



DOC16/285990-01

Mr Chris Ritchie  
Director, Industry Assessments  
NSW Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

**STANDARD POST AND EMAIL**

5 August 2016

Dear Mr Ritchie

**Suez Recycling and Recovery Pty Ltd  
State Significant Development Application - SSD 14\_6835  
Lucas Heights Landfill and Resource Recovery Expansion  
General Terms of Approval and Draft Environment Protection Licence Conditions**

I refer to the proposed landfill and resource recovery expansion at New Illawarra Road, Lucas Heights (SSD 14\_6835) that was placed on public exhibition between 9 November and 18 December 2015 (the "Project"). The joint applicants for the project are Suez Recycling and Recovery Pty Ltd and Sutherland Shire Council (the "proponent"). The EPA notes that Sita Australia Pty Ltd rebranded to Suez Recycling and Recovery Pty Ltd in March 2016.

The NSW Department of Planning and Environment ("Planning") requested the Environment Protection Authority ("EPA") make a submission in relation to this project. The proposal submission documents includes the draft Operational Environmental Management Plans and the Environmental Impact Statement dated October 2015 ("the EIS") in support of the project. The EPA reviewed the EIS and submitted a response to Department of Planning and Environment ("DPE") on 22 December 2015.

The EPA agreed to meet with Suez on 8 February 2016 and both proponents on 6 May 2016 to clarify the comments and information requested by the EPA in its 22 December 2015 response.

**Proponents Response to Submissions**

On 9 June 2016 Planning sent the EPA the "*Response to Submissions and Preferred Project Report*" prepared by Suez ("RTS"). The EPA has reviewed the RTS and based on the information set out in the EIS and RTS, provides recommended Conditions of Approval for your consideration in Attachment A. Draft environment protection licence conditions are provided in Attachments B, C, D and E.

### **Air Quality and Odour - Comments**

The EPA reviewed the Air Quality Assessment dated August 2015 submitted as Appendix G of the EIS and advised that the assessment does not adequately characterise the risk of odour impacts from the proposed development. Technical and general comments were provided in response to the EIS which the proponent subsequently addressed in the RTS. The EPA considers the response to submissions ("RTS") satisfactorily addresses all issues, to enable provision of recommended conditions of approval.

### **Environment Protection Licence**

The EPA advises that should Planning approve the proposal, the proponent will need to apply to the EPA for a variation to Environment Protection Licence ("EPL") number 5065 and new environment protection licences for the Garden Organics ("GO") facility and the Advanced Resource Recovery Technology ("ARRT") Facility pursuant to Schedule 1 of the *Protection of the Environment Operations Act 1997* ("POEO Act"). Alternately, the proponent may apply to the EPA to vary EPL 5065 to include the new GO facility and the ARRT facility on that licence.

Under the *Protection of the Environment Operations (Waste) Regulation 2014* ("Waste Regulation"), facilities that store, recover, recycle or process waste in the regulated area are liable for the waste levy beginning 1 August 2015. One of the triggers for payment of the levy is if waste at a facility is stockpiled above the Authorised Amount. This Authorised Amount would apply to the ARRT if approved. The Authorised Amount would be determined by the EPA and required as a condition of the licence. The waste levy liability does not apply to Premises that compost only.

The proponent should also be made aware that, consistent with provisions under Part 9.4 of the POEO Act, any environment protection licence issued by the EPA in relation to a waste facility will require the provision of a financial assurance. The amount and form of the assurance would be determined by the EPA and required as a condition of the licence.

Finally, if consent is granted by DPE and the EPA issues environment protection licences, the proponent will have to prepare, test and implement a Pollution Incident Response Management Plan for each facility in accordance with Section 153A of the POEO Act.

If you have any questions in relation to this matter, please contact myself on 9995 5646 or Sally Bowers on 9995 5736.

Yours sincerely



**Trevor Wilson**  
**Unit Head - Waste Compliance**  
**Environment Protection Authority**

Encl.

Attachment A – Comments and Recommended Conditions of Approval

Attachment B – Draft new environment protection licence conditions – Landfill (EPL 5065)

Attachment C – Draft environment protection licence conditions – Garden Organics (GO)

Attachment D – Draft environment protection licence conditions – Advanced Resource Recovery Technology (ARRT) Facility

Attachment E – Draft environment protection licence conditions - General

## **Attachment A**

### **EPA – Comments and Recommended Conditions of Approval**

#### **Lucas Heights Landfill and Resource Recovery Expansion - SSD 14\_6835**

#### **THE PROPOSAL**

Suez Recycling and Recovery Pty Ltd (“Suez”) and Sutherland Shire Council (“the proponents”) are jointly seeking approval to change the existing landfill and construct additional processing facilities at Lucas Heights Resource Recovery Park located on New Illawarra Road, Lucas Heights, NSW (Lot 3 DP 1032102, Lot 101 DP 1009354, Lot 2 DP 605077) in the Sutherland Local Government Area. The proposal involves:

- **Re-profiling the existing landfill** to provide an additional 8.3 million cubic metres of landfill capacity and extend the life of the landfill from 2025 to 2037 (12 extra years);
- **Increase the approved quantity of waste landfilled** from 575,000 to 850,000 tonnes per year;
- **Relocate the existing garden organics (GO) facility** and increase capacity from 55,000 to 80,000 tonnes of garden waste per year;
- **Construct and operate a fully enclosed advanced resource recovery technology (ARRT)** facility to recover resources from up to 200,000 tonnes of general solid waste per year; and
- **Rehabilitate the landfill post-closure** to create 124 hectares of parkland for future community uses.

## **Attachment A**

### **General Recommended Conditions of Approval for the Resource Recovery Park (“LHRRP”)**

#### **1. a Hours of Operations**

<b>Activity</b>	<b>Day</b>	<b>Hours of Operation</b>
LHRRP waste receival	Monday – Friday	6am – 5pm
	Saturday – Sunday	8am – 5pm
LHRRP construction	Monday – Friday	7am – 5pm
	Saturday – Sunday	8am – 5pm
Landfilling and GO facility operations	Monday – Friday	6am – 5pm
	Saturday – Sunday	8am – 5pm
Other landfilling operations	Monday – Sunday	Anytime
Other GO facility operations	Monday - Sunday	Anytime
ARRT facility operations	Monday – Sunday	Anytime

“Other landfilling operations” permitted anytime includes only security guard patrol, machinery maintenance and/or repairs, site infrastructure maintenance and/or repairs (landfill gas and leachate), and emergency management activities related to site safety, emergency repairs and site infrastructure repairs.

“Other GO facility operations” permitted anytime includes only repair works, machinery maintenance and repairs, loading bunkers, final product preparation manufacture (but does not include shredding) and emergency management activities related to site safety, emergency repairs and site infrastructure repairs. For clarity, unloading bunkers is only permitted between the hours of operations listed under “Landfilling and GO facility operations”.

- a. The Proponent shall not receive more than:
  - 850,000 tonnes of general solid waste (putrescible and non-putrescible) and asbestos waste per year on site for landfill disposal; and
  - 10,000 tonnes of general solid waste (non-putrescible) and batteries per year on site at the Resource Recovery Centre and waste collection point.
  - 80,000 tonnes of garden and wood waste per year and 2,000 tonnes of manure at the Garden Organics (GO) facility.
  - 200,000 tonnes of general solid waste (putrescible and non-putrescible) per year including 10,000 tonnes of biosolids at the Advanced Resource Recovery Technology (ARRT) facility.
- b. The facility must be designed and operated to comply with section 120 of the *Protection of the Environment Operations Act 1997*. Section 120 of the Act prohibits the pollution of waters.
- c. The facility must be designed and operated to comply with section 129 of the *Protection of the Environment Operations Act 1997*.
- d. The facilities must be maintained in a condition which prevents the emission of dust from the premises.

- e. Stormwater from all areas of the premises must be controlled and diverted through appropriate erosion and sediment control/pollution control measures or structures.
- f. Upon the cessation of operations at the site in 2037, the Proponent shall decommission the project, rehabilitate the site and convert it to community parkland by 2039 to the satisfaction of the Director-General.
- g. The Proponent shall prepare and implement a Rehabilitation and Closure Plan for the project to the satisfaction of the Director-General. This plan must:
  - Be prepared by a suitably qualified and experienced expert, in consultation with the EPA;
  - Submitted to the Director-General for approval six months prior to the last load of waste being received at the site;
  - Define the objectives and criteria for rehabilitation and closure;
  - Describe the measures to be implemented to achieve the specified objectives and criteria for rehabilitation and closure;
  - Describe how the performance of these measures will be monitored over time.

## 2. Air Quality and Odour - Recommended Conditions of Approval

- a. The proponent must prepare and implement an Air Quality and Odour Management Plan for the site. For all emissions sources at the site the management plan must include, but is not limited to:
  - List of all emission sources across the LHRRP;
  - Key performance indicator(s);
  - Monitoring method(s);
  - Location, frequency and duration of monitoring;
  - Record Keeping;
  - Response mechanisms; and
  - Compliance reporting

## 3. Noise - Recommended Conditions of Approval

- a. Noise generated at the premises must not exceed the noise limits in the Table below. The Receiver locations have been taken from Table 2.1 of the *Lucas Heights Resource Recovery Park Project - Noise Assessment* prepared by GHD (Ref 21\23482 Rev 8 dated 3 August 2015).

Location	NOISE LIMITS dB(A)			
	Day L <sub>Aeq</sub> (15 minute)	Evening L <sub>Aeq</sub> (15 minute)	Night L <sub>Aeq</sub> (15 minute)	Night L <sub>A1</sub> (1 minute)
<i>R1 - Engadine</i>	35	35	35	45
<i>R2 – Barden Ridge</i>	35	35	35	45
<i>R3 – Menai</i>	35	35	35	45
<i>R6 - Gandangara</i>	37	37	37	45
<i>R7 – Gandangara North</i>	35	35	35	45

**b.** For the purpose of condition 3a:

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays.
- Evening is defined as the period 6pm to 10pm.
- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.

**c.** The noise limits set out in condition 3a apply under all meteorological conditions except for the following:

- i) Wind speeds greater than 3 metres/second at 10 metres above ground level.
- ii) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- iii) Stability category G temperature inversion conditions.

**d.** For the purposes of condition 3c:

- i) Data recorded by a meteorological station installed on site must be used to determine meteorological conditions; and
- ii) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.

**e.** To determine compliance:

- i) with the  $L_{eq(15 \text{ minute})}$  noise limits in condition 3a, the noise measurement equipment must be located:
  - approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or
  - within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable
  - within approximately 50 metres of the boundary of a National Park or a Nature Reserve.
- ii) with the  $L_{A1(1 \text{ minute})}$  noise limits in condition 3a, the noise measurement equipment must be located within 1 metre of a dwelling façade.
  - with the noise limits in condition 3a, the noise measurement equipment must be located:
    - at the most affected point at a location where there is no dwelling at the location; or
    - at the most affected point within an area at a location prescribed by conditions e(i) or e(ii).

**f.** A non-compliance of condition 3a will still occur where noise generated from the premises in excess of the appropriate limit is measured:

- at a location other than an area prescribed by conditions e(i) or e(ii). and/or
  - at a point other than the most affected point at a location.
- g.** For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

### **Requirement to Monitor Noise**

- h.** To assess compliance with Condition 3a, attended noise monitoring must be undertaken in accordance with Conditions 3e and:
- a) at each one of the locations listed in Condition 3a;
  - b) occur annually in a reporting period;
  - c) occur during each day, evening and night period as defined in the NSW Industrial Noise Policy for a minimum of:
    - 1.5 hours during the day;
    - 30 minutes during the evening; and
    - 1 hour during the night.
  - d) occur for three consecutive operating days.

### **Reporting Conditions**

- i.** A noise compliance assessment report must be submitted to the EPA within 30 days of the completion of the yearly monitoring. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include:
- a) an assessment of compliance with noise limits presented in Condition 3a; and
  - b) an outline of any management actions taken within the monitoring period to address any exceedences of the limits contained in Condition 3a.

### **Additions to Definition of Terms of the licence**

- NSW Industrial Noise Policy - the document entitled "New South Wales Industrial Noise Policy published by the Environment Protection Authority in January 2000."
  - Noise – 'sound pressure levels' for the purposes of conditions 3a to 3i.
- j.** The proponent must install a meteorological weather station so as to be capable of continuously monitoring the parameters: wind direction, speed, sigma theta, rainfall and relative humidity

## **Recommended Conditions of Approval for the Landfill**

### **4. Preparation for waste disposal**

- a. Areas to be reprofiled must be prepared and managed in accordance with the process detailed in section 7.2.2 of the Response to Submissions dated June 2016. Any changes to this procedure must be approved in writing by the EPA.
- b. The reprofiling of the landfill can only occur in the area identified on Figure E.3 (dated 28 May 2015) in section 2.2 of the Response to Submissions dated June 2016.
- c. A maximum area of up to 1 hectare of existing intermediate cover or 2 hectares of existing final capped cover may be stripped of cover in advance of landfilling to form the "Prepared Surface". The Prepared Surface must have a minimum depth of 300mm.

### **5. Air Quality and Odour**

- a. Prior to commencement of the proposed landfilling on top of existing waste cells, the proponent must conduct an odour audit to validate the odour reductions outlined within the Environmental Impact Statement for the existing landfill have been achieved. The odour audit must include the collection and analysis of odour samples in accordance with the *Approved Methods for Sampling and Analysis of Air Pollutants in NSW* (or as updated). Where reductions are not being achieved, the identification of mitigation measures with a timeline for implementation must be nominated.

### **6. Water**

- a. Periodic reviews must be undertaken of the leachate water balance model against ongoing monitoring of leachate extraction volumes to provide calibration of these predicted results.

### **7. Gas and Leachate management**

- a. A dual gas/leachate management trench must be constructed near the perimeter of the reprofiling area to intercept sideways movement of leachate and provide additional extraction points. The purpose designed trench must consist of a nominally 1.5-2 metre deep trench within the existing waste mass backfilled with site generated crushed sandstone and perforated pipe. The final design must be approved by the EPA prior to construction.
- b. Extraction risers must be located along the length of the trench, to allow leachate to be extracted and transferred to the existing leachate ring main. A detailed design of the system must be undertaken prior to installation and must include consideration of predicted leachate flows, settlement and strength requirements. A construction environmental management plan must be prepared by a suitably qualified person to manage potential impacts to surface water during the installation of the system.
- c. The landfill gas field infrastructure must be retained and operating at the premises, including the Prepared Surface, as much as practicable.
- d. To improve the detection of leachate in groundwater systems to the north (and down gradient) of the Premises, the Proponent must re-establish historic groundwater bores BH31, MB021, MB022 and BH24. The monitoring regime is to be designed in conjunction with the EPA.



## **Recommended Conditions of Approval for the Garden Organics Facility (Compost)**

### **8. Air Quality and Odour**

- a. Within 6 (six) months of the Garden Organic commencing operations, the proponent must conduct a post commissioning odour audit of these facilities. The audit must:
  - Validate the odour data utilised within the Environment Impact Statement through the collection and analysis of odour samples in accordance with the *Approved Methods for Sampling and Analysis of Air Pollutants in NSW* (or as updated);
  - Validate the efficiencies of the odour controls, specifically the covers utilised for the active composting stage of the Garden Organics;
  - Validate the odour data for freshly turned material;
  - Demonstrate that the final design achieves an equivalent or better performance than stated within the Environmental Impact Statement. Any dispersion modelling required to demonstrate this must be conducted in accordance with the *Approved Methods for Modelling and Assessment of Air Pollutants in NSW*;
  - Identify any additional mitigation measures where odour performances significantly differ from that stated within the Environmental Impact Statement, and include a timeline for implementation.

### **9. Water**

- a. All water that comes in contact with waste must be managed as leachate. Leachate may only be reused in the composting process onsite or disposed to sewer in accordance with Trade Waste Agreement requirements.
- b. Consideration will be given to managing surface water from roof and breathable membrane covers as stormwater and discharged to Mill Creek. A detailed design must be submitted to the EPA for approval which demonstrates that the surface water run-off from the roof and breathable membrane covers does not come into contact with waste. If approved by the EPA additional monitoring points must be installed to monitor the water quality discharged from the GO facility to Mill Creek.
- c. Excess water collected in the leachate dams during high rainfall periods must be transported offsite and disposed of lawfully.

## **Recommended Conditions of Approval for the Advanced Resource Recovery Technology (AART) Facility**

### **10. Biofilter and pre-treatment Pre Commissioning Study**

Should approval for the ARRT facility be granted, the EPA strongly recommends that the proponent be required to appoint an independent odour expert to verify the performance of the biofilter and pre-treatment.

The EPA strongly recommends the following as conditions of approval:

- a. Prior to commencement of operations, a report must be submitted to the Director General that includes the final design parameters and actual stack parameters for the biofilter and pre-treatment.
- b. Prior to commencement of operations, the proponent must appoint an independent recognised odour control specialist to review the odour control system and odour management plan in conjunction with the EPA. The proponent must provide the Director General with a written report that includes a review and approval of the odour control system, and the odour management plan that has been produced by a recognised odour control specialist.

### **11. Air Quality and Odour**

- a. All waste receipt, processing, storage and dispatch operations associated with the ARRT must be completely enclosed within sealed buildings that are operated under negative pressure.
- b. All air captured through the building(s) associated with the ARRT must be treated through a biofilter and appropriate pre-treatment prior to being discharged to atmosphere.
- c. Design and construction provisions for the ARRT building to be designed by a suitably qualified person and include both a biofilter and appropriate pre-treatment/post treatment.
- d. The point source discharge from the biofilter must be designed to achieve those discharge parameters outlined within the Environment Impact Statement (as minimum).
- e. The biofilter must be designed to achieve a maximum odour emission concentration of 250 OU/m<sup>3</sup> at discharge. Where 250 OU/m<sup>3</sup> can't be achieved additional mitigation measures must be proposed and implemented in a timeframe approved by DPE.
- f. In consultation with the EPA an appropriate pre-treatment to the biofilter must be designed and constructed by a suitably qualified person. This plant must be fully operational at the commissioning of the ARRT.

### **Post commissioning odour audit**

- g. Within 6 weeks of commencement of operations and again after 6 months of operation, the proponent must conduct a post commissioning odour audit of the AART. The audit must:
  - Validate the odour data utilised within the Environment Impact Statement through the collection and analysis of odour samples in accordance with the *Approved Methods for Sampling and Analysis of Air Pollutants in NSW* (or as updated);
  - Validate the efficiencies of the odour controls, including the Biofilter(s) and pre-treatment;
  - Demonstrate that the final design achieves an equivalent or better performance than stated within the Environmental Impact Statement. The dispersion modelling required to demonstrate this must be conducted in accordance with the *Approved Methods for Modelling and Assessment of Air Pollutants in NSW*;
  - Identify and implement any additional mitigation measures where odour performances significantly differ from that stated within the Environmental Impact Statement, and include a timeline for implementation of identified improvements.

## 12. Air Quality and Odour Management Plan

- a. Prior to commencement of operations, an Air Quality and Odour Management Plan for the facility must be developed and implemented in consultation with a recognised independent odour control specialist and the EPA.
- b. The Air Quality and Odour Management Plan must contain, as a minimum, the following elements:
  - a. Odour management strategy consisting of:
    - Objectives and targets
    - Odour risk assessment
    - Biofilter and pre-treatment monitoring and maintenance plan;
    - Air quality monitoring plan;
    - Communications strategy; and
    - System and performance review for continuous improvement.
  - b. The Biofilter and pre-treatment monitoring and maintenance plan must include:
    - a method for monitoring biofilter and pre-treatment performance that identifies biofilter and polishing treatment performance indicators that can be monitored via the process control room computer systems;
    - detail all proposed actions to ensure that the biofilter and pre-treatment is maintained for operation in a proper and efficient manner including, but not limited to, frequency of replacement/replenishment of filter bed material
    - identify mitigation actions to be taken in the event of breakdown and/or servicing of the biofilter and /or pre-treatment system.

## 13. Water

- a. All leachate from the AART must be stored indoors.
- b. Excess leachate must be transferred to a premises lawfully permitted to receive it.
- c. The Licensee must install and monitor six additional groundwater wells for the ARRT and GO facility, comprising four shallow wells and two deeper wells. These would characterise deeper flow directions and identify short term water quality impacts in the deeper aquifer system from the ARRT and GO facility. The two deeper wells would be located at the northwest corner of the proposal site on Heathcote Road and east of the GO sump. Biannual monitoring to be undertaken with further investigations if ammonia concentrations exceeds 1mg/L in groundwater samples.  
Ref: Table 24.1 and Page 14-12 of EIS

## 14. Construction conditions

- a. The Proponent shall comply with the construction hours in the table below:

Day	Hours
Monday- Friday	7am – 6pm
Saturday	8am – 1pm
Sundays and Public Holidays	Nil

1. The Proponent shall prepare and implement a Construction Environmental Management Plan (“CEMP”) for the project. The CEMP should include at a minimum (but not be limited to):
  - Construction hours;
  - Relevant sections of the above mentioned “Traffic Noise Management Strategy”;
  - Detailed Air Quality and Odour Management Plan;
  - Noise and Vibration Construction Noise Management Plan;
  - Waste Management Plan;

- Hazards and Risks Plan;
  - Erosion and Sedimentation Control Plans (progressive plans to provided to the EPA as the works progress and/or as required by the EPA); and
  - The final “Construction Commitments” as set out in Table 8.1 of the EA.
2. During construction, any material brought on-site for filling must meet the requirements of the relevant Resource Recovery Exemption to apply that material to land. The Proponent must retain records of all material brought on-site for filling purposes and provide those records to the EPA when requested.

## **Attachment B**

### **Draft environment protection licence conditions – Landfill (EPL 5065)**

#### **Lucas Heights Landfill and Resource Recovery Expansion**

Note: The following draft licence conditions, detailed in Attachment B, are in addition to or amendments to existing Environment Protection Licence No. 5065 conditions.

#### **COMMENTS**

The licence variation application to the EPA must:

- a. contain a proposed schedule for filling and progressive capping;
- b. contain a program of works for eliminating leachate contaminated stormwater entering the stormwater dam from the NW corner of the Premises;
- c. address the technical requirements of the latest version of the EPA's Landfill Guidelines.

The purpose of the surface gas monitoring programme is to monitor ground level concentrations of gas. The monitoring programme is silent on whether the monitoring programme includes readings around gas infrastructure however it does require 100m x 100m grid monitoring plus readings at depressions in cover material, surface fissures and other obvious odour sources away from the sampling grid. Infrastructure that falls within the grid or is a known odour source should be included in this monitoring programme. This ambiguity will be addressed through this licence variation. Ref: Point 4.6.1 of the EIS

The EIS identifies three zones within the main sediment dam: the sediment storage zone; water reuse zone; and a sediment control "settling" zone. The EPA propose to set a minimum freeboard at the top of the water reuse zone. This would allow the dam to capture 10ML of surface water before the dam starts to overflow. Dam levels must be returned to the minimum freeboard within 5 days of the cessation of a rainfall event.

Monitor pollutants in the groundwater pumped out of the groundwater depressurisation system to be incorporated into the existing monitoring programme.

#### **NEW CONDITIONS**

1. A maximum area of 1 hectare of existing intermediate cover or 2 hectares of existing final capped cover may be stripped of cover in advance of landfilling to form the "Prepared Surface". The Prepared Surface must have a minimum depth of 300mm.
2. Each day a maximum of 2,500m<sup>2</sup> of the prepared surface may be stripped back to expose previously landfilled waste to form the "Active Tipface".
3. The landfill gas field infrastructure not associated with the Prepared Surface must be retained and operating at all times.
4. A dual gas/leachate management trench must be constructed near the perimeter of the reprofiling area to intercept sideways movement of leachate and provide additional extraction points. The purpose design trench must consist of a nominally 1.5-2 metre deep trench within the existing waste mass backfilled with site generated crushed sandstone and perforated pipe.
5. Detailed designs are required prior to construction of the drainage channels before commencement of each landfill stage. Ref: Taken from page 13-26 of the EIS.
6. Extraction risers must be located along the length of the trench, to allow leachate to be extracted and transferred to the existing leachate ring main. A detailed design of the system must be undertaken prior to installation and must include consideration of leachate flow and stresses on pipe infrastructure.

A construction environmental management plan prepared by a suitably qualified person to manage potential impacts to surface water during the installation of the system.

7. Suez must install and maintain freeboard markers in Sediment Dam 5. Freeboard markers must:
  - a. indicate the 10ML settling zone
  - b. indicate 2 ML increments;
  - c. be permanently installed;
  - d. be positioned in locations that allow freeboard verification.
8. Sediment dam 5 to be maintained at or below the base of the 10ML settling zone.
9. During 2 day 90<sup>th</sup> percentile rainfall events of 34.8mm or more the stormwater treatment plant must be engaged, as soon as the event is known, to treat sediment laden water. The 10ML capacity settling zone must be re-established within 5 days of the rainfall event concluding.
10. The licensee must progressively final cap completed stages of filling as soon as practicable.

## **Attachment C**

### **Draft environment protection licence conditions – Garden Organics (GO)**

#### **Lucas Heights Landfill and Resource Recovery Expansion**

#### **COMMENTS**

##### **Storage limits**

Suez propose to limit the amount of waste stored onsite at any one time to 40,000 tonnes. Based on the storage volumes provided by Suez in the Response to Submissions (page 30) and a density conversion rate of 0.4 it appears that the proposed facility will be capable of storing approximately 30, 500 tonnes of material. The EPA has taken this into consideration when drafting maximum storage limits for the Premises.

In the EIS (page 50 of Appendix G), the combined surface area of the reception, storage, preparation and shredding area is 3,530m<sup>2</sup>. In the revised layout the total area allocated to these activities is 2,450m<sup>2</sup>, 31% less. Despite this 31% reduction in size the volume proposed to be stored in this area remains at 12,000m<sup>2</sup>.

The EPA propose to set an at any one time storage limit for the GO facility to minimise the risk of odour generation from waste material onsite. This volume limit will be confirmed at the time of issue/variation of the licence.

##### **Stormwater and leachate management**

Consideration will be given to managing surface water from roof and breathable membrane covers as stormwater and discharged to Mill Creek. A detailed design must be submitted to the EPA for approval which demonstrates that the surface water run-off from the roof and breathable membrane covers does not come into contact with waste. If approved by the EPA additional monitoring points must be installed to monitor the water quality discharged from the GO facility to Mill Creek.

Monitoring points will be added to the licence to monitor leachate dams.

The licence for the current compost facility No. 12520 at the premises identifies the type of conditions that would be issued in a licence and below are additional conditions that will form part of any new or varied licence should one be issued.

#### **NEW CONDITIONS**

1. The licensee may receive no more 80,000 tonnes of garden and wood waste per year and 2,000 tonnes of manure at the Garden Organics (GO) facility.
2. Organic material stored in the maturation area, must be placed in no more than five (5) windrows being no larger than 50 metres in length, 3 metres high and 20 metres in width.
3. Organic material stored in the compost storage area, must be placed in no more than seven (7) windrows being no larger than 50 metres in length, 5 metres high and 20 metres in width.
4. Waste stored in the Waste Reception/Sorting/Preparation Area, must be placed in stockpiles no higher than 5 metres.
5. The licensee must install and maintain 3 metre stockpile markers in the maturation area, 5 metre high stockpile markers in the compost storage area and 5 metres high stockpile markers in the Waste Reception/Sorting/Preparation Area. The stockpile markers must:
  - a. be located on the pads;
  - b. indicate 1 metre increments;
  - c. be permanently installed;
  - d. be positioned in locations that allow height verification of all windrows and stockpiles stored outside.

6. Only organic material that has undergone a minimum four week active composting process in the concrete bunkers, under forced aeration, is permitted to be stored in the maturation area and compost storage areas.
7. The maximum amount of organic material and/or manure permitted to be stored on the Premises at any one time is 35,000 tonnes or 87,500m<sup>3</sup>.
8. The amount of organic material stored in the Waste Reception/Sorting/Preparation Area at any one time must not exceed 8,000m<sup>3</sup> or 3,200 tonnes.
9. If the amount of organic material stored in the Waste Reception/Sorting/Preparation Area at any one time exceeds 8,000m<sup>3</sup> or 3,200 tonnes, organic material over and above 8,000m<sup>3</sup> or 3,200 tonnes must be transported to a premises lawfully permitted to receive it. Organic material must not be received at the Premises until the amount of material stored in the Waste Reception/Sorting/Preparation Area is less than 8,000m<sup>3</sup> or 3,200 tonnes.
10. All waste stored in the partially enclosed concrete bunkers must be covered with breathable membrane covers between 5pm and 6am Monday to Friday and between 5pm and 8am Saturday to Sunday, unless that bunker is being loaded.
11. Should any of the materials post active composting phase or maturation phase emit offensive odours, the materials must be covered until rectification actions are complete.
12. All water that comes in contact with waste must be managed as leachate. Leachate may only be reused in the composting process onsite or disposed to sewer in accordance with Trade Waste Agreement requirements.
13. The leachate ponds must be kept adequately aerated.
14. Excess water collected in the leachate dams during high rainfall periods must be disposed to sewer in accordance with Trade Waste Agreement requirements.
15. Minimum freeboard levels (TBC) to be set for leachate dams and freeboard markers installed.
16. Monthly dust deposition monitoring shall be undertaken at two boundary locations adjacent to the GO facility (of the six dust deposition monitoring locations over the entire LHRRP).
17. The licensee must complete and submit to the EPA an Annual Waste Summary Report each financial year via the Waste and Resource Reporting Portal (WARRP) within 60 days of the end of the financial year.



## **Attachment D**

### **Draft environment protection licence conditions – Advanced Resource Recovery Technology (ARRT) Facility**

#### **Lucas Heights Landfill and Resource Recovery Expansion**

#### **CONDITIONS**

The Proponent shall not receive more than:

- 200,000 tonnes of general solid waste (putrescible and non-putrescible) per year including 10,000 tonnes of biosolids at the Advanced Resource Recovery Technology (ARRT) facility.

#### **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.

##### **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.

##### **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.

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

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

P1.1 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.

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.

#### **3 Limit Conditions**

##### **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.

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 will be set as part of licence application assessment process.

### 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.

<b>Waste</b>	<b>Description</b>	<b>Activity</b>	<b>Other Limits</b>
General solid waste (putrescible)	As defined in Schedule 1 of the POEO Act, in force from time to time	Resource recovery Composting Waste storage	Must not receive more than 200,000 tonnes per year of general solid waste (putrescible and non-putrescible)
General solid waste (non-putrescible)	As defined in Schedule 1 of the POEO Act, in force from time to time	Resource recovery Composting Waste storage	
Biosolids categorised as unrestricted use, or as restricted use 1, 2 or 3, in accordance with the criteria set out in the biosolids guidelines	As defined in Schedule 1 of the POEO Act, in force from time to time	Composting Waste storage	Must not receive more than 10,000 tonnes per year

L3.3 An authorised maximum amount of waste permitted on the premises will be set for the premises.

## 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
- 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 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises;

O3.2 Activities occurring in or on the premises must be carried out in a manner that will minimise the generation, or emission of dust from the premises.

### O4 Potentially offensive odour

O4.1 The licensee must comply with section 129 of the *Protection of the Environment Operations Act 1997*. Section 129 of the Act states that the licensee must not cause or permit the emission of any offensive odour from the premises.

O4.2 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 offensive odour beyond the boundary of 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.

## **O5 Emergency response**

O5.1 The licensee must maintain, and implement as necessary, a current emergency response plan for the premises. The licensee must keep the emergency response plan on the premises at all times. The emergency response plan must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. If a current emergency response plan does not exist at the date on which this condition is attached to the licence, the licensee must develop an emergency response plan within three months of that date.

## **Control Entry to Premises**

O6.1 The licensee must take all practicable steps to control entry to the premises.

## **O5 Processes and management**

O5.1 The licensee must ensure that any general solid waste (non-putrescible) and/or general solid waste (putrescible) received for processing, storage or resource recovery at the premises is assessed and classified in accordance with the EPA's Waste Classification Guidelines as in force from time to time.

## **O5.2 Odour Management**

The licensee must ensure the facility is built and operated to minimise odours. This must include:

- a) all composting must be undertaken wholly within an enclosed building that captures and treats all air emissions;
- b) composting must be undertaken for set periods of time and at certain temperatures, oxygen and moisture levels so that the composted material has been fermented properly and is adequately stabilised prior to any outdoor storage of the composted material (parameters to be agreed with the EPA prior to operations at the premises);
- c) all exhaust air from the composting building and from the composting tunnels must pass through the biofilters and pre-treatment;
- d) the biofilters are to be of a deep bed design and must have vented roofs; and
- e) a system of two leachate ponds must be used on site, to minimise the surface area of odorous leachate.
- f) all composting is undertaken in accordance with Australian Standard AS 4454-2003: Composts, Soil Conditioners and Mulches, Appendix N, Best practice guidelines for Composting Systems, or other practices approved in writing by the EPA.

## **O6 Waste management**

O6.1 The licensee must implement procedures to detect any waste at the premises which not permitted by this licence to be received at the premises ("non-conforming wastes"). Non-conforming wastes must be removed from the premises as soon as possible and taken to another premises which can lawfully accept such wastes.

## **O7 Other operating conditions**

O7.1 The licensee shall ensure that all above ground tanks and vats, including those treating, processing and storing waste water, leachate and diesel must be surrounded by a bund with a capacity to contain 110% of the tanks within the bund. All bunding must be designed and installed in accordance with the requirements of all relevant Australian Standards and or the EPA's "Environment Protection Manual Technical Bulletin Bunding and Spill Management".

## **Preventing Fires**

O8.1 All operations and activities occurring at the premises must be carried out in a manner that will prevent and minimise the risk of fire at the premises.

## **O9 Waste management**

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

O9.1 There must be no incineration or burning of any waste at the premises.

O9.2 The last licensee must prepare and submit to the EPA within twelve months prior to the last load of waste being received a closure plan in accordance with section 76 of the Protection of the Environment Operations Act 1997.

## **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.

## **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.

## **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.

## **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.

## **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:

- 1. a Statement of Compliance,
- 2. a Monitoring and Complaints Summary,
- 3. a Statement of Compliance - Licence Conditions,
- 4. a Statement of Compliance - Load based Fee,
- 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
- 6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data,
- 7. a Statement of Compliance - Environmental Management Systems and Practices; and
- 8. a Statement of Compliance - Environmental Improvement Works.

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').

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 Statements 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.

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.

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.

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.

### **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.

E1.2 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.

E1.3 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.

E1.4 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 E1.2 and E1.3

#### **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**

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.