

# Environment Protection Licence



Licence - 5065

Licence Details	
Number:	5065
Anniversary Date:	21-August

Licensee
SITA AUSTRALIA PTY LTD
LOCKED BAG 5015
KINGSGROVE DC NSW 2208

Premises
LUCAS HEIGHTS WASTE & RECYCLING CENTRE
NEW ILLAWARRA ROAD
LUCAS HEIGHTS NSW 2234

Scheduled Activity
Waste Disposal (application to land)
Waste Storage

Fee Based Activity	Scale
Waste disposal by application to land	Any annual capacity
Waste storage - other types of waste	> 0 T stored
Waste storage - waste tyres	> 0 T stored

Region
Waste & Resources - Waste Management
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SYDNEY NSW 2000
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## Information about this licence

### Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

### Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act); and
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

### Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

### Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

### Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

### Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

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The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

### Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

### Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

### This licence is issued to:

SITA AUSTRALIA PTY LTD
LOCKED BAG 5015
KINGSGROVE DC NSW 2208

subject to the conditions which follow.

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## 1 Administrative Conditions

### A1 What the licence authorises and regulates

- A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Waste Disposal (application to land)	Waste disposal by application to land	Any annual capacity
Waste Storage	Waste storage - other types of waste	> 0 T stored
Waste Storage	Waste storage - waste tyres	> 0 T stored

### A2 Premises or plant to which this licence applies

- A2.1 The licence applies to the following premises:

Premises Details
LUCAS HEIGHTS WASTE & RECYCLING CENTRE
NEW ILLAWARRA ROAD
LUCAS HEIGHTS
NSW 2234
LOT 1 DP 233333, LOT 2 DP 605077, PART LOT 101 DP 1009354, LOT 3 DP 1032102, LOT 111 DP 1050235
LOT 1 DP233333; LOT 2 DP605077; LOT 111 DP1050235; LOT 3 DP1032102; LOT 101 DP1009354 (EXCLUDING AREA DEFINED BY RED BOUNDARY AND LABELLED AS "GARDEN ORGANICS AREA" ON MAP TITLED "PLAN SHOWING THE POSITION OF THE "GARDEN ORGANICS AREAS" WITHIN LOT 101 IN DP 1009354 AT THE LUCAS HEIGHTS 2 WASTE PROCESSING FACILITY", REFERENCE 12415 ISSUE A, AND DATED 3 MARCH 2011 AND EXCEPT PART LOT 101 DP 1009354 SHOWN ON THE MAP RECEIVED BY THE EPA 6 MAY 2009, TITLED "PLAN SHOWING AREA LICENSED TO PCYC PART LOT 101 IN DP 1009354 LUCAS HEIGHTS", DATED 28 APRIL 2009 AND MARKED AS PROPOSED NEW BIKE TRACK AREA. MAP REF: 11925), BATCH REACTOR & LEACHATE POND WITHIN PART LOT 1 IN DP1027216 AS SHOWN IN MAP REF11883 DATED 19/4/09.

### A3 Other activities

- A3.1 This licence applies to all other activities carried on at the premises, including:

#### Ancillary Activity

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Crushing, grinding or separating

## A4 Information supplied to the EPA

- A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

## 2 Discharges to Air and Water and Applications to Land

### P1 Location of monitoring/discharge points and areas

- P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

#### Air

EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
28	Gas Monitoring Point - MB036		Gas Monitoring point labelled "MB036" on map titled "Figure 2: Site plan showing the location of gas bores", prepared by CES and dated 17 June 2008, 312900E 6230979N.
29	Gas Monitoring Point - MB037		Gas Monitoring Point labelled "MB037" on map titled "Figure 2: Site plan showing the location of gas bores", prepared by CES and dated 17 June 2008, 312897E 6230983N.
30	Gas Monitoring Point - MB042		Gas Monitoring Point labelled "MB042" on map titled "Figure 2: Site plan showing the location of gas bores", prepared by CES and dated 17 June 2008, 312173E 6231894N.
31	Gas Monitoring Point - MB043		Gas Monitoring Point labelled "MB043" on map titled "Figure 2: Site plan showing the location of gas bores", prepared by CES and dated 17 June 2008, 312171E 6231888N.
32	Gas Monitoring Point - MB046		Gas Monitoring Point labelled "MB046" on map titled "Figure 2: Site plan showing the location of gas bores", prepared by CES and dated 17 June 2008, 312972E 6230327N.

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33	Gas Monitoring Point - MB047	Gas Monitoring Point labelled "MB047" on map titled "Figure 2: Site plan showing the location of gas bores", prepared by CES and dated 17 June 2008, 312975E 6230331N.
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P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

## *Water and land*

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Discharge to waters Overflow quality monitoring - MC1	Discharge to waters Overflow quality monitoring - MC1	Discharge Point at Mill Creek labelled as "1" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 312001E 6231750N.
3	Leachate quality monitoring - LD001		Surface Water Monitoring Point from Leachate Dam (LD001) labelled as "3" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 311987E 6231582N.
4	Groundwater quality monitoring - MB008		Groundwater Monitoring Point from MB008 labelled as "4" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 312877E 6230142N.
7	Groundwater quality monitoring - MB032		Groundwater Monitoring Point from MB032 labelled as "7" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 312013E 6231780N.
8	Groundwater quality monitoring - MB034		Groundwater Monitoring Point from MB034 labelled as "8" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 312015E 6231775N.



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16	Groundwater quality monitoring - MB305		Groundwater Monitoring Point from MB305 labelled as "16" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 311860E 6231217N.
17	Groundwater quality monitoring - MB306		Groundwater Monitoring Point from MB306 labelled as "17" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 311858E 6231220N.
18	Groundwater quality monitoring - MB033		Groundwater Monitoring Point from MB033 labelled as "18" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 312011E 6231775N.
19	Groundwater quality monitoring - MB035		Groundwater Monitoring Point from MB035 labelled as "19" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 312006E 6231771N.
20	Pumped Discharge from Sediment Dam 5 - DS002	Pumped Discharge from Sediment Dam 5 - DS002	Discharge Point from Sediment Dam 5 labelled as "20" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 312031E 6231701N.
21	Pumped Discharge from Stormwater Treatment Plant - DS001	Pumped Discharge from Stormwater Treatment Plant - DS001	Discharge Point from stormwater treatment plant adjacent to Sediment Dam 5 labelled as "21" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 312039E 6231730N.
22	Overflow from Sediment Dam 5 - OF001	Overflow from Sediment Dam 5 - OF001	Monitoring Point from Overflow of Sediment Dam (SD005) labelled as "22" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 312031E 6231701N.

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23	Sediment Dam 5 - SD005	Surface Water Monitoring Point from Sediment Dam (SD005) labelled as "23" on map titled "Lucas Heights Waste & Recycling Centre - Licence Monitoring Points" (Plan R46-310) prepared by WSN Environmental Solutions. 312000E 6231662N.
24	Groundwater quality monitoring - MB038	Groundwater Monitoring Point labelled "MB038" on map titled "Figure 2: Site plan showing the location of groundwater monitoring bores" in "Preliminary Groundwater Installation Report, Lucas Heights" (CES020510-WS-76-F) 312234E 6231718N
25	Groundwater quality monitoring - MB039	Groundwater Monitoring Point labelled "MB039" on map titled "Figure 2: Site plan showing the location of groundwater monitoring bores" in "Preliminary Groundwater Installation Report, Lucas Heights" (CES020510-WS-76-F) 312227E 6231717N
26	Groundwater quality monitoring - MB040	Groundwater Monitoring Point labelled "MB040" on map titled "Figure 2: Site plan showing the location of groundwater monitoring bores" in "Preliminary Groundwater Installation Report, Lucas Heights" (CES020510-WS-76-F) 312074E 6231713N
27	Groundwater quality monitoring - MB041	Groundwater Monitoring Point labelled "MB041" on map titled "Figure 2: Site plan showing the location of groundwater monitoring bores" in "Preliminary Groundwater Installation Report, Lucas Heights" (CES020510-WS-76-F) 312071E 6231707N
40	Leachate quality monitoring- LH1	Surface Water Monitoring Point from Leachate Dam LH1
41	Leachate flow monitoring - LH2 Leachate Flow Meter	Leachate Flow Monitoring Point within the LH2 leachate dam holding tanks compound.
42	Leachate flow monitoring - LH1 Leachate Flow Meter	Leachate Flow Monitoring Point located within the LH1 sump compound
43	Leachate flow monitoring - Harrington's Quarry Leachate Flow Meter	Leachate Flow Monitoring Point located at the second gate on Little Forest Road referred to as Harrington's Corner Gate.

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## 3 Limit Conditions

### L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

### L2 Concentration limits

L2.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.

L2.4 Water and/or Land Concentration Limits

#### POINT 1

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Conductivity	microsiemens per centimetre				1500
Dissolved Oxygen	milligrams per litre				6
Nitrogen (ammonia)	milligrams per litre				2.5
pH	pH				5.5-8.5
Phenol	milligrams per litre				0.32
TSS	milligrams per litre				50

#### POINT 20,21,22

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
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Nitrogen (ammonia)	milligrams per litre	2.5
TSS	milligrams per litre	50

L2.5 The licensee is taken not to have breached the licence total suspended solids concentration limits for Point 1 and Point 22 if:

- a) the overflow is caused by a rainfall event; and
- b) the licensee has taken all practical measures to avoid or minimise water pollution.

## L3 Waste

L3.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General solid waste (putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste storage Waste disposal (application to land)	NA
NA	General solid waste (non-putrescible)	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste storage Waste disposal (application to land)	NA
NA	Asbestos waste	As defined in Schedule 1 of the POEO Act, as in force from time to time.	Waste storage Waste disposal (application to land)	NA
T140	Tyres	The tyre has a diameter of 1.2 metres or more; and/or the tyre has been shredded or had its walls removed; and/or the tyre was delivered to the premises as part of a domestic load. For the purposes of this description: · Tyres are taken to be shredded only if the tyres are in	Waste storage Waste disposal (application to land)	Tyres stockpiled on the premises must not exceed fifty (50) tonnes of tyres at any one time.

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		pieces measuring no more than 250mm in any direction; and Domestic load means a load containing no more than 5 tyres having a diameter of less than 1.2 metres.		
NA	Leachate	Landfill leachate only generated at the premises known as "Harrington's Quarry" and "Lucas Heights 1" and conveyed via the leachate reticulation system to the Lucas Heights Leachate Treatment Plant	Waste processing (non-thermal treatment)	1200 kL/day
NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time	-	NA

Note: If the licence permits the disposal of asbestos waste, the licensee must comply with Clause 42 of the Protection of the Environment Operations (Waste) Regulation 2005.

L3.2 Waste must not be landfilled in Cell 5 (Stage 3) at the Premises until the EPA has provided written advice permitting the disposal of waste within it.

## L4 Potentially offensive odour

L4.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

## 4 Operating Conditions

### O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:

- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and

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b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

## **O2 Maintenance of plant and equipment**

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
- a) must be maintained in a proper and efficient condition; and
  - b) must be operated in a proper and efficient manner.

## **O3 Dust**

- O3.1 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

## **O4 Processes and management**

### **Enabling supervisory licensee to supervise and complying with directions**

- O4.1 The licensee must ensure that the holder of Environment Protection Licence No. 13384, the supervisory licence, has adequate access to the premises and records held at the premises in order to be able to ensure that the licensee receives only those types of wastes and in such quantities that do not exceed those permitted by this environment protection licence.
- O4.2 The licensee must ensure that the holder of Environment Protection Licence No. 13384, the supervisory licence, has adequate access to the premises and records held at the premises in order to be able to verify the annual returns prepared by the licensee of these premises.
- O4.3 The licensee must ensure that the holder of Environment Protection Licence No. 13384, the supervisory licence, has adequate access to the premises and records held at the premises in order to be able to ensure that the design, construction, extension and maintenance of all engineered features (eg. waste disposal cells, leachate and stormwater dams) of the premises being supervised are done in compliance with the conditions of the development approval and as further defined in conditions of this environment protection licence.

### **Control Entry to Premises**

- O4.4 The licensee must take all practicable steps to control entry to the premises.

## **O5 Waste management**

### **Incineration or Burning of any Waste**

- O5.1 There must be no incineration or burning of any waste at the premises.

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## Waste Recycling

- O5.2 The licensee must ensure that recycling facilities as much as practicable are provided for the following materials:
- a) Glass – clear, brown and green;
  - b) Paper and cardboard;
  - c) Batteries;
  - d) Sump engine oil;
  - e) Aluminium and steel cans; and
  - f) Reusable timber, firewood and green waste.
- O5.3 Recycling facilities at the premises must be clearly marked and be available for access by the public.

## Tyre Storage

- O5.4 The licensee must ensure that stockpiles of used, rejected or unwanted tyres (including shredded tyres and tyre pieces) are located in a clearly defined area.
- O5.5 The licensee must ensure that stockpiles of used, rejected or unwanted tyres (including shredded tyres and tyre pieces) are managed so as not to cause or to be likely to cause the spread of disease by vermin.
- O5.6 The licensee must ensure that measures are taken to prevent stockpiles of used, rejected or unwanted tyres (including shredded tyres and tyre pieces) from catching on fire.

## Covering of Waste

- O5.7 Cover material must be Virgin Excavated Natural Material.
- a) Daily cover  
Cover material must be applied to a minimum depth of 15 centimetres over all exposed landfilled waste prior to ceasing operations at the end of each day.
  - b) Intermediate cover  
Cover material must be applied to a depth of 30 centimetres over surfaces of the landfilled waste at the premises which are to be exposed for more than 90 days.
  - c) Cover material stockpile

At least two weeks cover material must be available at the premises under all weather conditions. This material may be won on site, or alternatively a cover stockpile must be maintained adjacent to the tip face.

## Disposal of Immobilised Waste

- O5.8 The licensee must cover the immobilised waste on the day of receipt.
- O5.9 The licensee must not dispose of immobilised waste which has disposal restrictions requiring that they may only be disposed of at general solid waste (putrescible and/or non-putrescible) landfills or restricted solid waste landfills, which have currently operating leachate management systems and which are licensed to receive that particular class of waste and that have licence conditions to receive waste subject to immobilisation approvals with this type of disposal restriction, other than in cells 2 and/or 3 in stage 5.

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## Uncovering of Landfilled Waste

- O5.10 The licensee must not carry out any activity that exposes previously landfilled waste at the premises, except as expressly permitted by a condition of this licence.
- O5.11 The licensee must carry out works in accordance with the document titled Odour Management Plan for Landfill Gas Extraction Systems provided with the letter received from Waste Service NSW dated 28 June 2002.

## Landfill Leachate

- O5.12 Landfill leachate must not be irrigated except as expressly permitted by a condition of this licence.
- O5.13 The licensee must not inject leachate back into the landfill waste.
- O5.14 Leachate must be disposed of to sewer or removed by tanker to a premises which may lawfully receive the leachate for treatment.

## Landfill Gas Oxidation

- O5.15 Except in emergency conditions or short periods of shutdowns the licensee must ensure that landfill gas generated by the disposal of waste and collected at the premises is treated by oxidation to carbon dioxide.

## O6 Other operating conditions

### Management of Collected Groundwater

- O6.1 The licensee must manage any groundwater extracted from groundwater depressurisation works in the same manner as leachate if the ammonia concentration in the groundwater is greater than 1 mg/L.

### Household Chemical Collection Program

- O6.2 Chemicals which have been collected in conjunction with a "Household Chemical Collection Program" must be stored in a secure and bunded location within the premises pending lawful off site disposal or recycling of these chemicals.

### Closure Plan

- O6.3 The licensee must prepare and submit to the EPA within twelve months prior to the last load of waste being landfilled, a closure plan in accordance with section 76 of the Protection of the Environment Operations Act 1997.

### Preventing Fires

- O6.4 All operations and activities occurring at the premises must be carried out in a manner that will prevent



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and minimise the risk of fire at the premises.

## Management of Surface Waters

O6.5 Surface waters must be diverted away from any area where waste is being or has been landfilled.

## 5 Monitoring and Recording Conditions

### M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:

- a) in a legible form, or in a form that can readily be reduced to a legible form;
- b) kept for at least 4 years after the monitoring or event to which they relate took place; and
- c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

- a) the date(s) on which the sample was taken;
- b) the time(s) at which the sample was collected;
- c) the point at which the sample was taken; and
- d) the name of the person who collected the sample.

M1.4 The licensee must record the date, duration and volume of any leachate discharge to surface water.

### M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Air Monitoring Requirements

**POINT 28,29,30,31,32,33**

Pollutant	Units of measure	Frequency	Sampling Method
Methane	percent by volume	Quarterly	Special Method 1

M2.3 Water and/ or Land Monitoring Requirements

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## POINT 1

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	microsiemens per centimetre	Special Frequency 1	Probe
Dissolved Oxygen	milligrams per litre	Special Frequency 1	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample
Total Phenolics	milligrams per litre	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample
Turbidity	nephelometric turbidity units	Special Frequency 1	Grab sample

## POINT 3,40

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	milligrams per litre	Yearly	Grab sample
Aluminium	milligrams per litre	Yearly	Grab sample
Arsenic	milligrams per litre	Yearly	Grab sample
Barium	milligrams per litre	Yearly	Grab sample
Benzene	milligrams per litre	Yearly	Grab sample
Benzo(a)pyrene	milligrams per litre	Quarterly	Grab sample
Cadmium	milligrams per litre	Yearly	Grab sample
Calcium	milligrams per litre	Yearly	Grab sample
Chloride	milligrams per litre	Yearly	Grab sample
Chromium (hexavalent)	milligrams per litre	Yearly	Grab sample
Chromium (total)	milligrams per litre	Yearly	Grab sample
Cobalt	milligrams per litre	Yearly	Grab sample
Conductivity	microsiemens per centimetre	Quarterly	Probe
Copper	milligrams per litre	Yearly	Grab sample
Ethyl benzene	milligrams per litre	Yearly	Grab sample
Fluoride	milligrams per litre	Yearly	Grab sample
Lead	milligrams per litre	Yearly	Grab sample
Magnesium	milligrams per litre	Yearly	Grab sample
Manganese	milligrams per litre	Yearly	Grab sample
Mercury	milligrams per litre	Yearly	Grab sample
Nitrate	milligrams per litre	Yearly	Grab sample
Nitrite	milligrams per litre	Yearly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Yearly	Grab sample
Organochlorine pesticides	milligrams per litre	Yearly	Grab sample
Organophosphate pesticides	milligrams per litre	Yearly	Grab sample
pH	pH	Yearly	Probe

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Phosphorus	milligrams per litre	Yearly	Grab sample
Polycyclic aromatic hydrocarbons	milligrams per litre	Quarterly	Grab sample
Potassium	milligrams per litre	Yearly	Grab sample
Sodium	milligrams per litre	Yearly	Grab sample
Sulfate	milligrams per litre	Yearly	Grab sample
Toluene	milligrams per litre	Yearly	Grab sample
Total dissolved solids	milligrams per litre	Yearly	Grab sample
Total organic carbon	milligrams per litre	Yearly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Quarterly	Grab sample
Total Phenolics	milligrams per litre	Yearly	Grab sample
Total suspended solids	milligrams per litre	Yearly	Grab sample
Xylene	milligrams per litre	Yearly	Grab sample
Zinc	milligrams per litre	Yearly	Grab sample

## POINT 4,7,8,16,17,18,19,24,25,26,27

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	milligrams per litre	Quarterly	Grab sample
Aluminium	milligrams per litre	Yearly	Grab sample
Arsenic	milligrams per litre	Yearly	Grab sample
Barium	milligrams per litre	Yearly	Grab sample
Benzene	milligrams per litre	Yearly	Grab sample
Benzo(a)pyrene	milligrams per litre	Quarterly	Grab sample
Cadmium	milligrams per litre	Yearly	Grab sample
Calcium	milligrams per litre	Quarterly	Grab sample
Chloride	milligrams per litre	Quarterly	Grab sample
Chromium (hexavalent)	milligrams per litre	Yearly	Grab sample
Chromium (total)	milligrams per litre	Yearly	Grab sample
Cobalt	milligrams per litre	Yearly	Grab sample
Copper	milligrams per litre	Yearly	Grab sample
Ethyl benzene	milligrams per litre	Yearly	Grab sample
Fluoride	milligrams per litre	Yearly	Grab sample
Lead	milligrams per litre	Yearly	Grab sample
Magnesium	milligrams per litre	Quarterly	Grab sample
Manganese	milligrams per litre	Yearly	Grab sample
Mercury	milligrams per litre	Yearly	Grab sample
Nickel	milligrams per litre	Yearly	Grab sample
Nitrate	milligrams per litre	Yearly	Grab sample
Nitrite	milligrams per litre	Yearly	Grab sample
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
Organochlorine pesticides	milligrams per litre	Yearly	Grab sample

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Organophosphate pesticides	milligrams per litre	Yearly	Grab sample
PCBs	milligrams per litre	Yearly	Grab sample
pH	pH	Quarterly	Probe
Polycyclic aromatic hydrocarbons	milligrams per litre	Quarterly	Grab sample
Potassium	milligrams per litre	Quarterly	Grab sample
Selenium	milligrams per litre	Yearly	Grab sample
Sodium	milligrams per litre	Quarterly	Grab sample
Standing Water Level	metres	Quarterly	In situ
Sulfate	milligrams per litre	Quarterly	Grab sample
Tetrachloroethene (tetrachloroethylene)	milligrams per litre	Yearly	Grab sample
Toluene	milligrams per litre	Yearly	Grab sample
Total dissolved solids	milligrams per litre	Quarterly	Grab sample
Total organic carbon	milligrams per litre	Quarterly	Grab sample
Total petroleum hydrocarbons	milligrams per litre	Quarterly	Grab sample
Total Phenolics	milligrams per litre	Yearly	Grab sample
Trichloroethylene	milligrams per litre	Yearly	Grab sample
Xylene	milligrams per litre	Yearly	Grab sample
Zinc	milligrams per litre	Yearly	Grab sample

## POINT 20,21

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen (ammonia)	milligrams per litre	Special Frequency 2	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 2	Grab sample

## POINT 22

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen (ammonia)	milligrams per litre	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample

## POINT 23

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen (ammonia)	milligrams per litre	Quarterly	Grab sample
Total suspended solids	milligrams per litre	Quarterly	Grab sample

M2.4 For the purposes of the table(s) above:

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- a) Special Frequency 1 means, if discharges occur, the collection of samples within 24 hours of discharge;
- b) Special Frequency 2 means, the collection of samples at minimal weekly intervals during discharge; and
- c) Special Method 1 means in accordance with the methods outlined in Benchmark 16 of EPA (1996) Environmental Guidelines: Solid Waste Landfills.

## M3 Testing methods - concentration limits

M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:

- a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
- b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or
- c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The *Protection of the Environment Operations (Clean Air) Regulation 2010* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

## M4 Weather monitoring

### Requirement to Monitor Meteorological Parameters

M4.1 The licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The applicant must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Rainfall	mm	Continuous	1 Hour	AM-4
Wind Speed @ 10 metres	m/s	Continuous	15 Minute	AM-2 & AM-4
Wind Direction @ 10 metres	Degrees	Continuous	15 Minute	AM-2 & AM-4
Temperature	Degrees Celsius	Continuous	15 Minute	AM-4

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Sigma theta @ 10 metres	Degrees	Continuous	15 Minute	AM-2 & AM-4
Solar Radiation	W/m2	Continuous	15 Minute	AM-4
Additional Requirements - Siting - Measurement				AM-1 & AM-4 AM-2 & AM-4

## M5 Recording of pollution complaints

- M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M5.2 The record must include details of the following:
- a) the date and time of the complaint;
  - b) the method by which the complaint was made;
  - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
  - d) the nature of the complaint;
  - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
  - f) if no action was taken by the licensee, the reasons why no action was taken.
- M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

## M6 Telephone complaints line

- M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M6.3 The preceding two conditions do not apply until 3 months after:
- a) the date of the issue of this licence or
  - b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

## M7 Requirement to monitor volume or mass

- M7.1 For each discharge point or utilisation area specified below, the licensee must monitor:
- a) the volume of liquids discharged to water or applied to the area;
  - b) the mass of solids applied to the area;

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c) the mass of pollutants emitted to the air;  
at the frequency and using the method and units of measure, specified below.

## POINT 41

Frequency	Unit of Measure	Sampling Method
Special Frequency 3	kilolitres	In line instrumentation

## POINT 42

Frequency	Unit of Measure	Sampling Method
Special Frequency 3	kilolitres	In line instrumentation

## POINT 43

Frequency	Unit of Measure	Sampling Method
Special Frequency 3	kilolitres	In line instrumentation

Note: Special Frequency 3 sampling requires a continuous inline flow meter with reporting of the total volume of leachate discharged quarterly.

## M8 Other monitoring and recording conditions

### Requirement to Monitor Landfill Gas

M8.1 The licensee must undertake quarterly surface landfill gas monitoring in accordance with the document titled "Landfill Surface Gas Monitoring Programme, Lucas Heights Waste and Recycling Centre" prepared by WSN Environmental Solutions and dated February 2006.

If the results of the monitoring indicate the presence of methane in excess of 500 ppm on the surface of the capped areas, the licensee must:

- a) notify the EPA within 24 hours; and
- b) submit to the EPA a proposed program to control these emissions.

The above quarterly surface landfill gas monitoring must be submitted to the EPA annually, accompanying the Annual Return.

M8.2 The licensee must undertake quarterly landfill gas accumulation monitoring in accordance with the document titled "Proposed Landfill Subsurface Gas and Accumulation Monitoring Program, Lucas Heights Waste and Recycling Centre" prepared by WSN Environmental Solutions and dated March 2006.

If the results of the monitoring indicate the presence of methane in excess of 1.25 % (v/v), the licensee must:

- a) notify the EPA within 24 hours; and
- b) submit to the EPA a proposed program to control these emissions.

The above quarterly landfill gas accumulation monitoring must be submitted to the EPA annually,

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accompanying the Annual Return.

## Requirement to Record Leachate Discharge Events

M8.3 The licensee must record the date, duration and volume of any leachate discharge to surface water.

## Requirement to Record Fires

- M8.4 The licensee must record the following data in relation to fires occurring at the premises:
- (a) time and date when the fire started;
  - (b) whether the fire was authorised by the licensee, and, if not, the circumstances which ignited the fire;
  - (c) the time and date that the fire burnt out or was extinguished;
  - (d) the location of fire (e.g. clean timber stockpile, putrescible garbage cell, etc);
  - (e) prevailing weather conditions at the time of the fire;
  - (f) observations made in regard to smoke direction and dispersion;
  - (g) the amount of waste that was combusted by the fire;
  - (h) action taken to extinguish the fire; and
  - (i) action taken to prevent a reoccurrence.

## 6 Reporting Conditions

### R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
- a) a Statement of Compliance; and
  - b) a Monitoring and Complaints Summary.

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

- R1.3 Where this licence is transferred from the licensee to a new licensee:
- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
  - b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
  - b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

- R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').



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- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
- a) the licence holder; or
  - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.
- R1.8 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.
- R1.9 Certification by supervisory licensee

The items specified in condition R1.8 must be signed by the holder of Environment Protection Licence No. 13384 – the supervisory licence.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

## **R2 Notification of environmental harm**

- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.
- R2.3 In the event that monitoring detects ammonia in groundwater at a concentration above 1 mg/L in any of the points 4, 7, 8, 16, 17, 18 and 19 the licensee must send written notification to the Manager Sydney Waste within 14 days of the monitoring results becoming available.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

## **R3 Written report**

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
- a) where this licence applies to premises, an event has occurred at the premises; or
  - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
- and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

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- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
- a) the cause, time and duration of the event;
  - b) the type, volume and concentration of every pollutant discharged as a result of the event;
  - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
  - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
  - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
  - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
  - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

## R4 Other reporting conditions

### Notification of Fires

- R4.1 The licensee must notify the details of the occurrence of all fires on the premises to the EPA in accordance with conditions R2.1 and R2.2 as soon as practical after becoming aware of the fire.

### Notification of Groundwater Contamination by Leachate and proposed remediation action

- R4.2 In the event that monitoring detects ammonia in groundwater at a concentration above 1 mg/L in any of the points 4, 7, 8, 16, 17, 18 and 19 the licensee must send written notification to the EPA within 14 days of the monitoring results becoming available.

## 7 General Conditions

### G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

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## 8 Special Conditions

### E1 Requirement To Maintain Financial Assurance

- E1.1 (a) A financial assurance in the form of an unconditional and irrevocable and on demand guarantee from a bank, building society or credit union operating in Australia as “Authorised Deposit-taking Institutions” under the Banking Act 1959 of the Commonwealth of Australia and supervised by the Australian Prudential Regulatory Authority (APRA) must be provided to the EPA by the 30 September 2011. The financial assurance must be in favour of the EPA in the amount of one million dollars (\$1,000,000). The financial assurance is required to secure or guarantee funding for works or programs required by or under this licence. The financial assurance must contain a term that provides that any monies claimed can be paid to the EPA or, at the written direction of the EPA, to any other person.

Note: The Licensee provided a financial assurance in the amount of one million two hundred thousand dollars (\$1,200,000) to the EPA on 7 September 2011. The EPA returned the financial assurance to the Licensee on 17 September 2012.

(b) A financial assurance in the form of an unconditional and irrevocable and on demand guarantee from a bank, building society or credit union operating in Australia as “Authorised Deposit-taking Institutions” under the Banking Act 1959 of the Commonwealth of Australia and supervised by the Australian Prudential Regulatory Authority (APRA) must be provided to the EPA by 30 September 2012. The financial assurance must be in favour of the EPA for a total amount to be held by the EPA of two million six hundred and forty four thousand dollars (\$2,644,000). The financial assurance is required to secure or guarantee funding for works or programs required by or under this licence. The financial assurance must contain a term that provides that any monies claimed can be paid to the EPA or, at the written direction of the EPA, to any other person.

Note that this total financial assurance is inclusive of that required in E1.1a)

Note: The Licensee provided a financial assurance in the amount of two million six hundred and forty four thousand dollars (\$2,644,000) to the EPA on 17 September 2012.

(c) A financial assurance in the form of an unconditional and irrevocable and on demand guarantee from a bank, building society or credit union operating in Australia as “Authorised Deposit-taking Institutions” under the Banking Act 1959 of the Commonwealth of Australia and supervised by the Australian Prudential Regulatory Authority (APRA) must be provided to the EPA by 30 September 2013. The financial assurance must be in favour of the EPA for a total amount to be held by the EPA of four million six hundred and forty four thousand dollars (\$4,644,000). The financial assurance is required to secure or guarantee funding for works or programs required by or under this licence. The financial assurance must contain a term that provides that any monies claimed can be paid to the EPA or, at the written direction of the EPA, to any other person.

Note that the total financial assurance is inclusive of those required in E1.1a) and E1.1b)

(d) The licensee must provide to the EPA, along with the original counterpart guarantees, confirmation in writing that the financial institution providing the guarantees is subject to supervision by the Australian Prudential Regulatory Authority (APRA).

- E1.2 The financial assurance must be maintained during the operation of the facility and thereafter until such

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time as the EPA is satisfied the premises are environmentally secure.

- E1.3 The financial assurance must be replenished by the full amount claimed or realised if the EPA has claimed on or realised the financial assurance or any part of it to undertake a work or program required to be carried out by the licence which has not been undertaken by the licence holder.
- E1.4 The EPA may require an increase in the amount of the financial assurance at any time as a result of reassessment of the total likely costs and expenses of rehabilitation of the premises.
- E1.5 The licensee must provide to the EPA the original counterpart guarantee within five working days of the issue of:
  - (a) the financial assurance required by condition E1.1; or
  - (b) the adjusted financial assurance as required by condition E1.3 and E1.4

## **E2 Environmental Obligations of Licensee (Works and Programs)**

- E2.1 While the licensee's premises are being used for the purpose to which the licence relates, the licensee must:
  - (a) Clean up any spill, leak or other discharge of any waste(s) or other material(s) as soon as practicable after it becomes known to the licensee or to one of the licensee's employees or agents.
  - (b) In the event(s) that any liquid and non-liquid waste(s) is unlawfully deposited on the premises, such waste(s) must be removed and lawfully disposed of as soon as practicable or in accordance with any direction given by the EPA.
  - (c) Provide all monitoring data as required by the conditions of this licence or as directed by the EPA.
- E2.2 In the event of an earthquake, storm, fire, flood or any other event where it is reasonable to suspect that a pollution incident has occurred, is occurring or is likely to occur, the licensee (whether or not the premises continue to be used for the purposes to which the licence relates) must:
  - (a) Make all efforts to contain all firewater on the licensee's premises;
  - (b) Make all efforts to control air pollution from the licensee's premises;
  - (c) Make all efforts to contain any discharge, spill or run-off from the licensee's premises;
  - (d) Make all efforts to prevent flood water entering the licensee's premises;
  - (e) Remediate and rehabilitate any exposed areas of soil and/or waste;
  - (f) Lawfully dispose of all liquid and solid waste(s) stored on the premises that is not already securely disposed of;
  - (g) At the request of the EPA monitor groundwater beneath the licensee's premises and its potential to migrate from the licensee's premises;
  - (h) At the request of the EPA monitor surface water leaving the licensee's premises; and
  - (i) Ensure the licensee's premises is secure.
- E2.3 After the licensee's premises cease to be used for the purpose to which the licence relates or in the event that the licensee ceases to carry out the activity that is the subject of this licence, that licensee must
  - (a) remove and lawfully dispose of all liquid and non-liquid waste stored on the licensee's premises;
  - (b) rehabilitate the site, including conducting an assessment of and if required remediation of any site contamination.

## **E3 EPA May Claim On a Financial Assurance**

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- E3.1 The EPA may claim on a financial assurance under s303 of the POEO Act if a licensee fails to carry out any work or program required to comply with the conditions of this licence.

## **E4 Construction of Cell 5 (Stage 3)**

- E4.1 The licensee must construct Cell 5 (Stage 3) in accordance with the GHD prepared design basis Memorandum (Job no: 21/20508 dated 19 November 2012), Detailed Drawings for tender (21-20508 series) dated 14 November 12, Specification (21/20508/182575) and Construction Quality Assurance Plan (21/20508/182994).

The systems installed in Cell 5 (Stage 3) must comprise and not be limited to the specified:

- (a) groundwater collection system;
- (b) compacted clay liner on the floor and sidewalls;
- (c) HDPE membrane on the floor and partway up the sidewalls;
- (d) aggregate leachate drainage layer over the entire floor; and
- (e) geosynthetics.

- E4.2 The licensee must submit to the EPA a Construction Quality Assurance Report prepared in accordance with the Construction Quality Assurance Plan (21/20508/182994). This report must comment on whether the respective systems were installed in accordance with their respective specifications.

## **E5 Alternative Daily Cover trial - polymer and fibre based and/or foam based product**

- E5.1 The licensee may conduct a trial using the Alternative Daily Cover ("ADC") for a twelve (12) month period. The ADC operational trial:
- a) shall commence from the first day ADC is utilised at the premises;
  - b) may use polymer and fibre based and/or foam based product specifically developed to cover waste at the premises as specified in the report titled "Trial proposal for use of alternative daily cover material (ADC) at Lucas Heights Waste & Recycling Centre" prepared by WSN Environmental Solutions, letter titled "SITA Australia – Lucas Heights Landfill – Licence No 5065 – Application for Extension of Alternative Daily Cover (ADC) Trial" dated 19 December 2012; and
  - c) the trial does not include intermediate cover.
- E5.2 The licensee must provide a written report to the Manager Waste Operations, Environment Protection Authority PO Box A290 Sydney South NSW 1232, within 30 days of the end of the ADC operational trial. The report must include, but not limited to:
- a) a qualitative assessment of the effectiveness of the ADC in meeting the objectives of Benchmark Techniques 33 of the EPA's Environmental Guidelines: Solid Waste Landfills (1996); and
  - b) a qualitative assessment of the in-field practical effectiveness of using ADC.

## **E6 Alternative Daily Cover Trial - Tarpomatic**

- E6.1 The licensee may conduct a trial using the Alternative Daily Cover ("ADC") for a twelve (12) month period. The ADC operational trial:
- a) shall commence from the first day ADC is utilised at the premises;

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b) may use tarpomatic, a geotextile fabric cover specifically developed to cover waste at the premises as specified in the report titled "Use of tarpomatic system as an alternative daily cover at Tamala Park: Environmental Assessment Report" prepared by HSE Control Pty Ltd and dated 23 February 2010; and

c) the trial does not include intermediate cover.

- E6.2 The licensee must provide a written report to the Manager Waste Operations, Environment Protection Authority PO Box A290 Sydney South NSW 1232, within 30 days of the end of the ADC operational trial. The report must include, but not limited to:
- a) a qualitative assessment of the effectiveness of the ADC in meeting the objectives of Benchmark Techniques 33 of the EPA's Environmental Guidelines: Solid Waste Landfills (1996); and
  - b) a qualitative assessment of the in-field practical effectiveness of using ADC.

## **E7 Construction of Emergency Leachate Storage Dam**

- E7.1 The licensee must construct an Emergency Leachate Storage Dam in accordance with the GHD Australia report titled "Emergency Leachate Storage Dam Design Basis" dated 28 November 2013 (Job no. 21/20508).

The works installed in the Emergency Leachate Storage Dam must comprise of a:

- (a) 2.5mm HDPE geomembrane liner;
- (b) compacted clay liner; and
- (c) groundwater interception layer.

- E7.2 Within 4 weeks of completion of construction of the Emergency Leachate Storage Dam, the licensee must submit to the EPA a Construction Quality Assurance Report demonstrating that the works were installed in accordance with the GHD Australia report titled "Emergency Leachate Storage Dam Design Basis" dated 28 November 2013 (Job no. 21/20508) and the quality assurance procedures therein.

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## Dictionary

### General Dictionary

<b>3DGM [in relation to a concentration limit]</b>	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
<b>Act</b>	Means the Protection of the Environment Operations Act 1997
<b>activity</b>	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
<b>actual load</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>AM</b>	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
<b>AMG</b>	Australian Map Grid
<b>anniversary date</b>	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
<b>annual return</b>	Is defined in R1.1
<b>Approved Methods Publication</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>assessable pollutants</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>BOD</b>	Means biochemical oxygen demand
<b>CEM</b>	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
<b>COD</b>	Means chemical oxygen demand
<b>composite sample</b>	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
<b>cond.</b>	Means conductivity
<b>environment</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>environment protection legislation</b>	Has the same meaning as in the Protection of the Environment Administration Act 1991
<b>EPA</b>	Means Environment Protection Authority of New South Wales.
<b>fee-based activity classification</b>	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
<b>general solid waste (non-putrescible)</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997



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<b>flow weighted composite sample</b>	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
<b>general solid waste (putrescible)</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>grab sample</b>	Means a single sample taken at a point at a single time
<b>hazardous waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>licensee</b>	Means the licence holder described at the front of this licence
<b>load calculation protocol</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>local authority</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>material harm</b>	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
<b>MBAS</b>	Means methylene blue active substances
<b>Minister</b>	Means the Minister administering the Protection of the Environment Operations Act 1997
<b>mobile plant</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>motor vehicle</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>O&amp;G</b>	Means oil and grease
<b>percentile [in relation to a concentration limit of a sample]</b>	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
<b>plant</b>	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
<b>pollution of waters [or water pollution]</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>premises</b>	Means the premises described in condition A2.1
<b>public authority</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>regional office</b>	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
<b>reporting period</b>	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
<b>restricted solid waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>scheduled activity</b>	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
<b>special waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>TM</b>	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .



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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Mr John Sparkes

Environment Protection Authority

(By Delegation)

Date of this edition: 12-April-2001

# Environment Protection Licence

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## End Notes

- 1 Licence varied by notice 1011080, issued on 10-Apr-2002, which came into effect on 05-May-2002.
- 2 Licence varied by notice 1018739, issued on 04-Jul-2002, which came into effect on 04-Jul-2002.
- 3 Licence varied by notice 1019721, issued on 30-Aug-2002, which came into effect on 30-Aug-2002.
- 4 Licence fee period changed by notice 1026075 on 25-Mar-2003.
- 5 Licence varied by notice 1034582, issued on 17-Jun-2004, which came into effect on 25-Jun-2004.
- 6 Licence varied by notice 1041728, issued on 22-Oct-2004, which came into effect on 25-Oct-2004.
- 7 Licence varied by notice 1044509, issued on 15-Feb-2005, which came into effect on 16-Feb-2005.
- 8 Licence varied by notice 1044945, issued on 22-Mar-2005, which came into effect on 22-Mar-2005.
- 9 Licence varied by notice 1045900, issued on 22-Jun-2005, which came into effect on 17-Jul-2005.
- 10 Licence varied by notice 1056254, issued on 02-Mar-2006, which came into effect on 18-Mar-2006.
- 11 Licence varied by notice 1063380, issued on 17-Aug-2006, which came into effect on 17-Aug-2006.
- 12 Licence varied by notice 1073111, issued on 13-Feb-2008, which came into effect on 13-Feb-2008.
- 13 Licence varied by notice 1084039, issued on 26-Mar-2008, which came into effect on 26-Mar-2008.
- 14 Licence varied by notice 1084652, issued on 22-Apr-2008, which came into effect on 22-Apr-2008.
- 15 Licence varied by Change to schedule 1, issued on 14-May-2008, which came into effect on 14-May-2008.
- 16 Licence varied by notice 1090406, issued on 03-Nov-2008, which came into effect on 03-Nov-2008.
- 17 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 18 Licence varied by notice 1095614, issued on 19-Dec-2008, which came into effect on 19-Dec-2008.

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| 19 | Licence varied by notice 1096953, issued on 21-Jan-2009, which came into effect on 21-Jan-2009.                 |
| 20 | Licence varied by notice 1101542, issued on 05-Jun-2009, which came into effect on 05-Jun-2009.                 |
| 21 | Licence varied by notice 1119590, issued on 24-Dec-2010, which came into effect on 24-Dec-2010.                 |
| 22 | Licence varied by notice 1123930, issued on 31-Jan-2011, which came into effect on 31-Jan-2011.                 |
| 23 | Licence transferred through application 146428, approved on 01-Mar-2011, which came into effect on 01-Mar-2011. |
| 24 | Licence varied by notice 1126549, issued on 31-Mar-2011, which came into effect on 31-Mar-2011.                 |
| 25 | Licence varied by notice 1127070, issued on 13-Jul-2011, which came into effect on 13-Jul-2011.                 |
| 26 | Licence varied by notice 1510954 issued on 16-Jan-2013  |
| 27 | Licence varied by notice 1517539 issued on 21-Oct-2013  |
| 28 | Licence varied by notice 1518984 issued on 24-Dec-2013  |