Environment Protection (Assessment of Site Contamination) Measure 1999*, as amended from time to time;

'ASTM D5092/D5092M-16' means the ASTM international standard for *Standard practice for design and installation of groundwater monitoring wells (Designation: ASTM D5092/D5092M-16)*, as amended from time to time.

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

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

'Clinical waste' means waste that has the potential to cause disease, sharps injury or public offence including sharps waste, human tissue waste, laboratory waste and animal waste resulting from medical or veterinary research or treatment or any other waste generated from a Western Australian health facility that has the potential to cause disease, sharps injury or public offence ;

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

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Administering the Environmental Protection Act 1986
Locked Bag 10

Joondalup WA 6919
Email: info@dwer.wa.gov.au;

'chemical waste' means waste material generated from the use of chemicals in medical, dental, veterinary, laboratory, ancillary and disposal procedures;

'Contaminated Solid Waste' has the meaning defined in Landfill Definitions;
'controlled waste' has the definition in *Environmental Protection (Controlled Waste) Regulations 2004;*

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

'cytotoxic waste' means waste material, including sharps, contaminated with a cytotoxic drug;

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

'designated burning area' means an area of a landfill site that has been designated by the occupier of the site as a designated burning area;

'DFES' means the Department of Fire and Emergency Services of Western Australia;

'Fire Control Officer', in relation to the premises, means a person who has such qualifications in fire fighting 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;

'general waste' means waste which comprises any waste material which is not otherwise specified in this Licence;

'green waste' means waste that originates from flora;

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

'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;

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

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

'laboratory waste' means a specimen or culture discarded in the course of medical, dental or veterinary practice or research, including genetically manipulated material and imported biological material or any material grossly contaminated thereby;

'Landfill infrastructure' means any specified element of the landfill lining or containment system and the leachate collection and abstraction system;

'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 L8684/2012/2 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 the submission of a sample to a laboratory which is NATA accredited for the analysis specified at the time of the analysis;

'pharmaceutical waste' means waste that includes:

i. expired pharmaceutical products;
ii. pharmaceutical products discarded due to being in a substandard state (e.g. non-compliant storage, damaged or contaminated packaging, failed quality control specifications during manufacture);
iii. pharmaceutical products returned by patients, discarded by the public, no longer required by the public or no longer required by a healthcare facility,;
iv. waste generated by the manufacture or via the administration of pharmaceutical products;
v. preparations of drugs added to an intravenous solution;
vi. other waste contaminated with pharmaceuticals. This definition excludes:

(a) pharmaceutical drugs and their metabolic by-products excreted by patients undergoing therapy;
(b) empty bottles (containing no liquid), empty pill bottles or strip packages where all tablets/capsules have been removed or other similar uncontaminated packaging;
(c) Materials with trace quantities of pharmaceutical products (with the exception of cytotoxic drugs) such as used syringes and used intravenous sets (although they may be classed as clinical waste including sharps); and
(d) Simple intravenous solutions such as saline or dextrose, liquid nutrient preparations and electrolyte solutions.

'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;

'qualifying zone' means area within the combustion chamber of the incinerator which does not include areas where primary combustion occurs and relates to completion of combustion. It commences at a location after the last injection of secondary air and excludes the residence time achieved in the secondary combustion unit or zone.

'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;

'radioactive waste' means waste material, including sharps, contaminated with a radioisotope which arises from the medical or research use of radionuclide, e.g. during nuclear medicine, radioimmunoassay and bacteriological procedures, which may be of solid, liquid or gaseous form, and which emit a level of radiation above the level set in the *Radiation Safety (General) Regulation 1983*;

'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 Definitions;

'shut down' means the period when plant or equipment is brought from activity to inactivity;

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

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

'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;

'tipping area' means the area of the landfill in which waste other than cover material 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 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 immediately recover, or remove and dispose of spills of any hydrocarbons, acids, alkalis, chemicals and/or biosolids associated with the disposal of waste at the premises outside of the designated disposal areas for these materials.

1.2.2 The Licensee shall ensure that earthen bunds and diversion channels are maintained to prevent stormwater run-off becoming contaminated by any waste on 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 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[1]
Clean fill	N/A	None specified
Contaminated solid waste	1,800 tonnes per annual period	Must meet the acceptance criteria for Class II landfills
Controlled waste		• Biological wastes (septage and grease trap only) to be deposited in septage ponds; • For incineration or disposal to landfill.
Hazardous		• Limited to waste oil, paint, vehicle batteries, 'DrumMuster' products;

		• For storage until final disposal off the island.
Inert waste Type 1		Waste containing visible asbestos or ACM shall not be accepted.
Inert Waste Type 2		• Tyres, plastic and scrap metal only; • No more than 500 tyres stored per annual period.
Putrescible waste		• For incineration; • Acceptance of putrescible waste for open burning shall only be permitted prior to the installation and commissioning of the incinerator and in the event of incinerator failure following notification as defined within condition 5.3.1.
Special Waste Type 1		• Cement bonded asbestos only. No fibrous asbestos shall be accepted; • Asbestos material is to be labelled and wrapped prior to export off the island for disposal, and separated from all other waste types.
Special Waste Type 2		• Radioactive waste shall not be accepted at the premises; • Biomedical / clinical for incineration only and includes quarantine, clinical, chemical, pharmaceutical, cytotoxic and general waste; • Waste accepted at the premise is to be recorded as follows: i) date of acceptance, source of waste and number of bins for each batch of waste received at the premises; ii) date that each batch of waste was incinerated; and iii) the total weight of waste incinerated each day. • All records should be included within the register as defined within condition 5.1.5.

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*.

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	Handling and disposal of waste	• 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. • Maintain an undisturbed separation distance of at least 20 metres between the waste and the highest level/ tide of any surface water body, as per condition 4.1.1, IR1. • Ensure that the tipping area is no greater than two metres in height, with a maximum linear length of 30 metres. • Carry out weekly collection of any windblown or washed away waste generated from the premises. • Rehabilitation of a cell or phase takes place within 6 months after disposal in that cell or phase has been completed.
All incinerated waste		• Secondary combustion chamber temperature is to be no less than 850°C when clinical waste or putrescible waste is incinerated. • Secondary combustion chamber temperature to be no less than 1100°C when chemical waste, pharmaceutical waste, cytotoxic waste or any waste with a content of more than 1% halogenated organic substances, expressed as chlorine, is incinerated. • Incineration efficiency to be no less than 95%. • Stack temperature to be no less than 400+ °C during incineration. • No incineration of batteries, paint, mobile phones, ink cartridges, tyres, computers or computer accessories, glass and aluminium cans to occur. • Ensure incineration of waste is carried out in accordance with the manufacturer's specifications for waste type segregation.
Clean Fill	Receipt, handling and disposal by landfilling	• No additional process limits.
Contaminated Solid Waste		• Biosolids to be managed in accordance with the *Western Australian Guidelines for Biosolids Management*, Department of Environment and Conservation, December 2012 (as amended from time to time).
Hazardous		• 'DrumMuster' products must be triple rinsed prior to acceptance on the premises. • Waste oil, paint, vehicle batteries, DrumMuster products must be stored in a fully enclosed bunded area/container, prior to off-shore disposal to a licenced facility.
Inert Waste Type1		• To be sealed, labelled and placed within a crate or other containment infrastructure prior to export for disposal offsite.

Inert Waste Type 2 - Tyres	Receipt, handling, storage prior to re-use or disposal	• To be stored in thin rows in piles of up to 100 units with a 6 m separation distance between piles. • Reuse and recycling of waste tyres permitted. • Area between rows to be kept clear at all times and free from combustible material. • No more than 500 tyres stored. • Disposal off-shore to licenced facility.
Putrescible Waste	Receipt, handling, storage prior to disposal by landfilling/ incineration	• Except for green waste, stored at the premises prior to incineration weekly. • Incinerator ash to be disposed of to landfill for burial. • Open burning of putrescible waste shall only be permitted in the event of incinerator failure and notification as defined within condition.
	Disposal by burning/ incineration	• Green waste to be dried and seasoned for at least 2 months before burning. • Burning to take place in a designated burning area at least 25m from the boundary of any active disposal areas. • Burning to take place in trenches or windrows. • Burning to take place only when an adequate supply of water is available to effectively manage the burning process.
Special Waste Type 1 (Asbestos Waste)	Receipt, handling and storage prior to disposal	• To be sealed, labelled and placed within a crate or other containment infrastructure prior to export for disposal offsite.
Special Waste Type 2 (Biomedical and Clinical Waste)		• Only to be placed into a designated biomedical waste/ quarantined storage area or impervious container within the premises prior to incineration. • Biomedical waste accepted at the premises that will not be incinerated within 48 hours of receipt shall be transferred to refrigerated storage facilities immediately. • Biomedical waste, if stored, is to be refrigerated and maintained at a temperature of 5°C or lower. • Biomedical waste shall not be stored at the premises for a period in excess of 30 days prior to incineration. • Infectious Clinical Waste must be placed directly within the primary combustion chamber without first being mixed with other waste types and without direct handling.

Note 1: 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*.

1.3.4 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[1]

Waste Type	Cover requirements
Inert Waste Type 1	No cover required
Inert Waste Type 2	No cover required – nil burial
Special Waste Type 1	No cover required – nil burial

Special Waste Type 2 (ash only) Contaminated solid waste Putrescible wastes (including ash)	To be covered 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, waste material or harbouring of disease vectors.

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

1.3.5 The Licensee shall take the specified management action in the case of an event in Table 1.3.4.

Table 1.3.4: Management actions

Emission point	Event/ action reference	Event	Management action
Incinerator	**EA1**	Failure or malfunction or abnormal operation period (including emission of black smoke)	Shut down incinerator. Restore normal operation of failed equipment or replace the failed equipment prior to re-introducing feed. Assess temperature operation of chamber/s during failure, malfunction or abnormal operation period. The Licensee must record the beginning and end of the Abnormal Operation period and any actions undertaken to rectify the issue.
	EA2	Start up	Must not load Clinical Waste, Chemical Waste, Cytotoxic Waste, Pharmaceutical Waste, and General Waste into the incinerator until optimal temperature can be reached for the proposed waste type.
	EA3	Wind direction outside of a south easterly or easterly direction	Do not start up incinerator for the purposes of incinerating waste. Reschedule incineration of waste batches to a time when the wind direction is compliant with condition 3.5.1.

1.3.6 Following the cessation of emissions/operation under condition 1.3.5, the Licensee shall not restart operation of the process until:
(a) the problem has been rectified; and
(b) the Licensee has recorded the actions taken to maintain compliance with the Licence.

1.3.7 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.

1.3.8 The Licensee shall install and maintain a sign at the entrance to the Premises which clearly displays the following information:
(a) hours of operation;
(b) contact telephone number for information or complaints;
(c) a warning indicating penalties for people lighting fires; and
(d) the types of waste that must not be deposited on the premises.

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

1.3.10 The licensee shall ensure that all gaseous and particulate matter leaving the primary chamber of the incinerator shall be incinerated in the secondary chamber, which shall operate at a gas outlet temperature of between 850-1400 degrees Celsius and have a minimum gas residence time within the secondary chamber of 2.0 seconds.

1.3.11 The Licensee shall ensure that the incinerator is constructed, installed and operated in accordance with the following submitted documentation in Table 1.3.5.

Table 1.3.5: Construction and Operation Requirements[1]

Document	Parts	Date of Document
Email: 'Air quality assessment of proposed waste incinerator at the Cocos Islands' for Scholer Industries – Synergetics Environmental Engineering, from Dave Collins.	All, including Drawings	21 August 2015
Email: Incinerator – 'Shire of Cocos (Keeling) Islands, Towards Zero Waste' from Aaron Bowman.	All	11 September 2015
Email: Incinerator information for the DER: 'WR1T Waste Incinerators (Final Revised specifications), Scholer Industries – Domestic, Industrial and Medical Waste Disposal Unit', from Aaron Bowman.	All, including attachments	11 September 2015
Email: Incinerator information for the DER: SI Operation Control Sequence. 'Control Sequence of WR1T Incinerator Operation', from Aaron Bowman.	All, including attachments	11 September 2015

Note 1: Where the details and commitments of the documents listed in condition 1.3.11 are inconsistent with any other condition of this Licence, the conditions of this Licence shall prevail.

2 Emissions

2.1 General

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

2.2 Point source emissions to air

2.2.1 The Licensee shall ensure that where waste is emitted to air from the emission points in Table 2.2.1, and identified on the map of emission points in Schedule 1, it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emission points to air

Emission point reference	Emission point reference on premises map	Emission point height (m)	Source, including any abatement
Incinerator Stack	A1	12.5	Incinerator stack, on the secondary combustion chamber, that holds a temperature of at least 400 °C to ensure that the reformation of dioxins and furans from the incinerator does not occur.

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 unless indicated otherwise in the relevant table.

3.1.2 The Licensee shall ensure that:
(a) monthly monitoring is undertaken at least 15 days apart; and
(b) quarterly monitoring is undertaken at least 45 days apart.

3.2 Monitoring of inputs and outputs.

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Table 3.2.1 Monitoring of inputs and outputs

Input/ Output	Parameter	Units	Averaging Period	Frequency
Waste Inputs	Clean fill, Contaminated solid waste, Inert Waste Type 1, Inert Waste Type 2, Putrescible waste, , Special Waste Type 1, Special Waste Type 2	m^3	Monthly	Daily assessment of the Premises for received items.
Waste Outputs	Waste type as defined in the Landfill Definitions			Daily assessment of waste items leaving or rejected from the Premises.
	Incinerator ash			Weekly assessment

3.3 Process monitoring

3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Process monitoring

Monitoring point reference	Process description	Parameter	Units	Frequency	Method
PM1	Exhaust gases in secondary chamber	Temperature	Degrees Celsius	Continuous when in use	None specified

3.4 Ambient environmental quality monitoring

3.4.1 The Licensee shall undertake the monitoring in Table 3.4.1 according to the specifications in that table and record and investigate results that do not meet any target specified.

Table 3.4.1: Monitoring of ambient groundwater quality

Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
HI6E HI7E H8E H9E HI10E HI11E The groundwater well constructed in accordance with condition 4.1.1, IR1	Standing water level	m(AHD)	Spot sample	Quarterly
	pH[1]	pH		
	Total Dissolved Solids	µS/cm		
	Lead	mg/L		
	Manganese			
	Copper			
	Chromium			
	Nickel			
	Zinc			
	Cadmium			
	Arsenic			
	Total Nitrogen			
	Total Phosphorus			
	Ammonia			

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

3.5 Meteorological monitoring

3.5.1 The Licensee shall ensure that the incinerator is only made operational when prevailing winds are from a south easterly or easterly direction.

3.5.2 The Licensee shall record the wind direction at each start-up and shut down of the incinerator.

4 Improvements

4.1 Improvement Program

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

Table 4.1.1: Improvement Program

Improvement Reference	Improvement	Date of completion
IR1	The licence holder must design, construct, and install a groundwater monitoring well in accordance with the following requirements:	Must be constructed, developed, and determined to be operational by 30 April 2025
	<u>Location:</u> The groundwater monitoring well must be located between the northern extended premises boundary and the Home Island Northern Freshwater Lens proposed water reserve boundary, as approximated in Figure 3.	
	<u>Well design and construction:</u> Designed and constructed in accordance with *ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores*.	

	Well screens must target the part, or parts, of the aquifer most likely to be affected by contamination[1]. Note 1: refer to Section 8 of Schedule B2 of the *Assessment of Site Contamination NEPM* for guidance on well screen depth and length.	
	<u>Logging of borehole:</u> Soil samples must be collected and logged during the installation of the monitoring well. A record of the geology encountered during drilling must be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS1726. Any observations of staining / odours or other indications of contamination must be included in the bore log.	
	<u>Well construction log:</u> Well construction details must be documented within a well construction log to demonstrate compliance with *ASTM D5092/D5092M-16*. The construction logs must include elevations of the top of casing position to be used as the reference point for water-level measurements, and the elevations of the ground surface protective installations.	
	<u>Well development:</u> The installed monitoring well must be developed after drilling to remove fine sand, silt, clay and any drilling mud residues from around the well screen to ensure the hydraulic functioning of the well. A detailed record should be kept of well development activities and included in the well construction log.	
	<u>Installation survey:</u> The vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor.	
	<u>Well network map:</u> A well location map (using aerial image overlay) must be prepared and include the location of all monitoring wells in the monitoring network and their respective identification numbers.	
IR2	The works licence holder must, within 60 calendar days of the monitoring well specified in IR1 being constructed, submit to the CEO a well construction report evidencing compliance with the requirements of IR1.	Within 60 calendar days of the monitoring well specified in IR1 being constructed
IR3	The Licensee shall prepare and submit a post closure rehabilitation plan for the Premises. 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: • 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; • timeframe for implementing the plan; and • the estimated period for which the site will require protection and monitoring.	31/01/2016

IR3	The Licensee shall submit to the CEO a waste management procedure for residual ash from the incineration of waste at the premises.	31/01/2016

5 Information

5.1 Records

5.1.1 All information and records required by the Licence shall:
- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 5.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
  - (i) off-site environmental effects; or
  - (ii) matters which affect the condition of the land or waters.

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

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

5.1.4 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.

5.1.5 The Licensee shall maintain a register of Special Waste Type 1 (Asbestos waste) received, and Special Waste Type 2 (Biomedical and clinical waste) incinerated at the Premises.

5.2 Reporting

5.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 56 calendar days after 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]
Table 1.3.1	Summary of annual waste acceptance	None specified
Table 1.3.2	Summary of waste processing	None specified
Table 1.3.4	Summary of events and management actions	None specified
Table 3.2.1	Monitoring of inputs and outputs	None specified
Table 3.3.1	Summary of process monitoring	None specified
Table 3.4.1	Summary of ambient groundwater quality monitoring data	GR1
3.5.1	Record of any exceedances against condition 3.5.1 requirements.	None specified
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified
5.1.5	Special waste register summary	None specified
-	Summary of any failure or malfunction of any pollution control equipment, or any incidents that have occurred during the annual period and any action taken	None specified

Note 1: Forms are in Schedule 2

5.2.2 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.

5.3 Notification

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

Table 5.3.1: Notification requirements

Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
-	Any unauthorised fire at the premises.	Provide the CEO with a report within 14 days of the fire. The report shall include: • 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
1.3.1	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
Table 1.3.4	EA1 - Failure or malfunction or abnormal operation period	Contact the CEO within 48 hours with the following details: • identification of date/ time of failure, malfunction or abnormal operation; • measures to be undertaken to rectify issue/s; and • timeframes for completion.	None specified
1.3.12	Construction of the incinerator	Notify the CEO in writing within 14 days following the completion of the works in condition 1.3.12.	None specified
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. Part B: As soon as practicable.	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

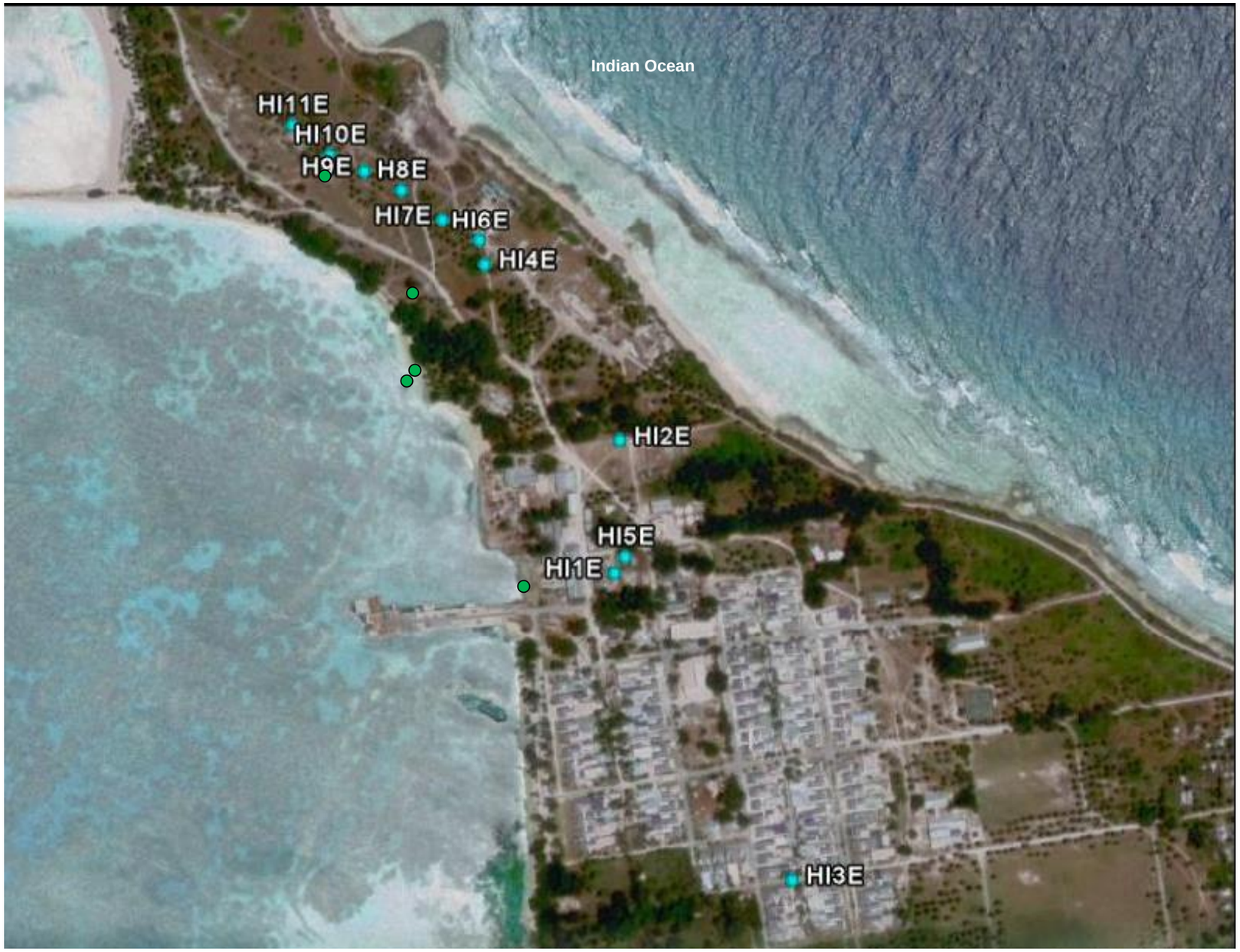
Government of Western Australia
Department of Environment Regulation

Schedule 1: Maps

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

Government of Western Australia
Department of Environment Regulation

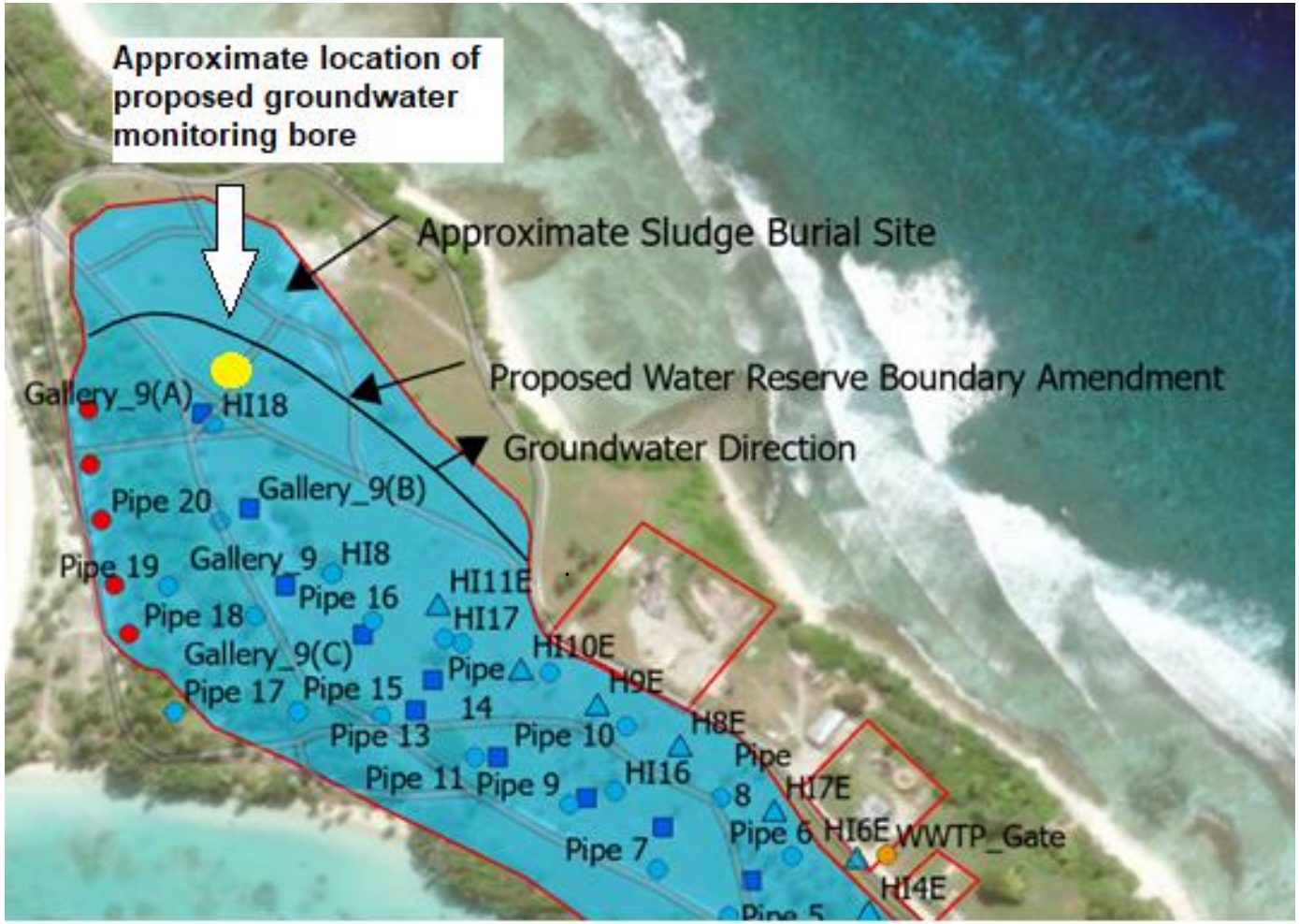
Map of Monitoring Locations
The locations of the monitoring points defined in Table 3.8.1 is shown below.



Key:
- Bores used for Shire landfill monitoring.
- Bores used by Water Corporation.

Figure 3. Groundwater monitoring well construction location

The proposed groundwater monitoring well location is indicated by a yellow circle.



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:

Government of Western Australia
Department of Environment Regulation

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 the DER:
☐ Yes ☐ Reported to the DER verbally Date _____ ☐ Reported to the DER in writing Date _____ ☐ 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	□	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	□	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	□	by affixing the common seal of the licensee in accordance with the *Corporations Act 2001*; or
	□	by two directors of the licensee; or
	□	by a director and a company secretary of the licensee, or
	□	if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or
	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	□	by the principal executive officer of the licensee; or
	□	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	□	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: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SEAL (if signing under seal)

Government of Western Australia
Department of Environment Regulation

Licence: L8684/2012/2 Licensee: Shire of Cocos (Keeling) Islands
Form: N1 Date of breach:

Notification of detection of the breach of a limit.

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

Part A

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

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

Part B

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

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

Government of Western Australia
Department of Environment Regulation

Licence: L8684/2012/2
Form: GR1
Name: Monitoring of ambient groundwater quality

Licensee: Shire of Cocos (Keeling) Islands
Period :

Form GR1: Monitoring of point source emissions to groundwater					
Emission point	**Parameter**	**Result[1]**	**Averaging period**	**Method**	**Sample date & times**
HI6E HI7E H8E H9E HI10E HI11E The groundwater well constructed in accordance with condition 4.1.1, IR1	Standing water level	m(AHD)	Quarterly	Spot sample	
	pH[1]	pH			
	Total Dissolved Solids	µS/cm			
	Lead	mg/L			
	Manganese				
	Copper				
	Chromium				
	Nickel				
	Zinc				
	Cadmium				
	Arsenic				
	Total Nitrogen				
	Total Phosphorus				
	Ammonia				

Note 1: In-situ non-NATA sampling permitted