Appendix T – Garden Organics Operation Environmental Management Plan

LH-EMP-002

OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

Lucas Heights Resource Recovery Park

Garden Organics Facility

ADDRESS: New Illawarra Rd, Lucas Heights NSW 2234

THE LEADER IN RESOURCE RECOVERY

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SITA AUSTRALIA	No: LH-EMP-002
	Date: 16 September 2015
GARDEN ORGANICS OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN	
Lucas Heights Resource Recovery Park	Approved: DRAFT 9

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ABBREVIATIONS

ANSTO	Australian Nuclear Science and Technology Organisation
ARRT	Advanced Resource Recovery Technology Facility
CRG	Community Reference Group
DoPE	New South Wales Department of Planning & Environment (formerly known as the New South Wales Department of Planning & Infrastructure)
EIS	Environmental Impact Statement
EMR	Environmental Management Representative
EMTG	Environmental Management Technical Group
EPL	Environmental Protection Licence
ERP	Emergency Response Plan
GO	Garden Organics
IMS	Information Management System
LHCA	Lucas Heights Conservation Area
LHRRP	Lucas Heights Resource Recovery Park
NSW EPA	New South Wales Environment Protection Authority
PIRMP	Pollution Incident Response Management Plan
SICTA	Sydney International Clay Target Association
SITA	SITA Australia
SSC	Sutherland Shire Council
SSPCYC	Sutherland Shire Police Citizens Youth Club

SECTION 1
INTRODUCTION

1.1 OVERVIEW

SITA Australia (SITA) is a leader in resource recovery, providing integrated waste management and resource recovery solutions. Its core business is to provide end-to-end waste management solutions including the collection, resource recovery, recycling and disposal of residual waste at over 100 sites and facilities around Australia.

SITA operates a solid waste landfill at Lucas Heights Resource Recovery Park (LHRRP). LHRRP is licensed to accept solid waste from domestic and commercial sources that are suitable for disposal in a general solid (putrescible) waste landfill.

Activities at the LHRRP include waste receival and recycling, waste compaction and covering, environmental monitoring and environmental management.

Waste receival activities will cease at the LHRRP in 2037. The site will then be rehabilitated and made available from 2039 to the community as a parkland. SITA would continue to have responsibility for the environmental performance of the disposed waste for a minimum 30 year period after site closure and would monitor and manage the site in accordance with the closure requirements administered by the New South Wales Environment Protection Authority (NSW EPA).

SITA operates a Garden Organics (GO) facility at the LHRRP. The GO facility accepts garden organics materials. The primary purpose of the GO facility is to minimise the amount of garden organic materials disposed to landfill and aim to produce compost which meets the Australian Standards AS 4454 – Composts, Soil Conditioners and Mulches and relevant general and special exemptions under Part 6 and Clause 51 and 51A of the POEO (Waste) Regulation 2005 administered by the NSW EPA. This facility would have improved process controls including the construction of concrete bunkers and slabs, active aeration and partial enclosure of the composting process to enable more effective control of potential odour emissions.

The maximum quantity per annum of garden organics proposed to be processed by the GO facility is 80,000 tonnes.

A LHRRP Operational Environmental Management Plan (OEMP) has been prepared which incorporates management strategies for all environmental and operational activities associated with waste receival, recycling and landfilling located at the landfill and Resource Recovery Centre at the LHRRP. The LHRRP OEMP also covers the cumulative environmental impacts (i.e. odour) arising from all of the activities at the LHRRP (e.g. GO and Advanced Resource Recovery Technology (ARRT) facilities). A Post Closure Environmental Management Plan (EMP) is also prepared to ensure that the site operates in accordance with community expectations and meets all applicable environmental standards.

1.2 SCOPE

The scope of this GO Facility OEMP includes all environmental and operational activities associated with the GO facility. This GO OEMP is specific to the potential impacts from the GO facility and specific controls. As mentioned, all cumulative impacts are addressed in the LHRRP OEMP.

THIS DRAFT VERSION OF THE OEMP WILL BE UPDATED TO ADDRESS ANY ADDITIONAL REQUIREMENTS FROM THE CONDITIONS OF CONSENT AND EPL (POST DEVELOPMENT CONSENT FOR THE PROJECT).

1.3 PURPOSE

The purpose of this OEMP is to adopt and document a "Best Practice Approach" for the environmental management of the GO facility. This OEMP also reflects the intention of the requirements of the Environmental Guidelines: Composting and Related Organics Processing Facilities (NSW EPA, 2004).

This OEMP describes the operational activities on the site that have, or are likely to have, an impact on the environment and the community and the measures to be undertaken to minimise those impacts.

The OEMP provides:

- *A basis for the New South Wales Environment Protection Authority (NSW EPA) to assess the environmental performance of the GO facility and to review the operational and monitoring activities that are covered by the site's Environment Protection Licence (EPL No. XXXX).*
- *Assurance to Sutherland Shire Council (SSC) that agreed preventative, mitigation and rectification measures are integrated into the GO facility operating procedures.*

1.4 BEST MANAGEMENT PRACTICE

The purpose of this OEMP is to adopt and document a "Best Practice Approach". In addition, the environmental management of the GO facility will also reflect the intention of the requirements of the *Environmental Guidelines: Composting and Related Organics Processing Facilities* which includes references to the environmental goals and benchmark techniques described within the guidelines.

Best Practice is defined as:

"*The best combination of eco-efficient techniques, methods, processes or technology used in a similar industry sector and environmental setting that demonstrably minimises the environmental impact and achieves the desired project goals for the local environmental setting*"

Eco-efficient is defined as:

"*The most effective means of achieving a particular goal or set of goals, taking into consideration environmental, economic and social factors*"

1.5 PREVENTION / MITIGATION / RECTIFICATION

This section describes the operational activities on the site that have, or are likely to have, an impact on the environment and the community and measures to be undertaken to manage those impacts.

Where applicable, the measures have been hierarchically categorised as follows:

- *Preventative measures* - aim to eliminate or reduce an environmental aspect that is likely to cause a negative impact
- *Mitigation measures* - aim to pre-emptively minimise any negative environmental impacts
- *Rectification measures* - aim to retrospectively control any negative environmental impacts

SITA will adopt the appropriate preventative, mitigation and/or rectification measures to address the site goals and objectives as required.

1.6 UPDATES

This OEMP is a "living document" and will be updated periodically by SITA as new technology emerges and new standards for environmental performance are adopted industry wide. Any proposed updates will be provided to Sutherland Shire Council (SSC), NSW EPA and the Community Reference Group (CRG) for discussion and comment.

This document is approved by SSC and any amendments must be approved by SSC.

1.7 LEGAL AND OTHER REQUIREMENTS

1.7.1 NSW Legislation

The procedure for maintaining compliance with legal and regulatory requirements at the GO facility is outlined in the Legal and Other Requirements Integrated Management System Procedure. The procedure designates responsibility for identifying applicable legal and regulatory requirements and ensuring access is maintained on site to applicable legal and regulatory requirements. The following NSW legislation applies to the operations of the GO facility:

- Environmental Protection and Biodiversity Conservation Act 1999
- Environmental Planning and Assessment Act 1979
- Protection of the Environment Operations Act 1997
- Waste Avoidance and Resource Recovery Act 2001
- Environmentally Hazardous Chemicals Act 1985
- Pesticides Act 1999
- Public Health Act 1991
- Protection of the Environment Operations Act, 1997
- Protection of the Environment Operations (Noise Control) Regulation 2000
- Protection of the Environment Operations (General) Regulation 2009
- Protection of the Environment Operations (Clean Air) Regulation 2010
- Protection of the Environment Operations (Waste) Regulation 2005
- Protection of the Environment Administration Regulation 2012
- Heritage Act 1977
- National Parks and Wildlife Act 1974
- Environmental Planning and Assessment Act 1979
- Waste Avoidance and Resource Recovery Act 2001
- Waste Recycling and Processing Corporation Act 2010
- Ozone Protection Act 1989
- National Environment Protection Council (New South Wales) Act 1995
- Sydney Water Act 1994
- Water Management Act 2000

- Soil Conservation Act 1938
- Public Health Act 2010
- Work Health and Safety Act 2011
- Road Transport Act 2013
- Contaminated Land Management Act 1997

The *Commonwealth National Greenhouse and Energy Reporting Act 2007* requires reporting of landfill gas emissions, and will be used to underpin the future Carbon Pollution Reduction Scheme.

The *Commonwealth National Environment Protection Council Act 1994* requires reporting of pollutants annually through the National Pollutant Inventory National Environment Protection Measure. This reporting is to the NSW EPA, and supporting legislation including the *PoEO Act 1997* regulations.

1.7.2 Conditions of Development Consent

THIS SECTION WILL BE UPDATED WITH THE NEW DEVELOPMENT CONSENT

1.7.3 Environment Protection Licence

THIS SECTION WILL BE UPDATED WITH THE NEW EPL REQUIREMENTS

The GO facility is licensed by the NSW EPA under the PoEO Act 1997. This license is renewed annually and is reviewed every five years after the date of issue (refer Appendix A). The conditions of this licence are addressed within this OEMP. A copy of the licence is kept at the LHRRP site office. There are separate Environment Protection Licences for the waste recieval, recycling and landfilling of the LHRRP, the Sutherland Shire Police Citizens Youth Club (SSPCYC) Minibike Club Area and the ARRT facility.

1.7.4 Voluntary Planning Agreement

In recognition of the critical role that the LHRRP plays in managing Sydney's waste, SITA would enter into a Voluntary Planning Agreement (VPA) with SSC in accordance with the requirements of the *EP&A Act*. The Minister for Planning would consider the VPA along with the DA and EIS and would be the consent authority for the proposal. All SITA entities (SembSITA, WSN Environmental Solutions and SITA Australia) and SSC would be signatories to the VPA.

The VPA commits SITA to providing significant financial resources to SSC and the community to enable it to develop community facilities like the Ridges Sporting Complex and golf course.

Under the VPA, SITA is committing to meet a number of environmental commitments in terms of actions it will take based on the site's environmental performance. This OEMP forms part of the VPA.

SECTION 2
SITE DESCRIPTION

2.1 BACKGROUND

2.1.1 Former Activities

The LHRRP site had been used for logging, gravel extraction and trail bike riding. The majority of the site has now been utilised for waste disposal and recycling activities. No liquid, toxic, hazardous or restricted waste, including radioactive waste, has been accepted at the LHRRP.

2.1.2 Existing LHRRP Activities

SITA currently operates the LHRRP site as a solid waste landfill with associated waste management and recycling activities and garden organics processing in the GO facility. The LHRRP site has approval (consent) for the treatment of mixed waste in the ARRT facility. Activities on site include: waste receival, recycling, waste compaction and covering, environmental management and monitoring, leachate collection and disposal, landfill gas extraction, electricity generation and gas flaring and truck parking and servicing.

The GO facility is located on the western side of the existing landfill, on the western side of Mill Creek adjacent to Heathcote Road.

2.1.3 Surrounding Land Uses

Location of the LHRRP is shown in Figure 2.1. Land uses surrounding the GO facility are as follows:

Direction	Description
North	• ARRT facility • Sydney International Clay Target Association (SICTA)
East	• Mill Creek is immediately adjacent to the boundary with the LHRRP landfill adjacent
South East	• LHRRP landfill • Beyond the landfill is the SSPCYC Mini-Bike Club • ANSTO's research facilities are located across New Illawarra Road
South	• Heathcote Road and the Heathcote National Park
West	• Heathcote Road is immediately adjacent to the boundary • The Holsworthy Military Reserve is on the other side of Heathcote Road

To the north-east of the LHRRP is a quarry which has been rehabilitated, a former quarry which has been filled with solid waste (Harrington's Quarry), and a former privately operated liquid waste depot on Commonwealth land, a burial facility for low level radioactive waste, and the former SSC night soil depot. Menai and West Menai residential areas are located approximately 2 km north-east of the site, and Yarrawarrah and Engadine are located approximately 2 km south west of the site. The Lucas Heights Conservation Area (LHCA) is located directly to the north of the LHRRP and comprises mainly bushland. Heathcote National Park is located to the south of the LHRRP.

Figure 2.1 LHRRP facility location

2.1.4 Archaeology and Heritage

2.1.5 Archaeology and Heritage

Unexpected finds
Any unexpected finds would follow procedures developed in the CEMP *(TO BE DEVELOPED)*

2.2 ENVIRONMENTAL CHARACTERISTICS

2.2.1 Zoning and Surrounding Land Use

TO BE CONFIRMED

Under the Sutherland Local Environmental Plan 2015 (SLEP), LHRRP is located in the following zones:

- SP1 – Special activities (Waste Recycling)
- RE1 – Public Recreation

The following outlines the objectives and permitted uses of each zone.

Under the SLEP, the LHRRP proposal can be defined as the following:

waste or resource management facility *means any of the following:*

(a) a resource recovery facility,

(b) a waste disposal facility,

(c) a waste or resource transfer station,

(d) a building or place that is a combination of any of the things referred to in paragraphs (a)–(c).

The following definitions are relevant to the definition of a waste or resource management facility as outlined above:

resource recovery facility *means a building or place used for the recovery of resources from waste, including works or activities such as separating and sorting, processing or treating the waste, composting, temporary storage, transfer or sale of recovered resources, energy generation from gases and water treatment, but not including re-manufacture or disposal of the material by landfill or incineration*

waste disposal facility *means a building or place used for the disposal of waste by landfill, incineration or other means, including such works or activities as recycling, resource recovery and other resource management activities, energy generation from gases, leachate management, odour control and the winning of extractive material to generate a void for disposal of waste or to cover waste after its disposal.*

waste or resource transfer *station means a building or place used for the collection and transfer of waste material or resources, including the receipt, sorting, compacting, temporary storage and distribution of waste or resources and the loading or unloading of waste or resources onto or from road or rail transport.*

The reprofiling of the landfill would occur on both the SP1 – Special Activities and RE1 – Public Recreation zones. Reprofiling of the landfill (waste disposal facility) does not meet the definition of waste recycling (or any other permitted uses) and therefore is not permissible on the SP1 and RE1 zones.

The proposed ARRT and GO facilities are located in the RE1 – Public Recreation zone. Both of these uses can be defined as a resource recovery facility, however this use is not permitted within the RE1 zone.

A planning proposal has been prepared and would run in parallel with the State Significant Development Application. The planning proposal seeks to include new local provisions on the LHRRP site within the SLEP which would allow the proposal (a waste or resource management facility) to be undertaken on the proposal site. To permit development of a waste or resource management facility, the consent authority must be satisfied that the objectives of the local provision for the site are met, these objectives are as follows:

(a) To improve the resource recovery capabilities of the Lucas Height Resource Recovery Park,

(b) To increase the waste disposal capacity of the Lucas Heights Resource Recovery Park to meet the needs of Sydney,

(c) To ensure that quality open space for recreation purposes is achieved following the closure of the Resource Recovery Park,

(d) To ensure landfill is of a type and degree of compaction that is capable of supporting the future use of the land for recreation purposes,

(e) To minimise the environmental impacts of the continued operation of the Lucas Heights Resource Recovery Park on local residents and the environment.

LHRRP activities are considered to be consistent with these objectives as they would improve the resource recovery capabilities and increase the waste disposal capacity of the LHRRP. The impacts of the proposal on the environment have been assessed through the environmental impact statement (EIS). The EIS concludes that there would be minimal additional impacts associated with the proposal.

The proposal would permit the future use of the land for recreation purposes, which would have occurred when the existing LHRRP facility ceases operating. Once capped and landscaped, the final landfill surface would supporting future recreation land uses. A master plan has been developed for the future use of the site and this plan identifies a number of passive recreation land uses such as picnic areas (with facilities), grassed areas available for picnics and other passive uses and also a shared path for pedestrians and cyclists.

Sutherland Shire Council granted approval in 2009 for the SSPCYC Mini-Bike club to be located at the southern end of the LHRRP site.

2.2.2 Topography

The LHRRP represents a gently undulating plateau, 200-1000 metres (m) in width, dissected by two ridges. The ridges run parallel to Heathcote Road and form a shallow valley. The gradients of the site are typical of a dissected plateau, with the slopes becoming steeper close to Mill Creek. Mill Creek itself has a slope of approximately 2% as it travels through the site.

2.2.3 Climate

A warm temperate climate with strong maritime influence is experienced in the Lucas Heights area. Mean daily temperatures range from 26.0 ^{0}C to 17.0 ^{0}C in February and from 15.8 ^{0}C to 6.6 ^{0}C in July. Frost is not experienced in this area.

Seasonal variations occur in rainfall with a greater proportion being received during summer months. A generally even rainfall distribution is experienced over the region with a mean annual rainfall of 1015 millimetres (mm).

2.2.4 Geology and Soils

The geology of the LHRRP is mainly Hawkesbury Sandstone, which is commonly found in the region. A lens of clay / shale, several metres thick, occurs near the LHRRP. There is an area of clay / shale on the north-eastern corner of the site in the Little Forest area, and also along the eastern side of adjoining SITA land. A clay quarry formerly operated on the eastern boundary of the LHCA. The shale is weathered, grey, silty clay with many fine sandy particles.

The soil in the LHRRP has been disturbed due to ongoing waste disposal and clay/shale extraction, and also because of gravel quarrying that took place here prior to these activities.

2.2.5 Surface Hydrology and Groundwater

Surface Water

Most of the LHRRP site lies within the Mill Creek catchment. Mill Creek originates from the LHRRP and flows north along the western boundary towards Georges River. The gradients of the LHRRP are typical of a dissected plateau, with the slopes becoming steeper close to Mill Creek. Mill Creek itself has a slope of 2% as it travels through the site. Baseflow for the perennial rivers and streams are generally sourced from seeps and springs derived from groundwater.

There are a number of surface water management features currently in place at the site. Surface water diversion drainage is constructed around the rim of each active waste disposal cell to control surface water runoff flowing into or from the cells. The drainage typically comprises open channel drains on the outer edge of earthen bunds. Surface water is collected in drains, swales and ponds and diverted to sediment dams. The dams are designed to allow for settlement of suspended solids before discharging offsite following large rainfall events when stormwater has reached capacity.

Most of the LHRRP (the landfilled portion) lies within the catchment area of Mill Creek, with the exception of the area bounded by New Illawarra Road and Little Forest Road in the south-east and the administration facilities, which drains to Bardens Creek. As this area is not impacted by this proposal, impacts to Bardens Creek are not assessed in this report. Mill Creek originates from within the site and flows in a northerly direction through approximately the centre of the site, covering most of the length of the site. Towards the origin of the creek, the channel is not always clearly visible. Apart from small overflows, flooding is not expected to occur over the site because the gradients of the site allow good drainage.

Groundwater

The Hawkesbury Sandstone is generally well-cemented by authigenic quartz and siderite and is infilled with varying proportions of clay. The unweathered sandstone has a very low primary or intergranular permeability. The formation has a complex aquifer system due to sub-vertical joints and sub-horizontal bedding planes and the lithology associated with variable weathering. There is 20 to 25 m of low permeability medium and high strength sandstone above the fracture zone (Douglas Partners, 1994).

Perched water tables, 'leaky' aquifers and pressurised zones are a feature of the hydrogeological environment due to the discontinuous shale and clay layers (Knight, 1992). Weathering has produced spatially and vertically variable aquifer material which influences the groundwater flow paths and hydraulic conductivity in different layers and areas.

2.3 SITE FACILITIES AND SERVICES

Figure 2.2 shows the location of the GO facility and Figure 2.3 shows the GO facility layout.

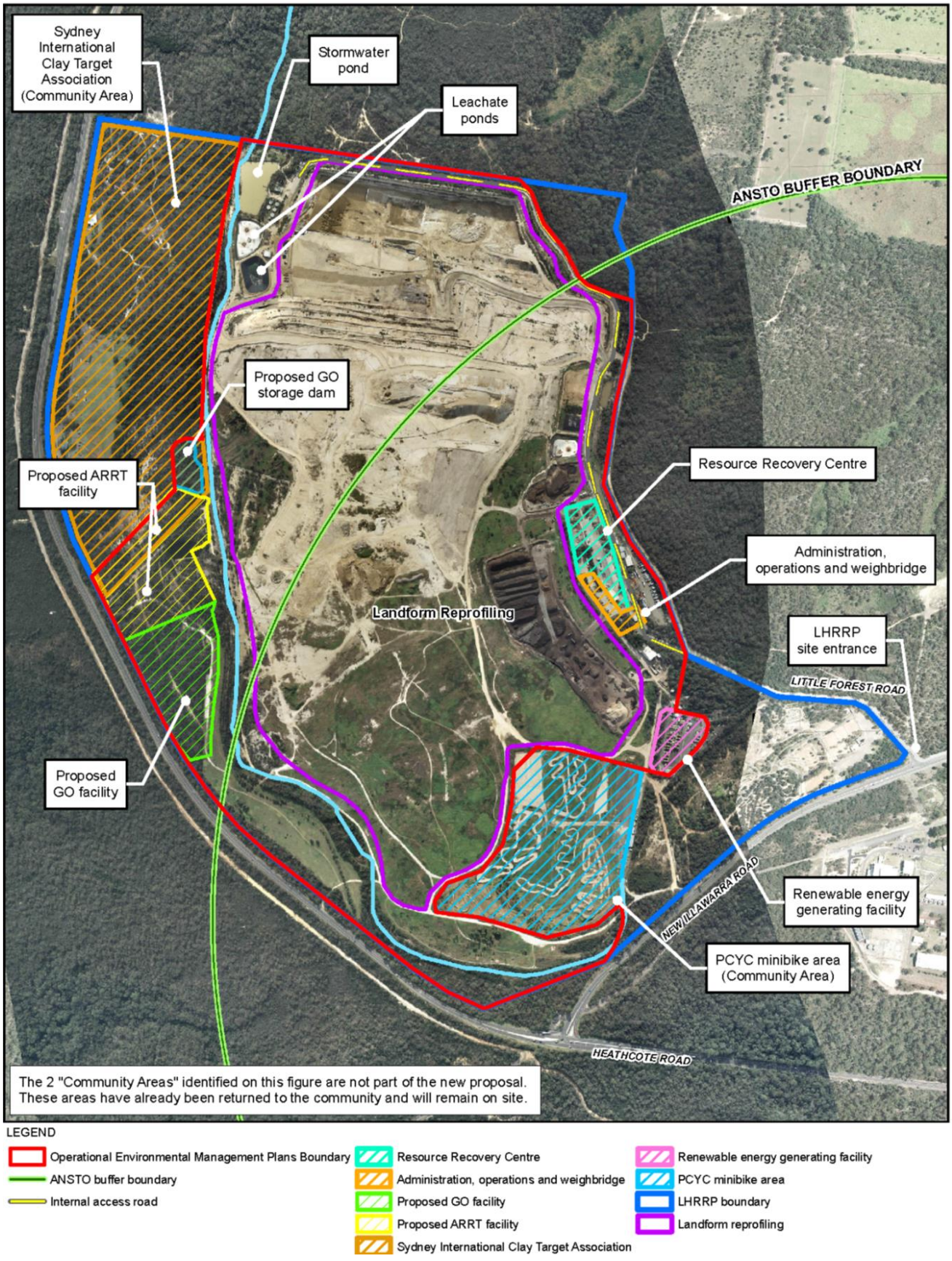

Figure 2.2 LHRRP layout

Figure 2.3 GO Facility Layout

The LHRRP facilities as well as those associated with the GO facility are accessed via Little Forest Road, which intersects New Illawarra Road opposite the ANSTO facility.

The key components of the GO facily, shown on Figure 2.3, include:

1. Waste receival/sorting/preparation
2. Active composting
3. Maturation
4. Finished compost storage
5. Mulch storage
6. Storage pond
7. Reception
8. Compost blending
9. Hardstand
10. GO sump
11. Amenities office

A reception area would be constructed between the waste receival area and the compost blending area including an amenities office with rooms to store samples and house the electrical panel room. This would also include a car park for 7 vehicles.

2.3.1 Engineering

Engineered pad
The engineered pad meets the requirements of the Department of Environment and Conservation (NSW) July 2004 publication 'Environmental guidelines: Composting and related organics processing'.

PROVIDE CONFIRMATION AFTER CONSTRUCTION

Aerated composting bunkers
During the active composting phase, composting would be undertaken in a series of 34, partially enclosed composting bunkers each 30 m long x 5 m wide. The back walls of the bunkers are maintained to approximately four metres high. The bunkers are filled with material to approximately three metres in depth.

The bunkers are equipped with a common ground aeration network.

The ground aeration system comprise of four, high density polypropylene pipes perforated at 10 cm spacing. The pipes would supply air to the composting material and permit process waters (leachate) to be evacuated towards drip pots.

A watering system is installed in the bunkers to recycle process leachate and rainwater run-off back into the composting process. The watering system would consist of a pump and filtration system near the leachate pond as well as a distribution and valve network permitting system regulation.

Bunker covering system
A cover system would be used for the first four weeks of composting to reduce odour and would comprise the following elements:

- A metallic frame resting on the back wall of the bunker
- A mobile winding cart to fold back the cover
- Guide rails

- A motorised hoist installed on the mobile cart to unroll the cover
- Breathable membrane covers

Breathable membrane covers
The use of breathable membrane covers assist to control the emission of odour from the composting process. It also prevents stormwater infiltration into the compost, which reduces garden organics leachate generation.

Active aeration of the material is also a key odour reduction measure, as it prevents the composting material going anaerobic (the main potential cause of odours).

2.3.2 Site access roads and Weighbridge

Access to the GO facility is via Little Forest Road and an internal roadway.

Near Little Forest Road, two weighbridges are installed, one on each side of the weigh bridge office, for incoming and outgoing traffic. The office contains the weighbridge computers, printout equipment, two-way radio and telephone communications.

Vehicles requiring access to the GO facility are directed by the weigh bridge to the GO facility access road after leaving the weigh bridge. Vehicles then proceed along the sealed access road, around the existing landfill, to the GO facility.

2.3.3 Signs

Signs providing information to access, site control, charging structure, operating hours and waste acceptance are displayed at the site entrance and other prominent on site locations within the LHRRP. On site signs providing information relating to environmental and WH&S issues (e.g. gas pipes, chemicals, electrical hazards etc.) are also prominently displayed and maintained in a visible and readable condition. Signs and site notices are maintained and upgraded as required by the SITA Signs, Site Notices and Labeling standard operating procedure (SOP).

2.3.4 Fencing

The LHRRP is surrounded by a 1.8 metre high chain-wire fence.

2.3.5 Screening

The site is visible from a few locations on New Illawarra and Heathcote Roads. To limit external views, revegetation and buffer zone maintenance are promoted on the site.

2.3.6 Drainage, water supply and wastewater management

Drainage
The GO facility would generate clean stormwater runoff and leachate. Garden organics leachate would be produced by rainwater run-off in dirty areas and process leachate from the aeration network.

All clean water collected from roofing and breathable membrane covers via a separate collection system. Separation of clean water from garden organics leachate would prevent excessive

volumes of contaminated water from being produced. The clean water would be conveyed direct to the natural environment (Mill Creek) via a detention system, or stored for later use on site.

Through appropriate grading and channels, garden organics leachate would be directed to and stored in a leachate pond prior to recycling back into the composting process.

Water supply

Water supply is drawn from local reticulated main supplies. Apart from potable water which is used for showering and drinking purposes, water collected in large rainwater tanks is used to clean equipment and floors, toilet flushing, and for other industrial purposes. It is also be used for watering any landscaped areas.

A significant amount of stormwater and leachate from the GO area would be stored and utilised for composting purposes. Any shortfall of water required for composting would be supplemented from the potable water supply.

Wastewater management

As shown on Figure 2.3, the garden organics leachate pond is located on the southern portion of the GO facility site and have a capacity of approximately 10,000 m^3. A pump and filtration system is installed in proximity to the leachate pond, along with a distribution and valve network to enable the leachate to be recycled back into the process. The covers form an impermeable barrier to stormwater infiltration into the covered compost. In the unlikely event that the covers are ineffective (e.g. via composting getting on their upper surface) housekeeping measures would be able to be taken to adjust the management of the cover process to maintain the effectiveness of covers for excluding stormwater from the compost.

The GO facility is bunded on all sides to prevent water flowing onto the facility via the roadways.

Wastewater from the amenities facilities at the proposal site would be managed separately to leachate arising from composting at the GO facility.

2.3.7 Security

The GO facility is located within the LHRRP. The LHRRP is surrounded by a fence with lockable security gates installed on access roads. SITA controls the access to the site during operational hours and after hours security. Staff are on duty to supervise delivery of garden organics at all times when the facility is open.

Lockable security gates are maintained on site.

2.3.8 Services

The GO facility is supplied with potable water from the mains, and has telephone and electricity connections. There is an on site treatment plant for sewage from site amenities.

Electricity

Electricity is supplied to the existing resource recovery buildings located to the east of the GO facility. New aboveground power lines is run alongside the proposed internal access road from the existing resource recovery centre to the proposed GO facility.

The GO facility has an electricity demand of approximately 600,000 kWh per year.

Communications

The GO facility amenities office is provided with telephone, computer and data cable access. Standard telephone cabling and two-way radio / mobile telephones provide the required telecommunication services. Internet access is provided via ADSL or Wi-Fi.

Fire services

Water to be used for firefighting would be drawn from the storage pond, or from landfill water storage basins by fire trucks if required.

SECTION 3
SITE MANAGEMENT STRUCTURE

3.1 SITE MANAGEMENT STRUCTURE

3.1.1 SITA Management Systems

SITA manages its environmental and Work Health and Safety (WH&S) performance on site through its Corporate Information Management System (IMS). The SITA IMS is structured on the requirements of AS/NZS 4801:2001 and AS/NZS 14001:2004 and contains Policies, Procedures, Management Plans, Emergency Response Plans (ERPs), SOPs and forms. The GO facility also complies with AS 9001.

This OEMP is a key component of the SITA IMS.

3.1.2 Change in management over time

The development of the LHRRP site for the proposed use as a recreational facility involves the rehabilitated site being made available to the public in 2039. Operations of the ARRT facility, GO facility and waste disposal activities would cease by the end of 2037 to allow the rehabilitation works to take place.

SITA would continue to have responsibility for the environmental performance of the disposed waste for a minimum 30 year period after site closure and in accordance with the closure requirements administered by the NSW EPA. This would include both the monitoring and management of landfill gas, groundwater quality and leachate.

The management structure of the GO facility and how it relates to the facility is described below.

Manager	Overall responsibility for the management of operational issues on site.
Compliance officer	Establishment and management of environmental monitoring contract, wet weather monitoring and ad-hoc sampling as required and interpretation and management of monitoring data. Quarterly reporting to CRG, SSC and the NSW EPA as required
Site supervisor	Supervision of site activities, ensuring that necessary water environmental controls are maintained and operated to achieve the environmental objectives.
Site personnel	Day to day implementation of environmental controls and visual monitoring as required

3.1.3 Management roles from the Planning instruments

Based on the existing Conditions issued by the Minister for Urban Affairs and Planning it is expected that the new conditions of consent will still require that the following management structure is established for the GO Facility:

- Environmental Management Representative (EMR)
- Environmental Management Technical Group (EMTG)

- Community Reference Group (CRG)
- Compliance officer

Environmental Management Representative

SITA will employ or contract qualified environmental services throughout the operating life of the GO facility. The Landfill Manager is the nominated EMR and is supported by SITA Compliance Officers.

The EMR is responsible for overseeing the environmental management of the GO facility operations and supervision of environmental services. The EMR has the authority to stop work if an adverse impact on the environment has occurred or is likely to occur.

The EMR will:

- Be responsible for the presentation or certification of all EMP's and procedures;
- Be responsible for considering and advising on matters specified in the conditions of this consent and compliance with such matters;
- Oversee the receipt and response to complaints about the environmental performance of the project;
- Facilitate an introduction and training program for all persons involved with the GO facility activities; and
- Be present on site during any critical construction or operational activities as defined in the relevant OEMP.

Environmental Management Technical Group

The EMTG, which will include SSC, SITA and the NSW EPA and will have regular meetings (quarterly, or as indicated per the VPA - Exhibit 1) during the initial landfill reprofiling works.

Community Reference Group

A CRG has been established for the LHRRP Facility, comprising of SITA representatives and the community. The CRG will meet on a quarterly basis to discuss matters of concern associated with the environmental impact of the LHRRP, including the GO facility, and to promote mutually satisfactory solutions. The group is kept informed of proposed works at the GO facility.

Compliance officer

SITA will employ or nominate a compliance officer for the GO facility.

The compliance officer will:

- Be in charge of establishment and management of environmental monitoring contract, wet weather monitoring and ad-hoc sampling as required and interpretation and management of monitoring data
- Reporting on a quarterly basis to CRG, SSC and the NSW EPA as required.

SECTION 4
STAFFING AND TRAINING REQUIREMENTS

4.1 STAFFING AND TRAINING REQUIREMENTS

SITA is responsible for the provision of sufficient staff on site to meet all the requirements described in this OEMP. It is also the SITA's responsibility to provide adequate training to all staff performing critical tasks such as inspection and direction of incoming wastes, operation of compaction or earthworks equipment and environmental management on site.

The Induction, Training and Competency Procedure provides instruction to ensure that staff are trained and competent to perform their required duties in a safe and environmentally sound manner and that appropriate training records are retained. Appropriate environmental and WH&S training shall also be given to suppliers and contractors to ensure their performance meets SITA requirements.

Environmental and WH&S Due Diligence Training is also provided to employees and nominated contractors. It is designed to provide employees and contractors with information about their environmental and WH&S responsibilities.

The training is focused on the following issues:

- Environmental legislation - NSW
- Environmental aspects and impacts of the operational activities
- SITA policies
- Environmental management
- Environmental due diligence

The LHRRP Training Matrix identifies the internal training needs (Induction, Environmental Due Diligence, IMS Awareness, IMS Procedures and SOPs) and the external training needs (first aid etc.) for on site staff. Contractors are required to provide ongoing training which is discussed at the monthly contractor meetings.

SECTION 5
REPORTING

5.1 RECORDS AND REPORTING

5.1.1 Monitoring Results

Environmental monitoring data are stored in electronic format on the SITA computer network. Summaries of monitoring data from GO Facility are available.

The monitoring results are reviewed and communicated on a monthly basis at the site meetings. This provides an ongoing mechanism for assessing the environmental performance over time. Monitoring results are also provided to the CRG meetings and SSC on a quarterly basis.

An annual return with the results from surface water, and leachate monitoring is provided to the EPA within eight weeks of the licence renewal date. The report includes all monitoring results, the number of complaints and details of non-compliance against the EPL.

Monitoring results required by the EPL are posted on the SITA website within 14 days (or made available on request).

The records of all complaints received be stored. The records include details of the following:

- Date and time of the complaint
- Method by which complaint was made
- Personal details of the complainant which were provided by complainant or, if no details were provided, a note to that effect
- Nature of the complaint;
- The action taken by the licensee, including any follow-up contact with the complainant
- If no action was taken by the licensee, the reasons why no action was taken

The record of each complaint must be kept for at least four years after the complaint was received and must be made available to any authorised officer of the NSW EPA on request.

SITA provides a number of feedback mechanisms for complaints.

Community members can register complaints via the SITA free-call 24-hour odour hotline in writing or through the SITA website

In accordance with the GO facility Pollution Incident Response Management Plan (PIRMP), SITA must immediately notify relevant agencies of any incidents causing or threatening material harm to the environment.

5.1.1 Reporting Template

In addition to report to the NSW EPA. SITA will also report to SSC in accordance with the LHRRP Reporting Template. The Reporting Template is contained in the LHRRP OEMP.

SECTION 6
ENVIRONMENTAL AUDITING AND REVIEW

6.1 ENVIRONMENTAL REVIEW

SITA evaluates the success of its environmental management approach on a regular basis. While individual components of the monitoring programme will be reviewed at set intervals as required by the NSW EPA, an overall evaluation of the environmental performance of the GO Facility is conducted on an annual basis in accordance with SITA's Environmental and WH&S Risk Assessment IMS Procedure. SITA's Statement of Environmental and WH&S Responsibilities and Accountabilities also provides the responsibilities for all SITA staff and contractors.

The Environmental and WH&S Risk Assessment Procedure aims to effectively identify and assess the current controls for WH&S hazards and environmental impacts and aspects and assists in the following objectives:

- To quantitatively evaluate the significance of the environmental impacts associated with waste disposal activities
- To formulate and periodically review environmental objectives, targets and programmes for the GO Facility
- To evaluate the effectiveness of existing environmental management practices to ensure compliance with current environmental legislation and guidelines
- To assist in the continual improvement and optimisation of the site's existing environmental management practices
- To provide confidence to the general public, community groups and regulatory agencies that waste disposal operations are being effectively managed in a way that minimises environmental impacts

6.2 MANAGEMENT SYSTEM AUDITS

The SITA Audit Procedure provides detailed instruction on additional weekly Inspections and Management system audits conducted on a regular basis to verify that site's operations comply with the requirements of this OEMP. The results of the audits are recorded and recommendations for improvement are communicated to the relevant management personnel as well as to the contractors.

6.3 COMPLAINT INVESTIGATION AND RECTIFICATION PROCESS

SITA is committed to best practice, prevention, mitigation and rectification of the operation and management of the LHRRP and post closure management obligations.

SITA and SSC have established an Agreed Methodology for establishing complaints. It will be reviewed every two years and at the request of any party, but any changes to the Agreed Methodology will only be made by agreement between the parties.

The Complaint Investigation and Rectification Process is documented in the LHRRP OEMP.

SECTION 7
GO FACILITY - SITE OPERATIONS

7.1 OPERATIONAL CONDITIONS

The LHRRP is certified as meeting a range of national and international certifications including ISO 14001 Environmental Management, ISO 9001 Quality Management and AS 4801 Occupational Health & Safety Management. As part of obtaining these accreditations, SITA is subject to a range of internal and external audits.

In addition to the above accreditations, SITA also has an interlinked system to govern the operations of each site as discussed in sections previously. This includes:

- SOPs
- Operational Environmental Management Plans
- Frequent meetings with stakeholders (including SSC, NSW EPA, refer to SECTION 3 for details)
- Environmental reporting programs (refer to SECTION 5 for details)
- Complaint handling programs (refer to SECTION 6 for details)
- Environmental monitoring programs (refer to SECTION 9 for details)

All these safeguards are in-place to evaluate the effectiveness of existing environmental and operational practices to ensure SITA operates in compliance with the licence conditions applicable at each site.

7.1.1 Operating Hours

The GO facility is open for receival and operations during the following hours

Activity	Day	Operating hours
Green waste receival	Monday - Friday Saturday and Sunday	6am – 4pm 8am – 4pm
GO facility operations	Monday - Sunday	Anytime

7.1.2 Processes

Recording of organics received

All vehicles entering the site must proceed to the weighbridge. Vehicle details are recorded by the weighbridge operator, and vehicles with green waste are directed to the greenwaste reception and shredding area for inspection. Generally any load >25% of non-compostable materials is classified as unacceptable and is directed to the landfill or small vehicles area. The staff at the reception area then notify the weighbridge that the vehicle is to be processed as a landfill waste receipt.

Receival and decontamination

The GO facility accepts Category 1 Organics (Department of Environment and Conservation, 2004) which are separated into the following groups:

- Type A Material – pallets, untreated wood waste, timber offcuts, selected tree waste that does not contain weed species
- Type B Material – garden waste and trees which may include noxious or garden species

All materials rejected or separated from the greenwaste that are not recyclable are then recorded by the weighbridge as waste being landfilled. The material is then sent to landfill.

Deliveries of Type A material are directed to the timber drop public drop area before being transferred to the timber shredding area on the green organics blending pad.

Type B material is unloaded in the GO facility reception area directly. All loads are inspected for contamination which is removed either to the recyclables or landfill waste collection areas.
The remaining decontaminated material is then shredded. The garden organics would be discharged and stacked up with a loader to a height of approximately four metres before being sorted and shredded.

The area would be large enough to store three days of garden organics during peak periods (or one week in normal times). Restricting the area for receival would assist in preventing the start of composting before the shredding / screening stage and hence reduce potential for odour generation.

The garden organics would be decontaminated by spreading the material on the ground and manually removing contaminants.

Shredding and screening

Once the material has been sorted, it would be prepared for composting using a mobile shredder and a screen for size reduction purposes.

The screening step would separate the incoming material into two different fractions: a fine fraction that would be used for the production of compost, and a coarse fraction to be used for the production of mulch or biomass for energy production. The separation of the coarse woody components (which are slower to degrade) would improve the efficiency of the composting process.

Composting

The prepared material would then undergo a minimum four weeks active composting process in the concrete bunkers under forced aeration, covered by a breathable membrane. The aeration system would comprise positive aeration from the channels within the floor of the bunker. The timing of aeration would be controlled automatically.

The composting windrows are progressively turned. Composted product is then processed through screens of varying type and stored in cones in the centre of the composting pad until required for blending into products for customers.

This composting system would significantly reduce the potential odour generation from the GO facility compared to current operations. The aerated bunkers would allow the composting process to be accelerated as well as reduce the stockpile volumes on the site.

The cover system limits the potential odour emissions from the process. Given the odour potential is highest during the four week active composting phase, the entire four weeks of the composting phase will be covered with a breathable membrane.

Maturation

Once the four weeks of composting has been completed, the material would be moved to the maturation area and matured for a further eight weeks. During the maturation phase, the activity of the micro-organisms is slowed significantly compared to the composting phase. For this reason, forced aeration is considered unnecessary during maturation. The maturation piles would be aerated by natural convection of air and by mechanical turning.

It is proposed that in addition to the loading operations for maturation and storage, maturing compost would be turned three times (once every two weeks).

Storage and blending

Once the material has been matured for eight weeks, it would be moved to the dedicated storage area. At this point the compost would be stable, and therefore no turning would be undertaken. The storage area would include a small area allocated for blending of finished compost to create a variety of compost products for market. Blending materials that will be used include sand, soil and pre-composted manure products.

7.1.3 Timing at the various stages

Stage	Residence time (under normal operations)
Receival and decontamination	Up to one week
Shredding and screening	Following decontamination
Composting (aerated and covered)	Minimum four weeks
Maturation	Eight weeks
Storage and blending	Following maturation

7.1.4 Water management

The GO facility would generate clean surface water runoff and leachate. Leachate would be produced by rainwater run-off in dirty areas and process leachate from the aeration network.

All clean water collected from roofing and internal roadways would be discharged into the natural environment after passing through a slush and oil extractor.

Through appropriate grading and channels, leachate would be directed to and stored in a leachate pond prior to recycling (in its majority) back into the composting process.

The leachate pond is located on the south eastern most portion of the GO facility site. A pump and filtration system would be installed in proximity to the leachate pond, along with a distribution and valve network to enable the leachate to be recycled back into the process.

7.2 INPUT MATERIALS CONTROL

7.2.1 Stock Limits

- 5,000 tonnes of manure
- 40,000 tonnes of composting material (includes receival, shredding, active composting and maturation stage)

7.2.2 Permitted Input Materials

The GO facility is licensed by the EPA to accept inert and/or solid waste as defined by Schedule 1 Part 3 of the PoEO Act 1997. Only the following input material types are accepted for processing (as defined in Section 3 of the EPL):

- Wood waste
- Garden organics
- Virgin excavated natural material
- Manure (pre-composted only)
- Fly ash
- General or specific exempted waste (waste that meets all the conditions of a resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2005)
- Waste (Any waste received on site that is below licensing thresholds in Schedule 1 of the PoEO Act 1997, as in force from time to time)

7.2.3 Excluded Materials

Any material that does not fall into the categories outlined in Section 7.2.1 is not accepted. This includes, but is not limited to, wastes classified in Schedule 1, Part 1 and Part 3 of the PoEO Act 1997 as hazardous waste, industrial waste, biosolids, grease trap waste, restricted solid or special waste, as listed in Appendix D. Raw manure is not accepted.

SITA monitors and controls the waste delivered to the site and rejects any substances that are not accepted at the GO facility. This function is fulfilled by informing customers, making enquiries into the content of customer loads at the weighbridge, visual inspection at the weighbridge as well as visual monitoring during unloading.

7.2.4 Screening of input materials

Signs at the entrance clearly indicate the types of materials that are and are not accepted at the facility. Information is also available in brochures available at the weighbridge, on the SITA website (www.SITA.com.au) and through the Customer Service Division (Tel: 1300 651 116).

When a vehicle enters the weighbridge, the weighbridge operator weighs the vehicle, records the data and asks the driver to describe the contents of the load. If the content cannot be clearly described or identified, the weighbridge operator will direct the load to a separate area for closer examination. If the wastes are identified as excluded wastes, the site manager will respond in accordance with the “Excluded Waste – management and handling” SOP. If the waste is rejected, this will be recorded in the weighbridge data system using the Rejected Load code (9999).

7.3 MATERIAL DELIVERY

All vehicles arriving at the GO facility have previously been weighed at the main LHRRP site entrance weigh bridge. In addition to weighing and charging, drivers are asked about the nature of the load before proceeding to the GO facility.

Drivers are directed to the organic waste reception area to discharge organic waste within the appropriate area prior to stockpiling and processing.

To avoid queuing of vehicles upon exit, some account customers (such as SSC operated trucks and SITA collection vehicles) are permitted to drive through the bypass lane at the weigh bridge, as they are not required to weigh out.

7.4 MATERIAL SEGREGATION

The design of the GO facility is such that cross contamination between fresh materials and already composted materials is prevented.

7.5 MATERIAL TRANSPORT

Non compostable and non-recyclable residual wastes from processing are transported by truck to the LHRRP landfill. Recyclable components that are removed from waste streams during initial stages and after composting are transported to the Chullora or Spring Farm Material Recycling Facilities for further processing.

7.6 STORAGE AND PROCESSING

After passing over the weighbridge, trucks proceed to the receival and preparation area. The garden organics are discharged and stockpiled with a loader to a height of approximately four metres before being sorted and shredded.

The area is sized to store three to seven days of garden organics during peak periods (or one week in normal times). Limiting the storage time prevents the start of composting before the shredding / screening stage and reduces the potential for odour generation. Volumes of storage materials will be kept at a practical minimum.

The garden organics are sorted by spreading the material on the ground and manually removing contaminants.

Once the material is sorted, it is prepared for composting using a mobile shredder and a screen for size reduction purposes. The prepared material then commences the composting process with the first four weeks in concrete bunkers under forced aeration, covered by a breathable membrane, which allows the composting process to be accelerated.

All bunkers are aerated, while the bunkers that accept freshly prepared material are covered.

Maturation of compost occurs in a dedicated area, with approximate capacity for 2 months. During this phase the compost is stabilised. The maturation piles are aerated by natural convection of air and by mechanical turning.

Once the material has been matured for eight weeks, it is moved to the dedicated storage area. At this point the compost is stable, and therefore no further turning is required. The storage area includes a small area allocated for blending of finished compost to create a variety of compost products for market.

7.7 SITE SUPERVISION AND CONTROL

Active areas are supervised by suitably experienced staff at all times during hours of operation.

The site supervisor will:

- Maintain the effective control of traffic within the GO facility
- Ensure that the equipment engaged are not operated in such a way as to constitute a risk to persons disposing or delivering waste
- Be responsible for the supply and placing of barricades and/or signs, in order that the above requirements are maintained at all times
- Keep a logbook for recording activities and incidents that occur during the operation of the GO facility
- Provide site notices and incident reports covering all activities on site

7.8 STAFFING

SITA will ensure that the GO facility is appropriately staffed by qualified and experienced personnel. When the GO facility is open the weighbridge will be staffed and the GO facility will be supervised.

At a minimum, staff training will be undertaken to ensure that:

- Staff are appropriately trained in their nominated roles to undertake task required of them
- All operators of equipment are skilled at undertaking all tasks required of them and maintain up to date licences for the operation of machinery
- All those that operate gas testing, water sampling or water testing apparatus are familiar with required testing and sample retention protocols to a standard approved by the NSW EPA under the EPL
- All those inspecting incoming wastes are skilled at identifying wastes that are unacceptable and accurate data recording

7.9 EQUIPMENT

Sufficient and appropriate machinery, plant and equipment will be maintained to meet the requirements of the OEMP. This will include, but is not limited to, equipment for:

- Reception / sorting of garden organics material
- Shredding / screening processes
- Composting processes
- Aeration processes
- Stockpile covering systems (with breathable membrane covers)
- Watering systems and water management
- Maturation processes
- Odour management
- Spreading, compaction and covering of waste and compost
- Compacting, trimming, shaping, grading and levelling of waste and compost
- Fire control and fire-fighting
- Any other operation required for the proper and efficient operation of the GO facility
- Breathable membrane cover

Notwithstanding the above, the minimum requirements at the GO facility, at all times, will be:

- A charger loader for spreading, compaction and movement of waste and compost

- A dozer / loader to assist in the operations
- A water cart for dust suppression and fire-fighting

All equipment will conform to the relevant Australian Standards.

All machinery and equipment will be maintained in proper working order in accordance with the manufacturers' requirements. In the event of machinery or equipment failure replacement plant or equipment will be organised as soon as practicable to ensure the requirements of the OEMP are fully complied with at all times.

7.10 SECURITY

Public access to the GO facility will be restricted during opening hours. The site is fenced and outside opening hours all access gates will be locked and the Security Contractor will maintain the security of the site.

7.11 HEALTH AND SAFETY PROCEDURES

SITA will take all necessary precautions to ensure the safety of all personnel engaged at the GO facility and all members of the public visiting the facility.

SITA will be responsible for ensuring that all employees are inducted and instructed about potential hazards at the GO facility and that safe working practices are to be observed.

A first aid treatment station will be equipped and maintained at the GO facility and SITA will have a person trained in first aid, on site, during all operating times in accordance with the appropriate statutory regulations.

It is SITA's responsibility to be familiar with the provisions of the *Work health and Safety Act 2011*.

SITA will ensure that all necessary protective clothing and safety equipment is available and/or issued to SITA employees, is maintained in good condition and used effectively.

SITA operates the GO facility in accordance with AS/NZS 4801 Occupational Health and Safety Management System and ISO 14001 Environmental Management System and ISO9001 Quality Management System.

7.12 COMMUNITY COMPLAINTS

A free call telephone line through SITA's Customer Service department operates 24 hours a day 7 days per week. Complaints about the LHRRP can be registered on this line. The details of all complaints received and actions taken in response to the complaints are kept on the SITA database. Complainants receive a detailed response within 24 hours of the complaint being lodged if requested.

Complaints received via the NSW EPA Environment line or SSC that are subsequently reported to SITA are investigated and responded to within the allocated time frame.

The complaints register is available for inspection upon request by the NSW Department of Planning & Environment (DoPE), the NSW EPA and SSC.

7.13 WET WEATHER OPERATION

SITA will ensure that the GO Facility is able to accept garden organics under all reasonable weather conditions without compromising the environmental management of the GO Facility. In the event that wet weather prevents access to and/or operation of the waste disposal area, SITA may provide alternative temporary waste disposal or storage services.

7.14 ACCESS ROAD MAINTENANCE

Temporary internal access roads within the GO facility areas will be constructed so as to minimise damage to vehicles and to provide effective access. Access roads will be wide enough to permit safe two-way movement by all vehicles using the GO facility. Controls will be in place to provide access to the waste disposal area during wet weather to provide a safe area for vehicles and minimise tracking of clay and waste.

The use of steel wheel compacters and other heavy earth moving machinery on site access roads will be minimised.

7.15 FIRE CONTROL

Current fire management of the GO facility is undertaken in accordance with the LHRRP ERP.

A water tanker and pumping equipment capable of being used for fire-fighting as well as dust suppression will be kept on site at all times and maintained in working condition. Water will be supplied from the onsite surfacewater dams or potable town water as required.

SITA will comply with all requirements of the PoEO Act 1997, and therefore prevent fires to minimise emissions to the atmosphere. No waste will be burnt at the site and no fires will be deliberately lit on the site, without the permission of the NSW EPA.

Incoming wastes which are found during inspection to be hot or on fire prior to deposition will be directed away from the active landfilling areas to a location where the material can be extinguished without risk of causing a fire on site.

In the event of a fire occurring at the site, prompt action will be taken to extinguish the fire. The NSW fire brigade will be immediately notified of all fires irrespective of the extent of the fire and whether or not it has been controlled. Full cooperation will be given to the Fire Brigade in fighting fires on the site.

All fire events will be recorded in detail including the date, time, location, expected cause of the fire, time it was extinguished, prevailing weather conditions, observations with regard to smoke direction and dispersion, amount of waste burnt, action taken to extinguish the fire and action taken to prevent a recurrence.

In the event of a surface fire occurring at the site, water and earth will be used as appropriate to extinguish the fire.

A firebreak, not less than 20 m wide and cleared of all flammable material will be provided and maintained around the boundaries of the waste disposal area. All sections of the firebreak will be maintained to allow access for fire-fighting vehicles in accordance with the requirements of the Fire Brigade. SITA will liaise with the Fire Brigade to establish and maintain these requirements.

All new employees will receive fire prevention, protection, fire-fighting and emergency procedures training. Training assistance will be sought from the fire protection section of the NSW fire brigade. All employees will be given refresher training courses at regular intervals.

SITA will ensure that each employee is conscious of the fire safety standards required to operate safely.

Other measures that will be taken to prevent fire include:

- A ban on smoking around the active GO facility area, with clear posted signs indicating designated smoking areas
- Clear posted signs on display to the public advising that waste flammable liquids are not permitted on the site
- All sealed or contaminated drums should not be accepted unless they are delivered as a special waste whose contents are clearly identified and suitable for acceptance
- All fuels or flammable solvents for operational use will be stored in an appropriately ventilated and secure store that complies with the Act covering storage of Dangerous Goods
- Hot Works Permits will be used where appropriate

7.16 RECORD KEEPING

All vehicles entering and leaving the GO facility will be recorded, along with the tonnage of waste or product from the facility. Details regarding reporting and review are documented in Section 5.

7.17 VEHICLE WHEEL AND EQUIPMENT WASHING

SITA will ensure that the wheel wash facility for cleaning the wheels of the vehicles leaving the site operates during wet weather. Signs will be displayed during wet weather when the wheel wash is operational. The wheel wash has a treatment system and recycles the water used in the process. A small amount is wasted and is directed to a tank for offsite disposal. Collected solids are removed to the 'Specials' area of the landfill as required.

Washing and servicing of equipment is conducted in a wash bay / work bay, is bunded to exclude rainwater. All of the wastewater from the washdown / service area is collected in a tank and treated for discharge to sewer.

SECTION 8
GO FACILITY - MANAGEMENT

8.1 OVERVIEW

In the waste that SITA handles every day on behalf of its many customers, SITA strives to increase the proportion which is reused, recycled or recovered. Waste that cannot be converted into resources are eliminated under conditions that respect our environment.

SITA provides environmental services for the well-being of the Australian population, and aims to manage natural resources by reinjecting them into the economy in the form of raw materials and energy. This is to avoid wastage of precious virgin resources.

SITA is committed to:

- Optimising recycling and recovery rates
- Reducing greenhouse gas emissions
- Improving energy efficiency through all operations
- Increasing and promote renewable energy production
- Reducing the degradation of Australia's agricultural soils

The following sections describe SITA's strategy to management at the LHRRP. Complaints will also trigger the complaints and auditing procedures as noted in section 6.3.

8.2 WATER MANAGEMENT

8.2.1 Environmental Goals and Principles

The GO facility would generate clean stormwater runoff and leachate. The entire GO facility is bunded. Areas not covered with breathable covers will be treated as leachate. Leachate is discussed in section 8.2.

All clean water collected from roofing and breathable membrane covers via a separate collection system. Separation of clean water from garden organics leachate would prevent excessive volumes of contaminated water from being produced. The clean water would be conveyed direct to the natural environment (Mill Creek) via a detention system, or stored for later use on site.

The water management system for the ARRT and GO facilities includes the following features:

- Supply Dam Volume: 4.8 ML
- Storage Dam Volume: 12 ML
- Surface water from the breathable covers over the concrete bunkers (7,020 m^2) in the GO facility area would be diverted to surface water as it would not have come into contact with compost.

The covers form an impermeable barrier to stormwater infiltrating into the covered compost. In the unlikely event that the covers are ineffective (e.g. via composting getting on their upper surface) housekeeping measures would be able to be taken to adjust the management of the cover process to maintain the effectiveness of the covers for excluding stormwater from the compost.

Leachate can be formed from the degradation of organic waste and percolation of water through organic waste. The composition of GO facility leachate is determined by physical, chemical and

biological processes. The quality of leachate is influenced by the type and age of waste, the physical and chemical conditions inside the GO facility, and microbiological activity.

Leachate is a source of odour. Management of odour is discussed in section 8.3.

Based on the NSW EPA *Environmental Guidelines: Composting and Related Organics Processing Facilities*: Leachate Barrier System, Leachate Collection System, leachate management on site is aimed at:

- Prevention of groundwater pollution by leachate
- Prevention of surface water pollution by leachate
- Prevention of the degradation of local amenity – in particular Mill Creek and the Georges River
- No leachate from the GO facility entering surface water and being discharged to Mill Creek

8.2.2 Management Strategy

The leachate drainage system will be maintained in an operable and effective condition at all times. Care will be taken to ensure the leachate drainage pipes are not damaged by waste disposal or other operational activities. SITA will ensure that the leachate collection system remains effective in collecting and draining leachate from the organic waste to a specific leachate collection pond.

Prevention measures

- Leachate dam is sized correctly during design phase
- Leachate is contained on site in a storage pond
- The storage pond is lined with a low permeability liner
- Storage pond markers are used to monitor pond levels
- Levels in the leachate storage dams will be actively managed so that they are have sufficient capacity to cope with leachate arising from wet weather events
- Maintaining perimeter bunds surrounding the GO facility
- Leachate is drained into a storage pond and re-used in the composting process for moisture control. Excess condensate is diverted to the leachate storage pond
- Separate runoff from areas where compost and related materials would be placed from areas there is no compost and related materials, where possible
- The dams are lined to suitably contain leachate
- Separate runoff from areas where compost and related will be placed from areas there is no compost and related materials, where possible

Mitigation measures

- Water from the leachate storage pond is reused for the composting process (after analysis to determine suitability to EPL requirements)
- Aeration systems installed in storage ponds run constantly and are regularly maintained
- Inspect quality of leachate holding dam regularly
- Monitoring and inspection of leachate transfer pipes to storage dams and treatment facilities
- Maintenance of bunds separating catchments in the GO facility
- Ongoing monitoring of leachate volumes generated, stored, re-used and disposed of for the GO facility
- Periodic review of the leachate water balance model

Rectification measures

- Leachate that cannot be reused for the composting process is transported off the facility to a licenced liquid treatment facility or LHRRP leachate system
- Chemical treatment of leachate dams as required
- Review of storage and treatment capacity
- De-sludging of dams as required
- Increase in aeration as required

Lucas Heights Resource Recovery Park Project EIS (GHD, 2015)

The Lucas Heights Resource Recovery Park Project EIS (GHD, 2015) undertook an assessment on the soils and surface water including leachate generated from the GO facility. It was concluded that:

- With the implementation of the mitigation measures proposed in the EIS, it is not expected that the proposal would result in an unacceptable impact in terms of sediment discharge to downstream waterways
- It is not expected that the activities associated with the proposal would result in a major increase in potable water demand
- Stormwater discharged from the site is not expected to have any unacceptable impacts on flooding conditions downstream
- The water balance suggests that the leachate proposed dams for the GO facility would have sufficient capacity and hence there would be no discharge of leachate to Mill Creek (during modelled time series)
- Overall weekly demand for process leachate from the operation of the ARRT facility composting process would exceed the volume of process leachate anticipated to be collected from the system. Hence no excess process leachate would be generated or able to be discharged to Mill Creek.
- The proposed works are not expected to result in any unacceptable impacts relating to surface waters.

Mitigation measures are proposed to manage risks and achieve these outcomes, with key mitigation measures listed below:

- Lined containment structures to suitably contain leachate from the GO and ARRT facilities

8.2.3 Activities/Frequency

The following activities are undertaken:

- Ensure adequate storage within leachate dams – *daily*
- Maintenance of automated leachate storage and transfer devices– *ongoing*
- Monitoring compliance with EPL – *three monthly*
- Analysis of wastewater to assess compliance with EPL criteria for reuse or release – *as required*

8.2.4 Performance Indicators/Targets

- No impact to waterways
- Containment of all leachate on site in up to the design event in accordance with the EPL

8.2.5 Reporting and Review

- Daily site monitoring during wet weather periods, reported to site management

- Site Supervisor performs daily inspection of the site, and reports weekly to the site manager using the checklist system
- Routine maintenance of aerators
- Review of monitoring results compiled by the compliance officer with the site manager
- Quarterly inspections by the compliance officer reported to the site manager

8.3 ODOUR CONTROL

8.3.1 Environmental Goals and Principles

A number of measures are in place to minimise odour generation. Odour generated from the LHRRP should be considered cumulatively. The area for storing incoming garden organics during peak periods is limited in size to prevent the start of composting before the shredding / screening stage.

The prepared material undergoes the composting process with the first four weeks in enclosed concrete bunkers under forced aeration, covered by a breathable membrane, which allows the composting process to be accelerated and minimises odours.

The maturation piles are aerated by natural convection of air and by mechanical turning.

Leachate is also a potential odour source.

Odour control on site is aimed at (as based on the NSW EPA *Environmental Guidelines: Composting and Related Organics Processing Facilities*:

- Compliance with Section 129 of the PoEO Act 1997
- Minimising impacts on local amenity

As described in the LHRRP OEMP, odour control at the LHRRP site is aimed at (as based on the NSW *EPA Environmental Guidelines: Solid Waste Landfills:* Odour Control):

- Prevention of degradation of local amenity
- Prevention of landfill gas emissions
- Achieving no detectable odours (less than 2 Odour Units (OU), cumulative) at the nearest residential receptor
- Improving site gas capture and destruction either by power generation activities or gas flaring as required

8.3.2 Management Strategy

SITA will implement the main features of the odour management strategy specifically for the GO facility, which are as follows:

Prevention measures

- Place prominent signs at the entrance to the LHRRP site defining acceptable wastes
- Conduct random monitoring and inspections of incoming vehicles to determine waste composition
- Immediately process waste received following receipt of garden organics waste
- Carry out prompt decontamination of material as it arrives at site, with minimal time between shredding and the decontamination process

- Minimise time between shredding and decontamination processes
- Actively aerate all 4 weeks of the composting process with covers applied
- Ensure correct process adherence during composting and maturation activities to prevent material from becoming odorous
- Order manures in accordance with production schedules and blend with compost only in favourable weather conditions (referring to limit of stockpiles (Section 7.2.1) at any given time)
- Check wind directions before undertaking potentially odorous operations
- Maintain optimal ground conditions to prevent ponding of water to assist with water management
- Operate a wheel washing facility for trucks leaving the site to minimise the transport of potentially odorous soil particles and debris onto adjacent roads
- SOPs incorporating odour prevention techniques to assist in staff induction and training
- Train staff (internal and contractors) on odour management strategy and all relevant procedures
- The prepared material is composted within the first four weeks in concrete bunkers under forced aeration, covered by a breathable membrane
- Only allow a maximum of 5,000 tonnes of blending materials at any one time
- No blending material that is emitting offensive odours will be brought onto site
- Only allow 40,000 tonnes of composting material (includes receival, shredding, active composting and maturation stage) at any one time
- Any materials causing a negative impact (i.e. odour) on the community will be covered

Mitigation measures

- Monitor manure stock levels and maintain the final product for sale at a minimum level. SITA sales team to have forward orders to assist in maintenance of compost stock volumes
- Measure oxygen and moisture content of compost (active phases) and control with aeration and moisture addition
- Control areas of water ponding with odour fences as well as pump outs
- Optimise aeration of dams and ponds to ensure effective dam and water management
- Recording of all incidents of identification and/or rejection of unacceptable waste in the logbook
- Any complaints from neighbours will be investigated and recorded in database
- Operations to advise sales if stocks become too high
- Inspect trucks as they leave site for possible odorous residual material present. Maintain records of truck cleanliness and fit for purpose state
- Monitor stockpiles and confirm that no offensive odours are being emitted

Rectification measures

- Investigate any complaints from neighbours and record in the database. Odour patrols as required through residential areas
- Minimise the volume of final product storage, keeping volumes as low as possible
- Install additional decontamination and shredding equipment if necessary
- Install odour trailers to cover the operational area
- Repair the ground surface in areas where ponding water occurs
- Manage the performance of staff who do not adhere to site controls
- Transport finished product to customer if compost stocks are too high
- Should any of the materials post active composting phase or maturation phase emit offensive odours, the materials will be covered until rectification actions are complete

Lucas Heights Resource Recovery Park Project EIS (GHD, 2015)

The Lucas Heights Resource Recovery Park Project EIS (GHD, 2015) undertook an assessment on the air quality including potential odour cumulatively from the reprofiling works, GO facility and ARRT facility. It was concluded that with the mitigation measures in place:

- There would be no significant impacts on the community or environment
- The project would be able to achieve 2 OU odour performance criteria cumulatively at the nearest residential receptor

8.3.3 Activities/Frequency

The following activities are undertaken:

- Inspection of site equipment - *daily*
- Site inspections by the Site Supervisor for excessive odour - *daily*
- Site inspections by the site Compliance Officer for excessive odour levels - weekly

8.3.4 Performance Indicators/Targets

- Meet the requirements of Section 129 of the PoEO Act 1997
- Achieving no detectable odours (less than 2 OU, cumulative) at the nearest residential receptor
- No odour complaints

8.3.5 Reporting and Review

- Daily inspection of the site by the site supervisor, and reporting weekly to the site manager using the checklist system
- Monthly review of monitoring results compiled by the site compliance officer with the site manager at operations meetings
- Monthly reporting of complaints in the monthly management performance report
- Quarterly inspections by the compliance officer reported to the site manager

Odour complaints will also trigger the complaints and auditing procedures as noted in section 6.3.

8.4 DUST CONTROL

8.4.1 Environmental Goals and Principles

Based on the NSW EPA *Environmental Guidelines: Composting and Related Organics Processing Facilities* Dust Controls, dust control is aimed at:

- Prevention of air pollution
- Prevention of impacts on local amenity

Dust controls that apply towards the whole LHRRP is documented in the LHRRP OEMP.

8.4.2 Management Strategy

SITA will implement the main features of the dust management strategy, which are identified as follows:

Prevention measures

- Dust generating activities are not undertaken during adverse weather conditions
- Limit movements of mobile plant in heavy winds
- Sealing of frequently used roadways
- Vehicles are covered or enclosed during transport around the site
- Significant operating activities are conducted within the enclosed areas of the facility
- Spraying of windrows, final compost storage areas, and loading areas, particularly prior to transportation and turning
- Cessation of operations if necessary (e.g. during strong winds and unsafe conditions)
- Monitor size of stockpiles or blending materials
- Screening of perimeter fences
- Cover or enclose vehicles during transport around the site

Mitigation measures

- Water cart on trafficable areas as required
- Water misting sprays to be installed if required
- Visual monitoring of dust emissions
- Monthly dust deposition monitoring at two boundary locations adjacent to the GO facility (of the six dust deposition monitoring locations over the entire LHRRP)
- Periodic Total Suspended Particulate (TSP) monitoring
- Maintain stockpiles or blending materials to a minimum practicable level
- Operate water cart(s) on trafficable areas as required

Rectification measures

- Recording of environmental complaints and regular review and reporting of performance
- Increasing the amount of sprinklers on stockpiles and water cart equipment for operational areas if required
- Reduce stockpiles or blending materials to a minimum practicable level

Lucas Heights Resource Recovery Park Project EIS (GHD, 2015)

The Lucas Heights Resource Recovery Park Project EIS (GHD, 2015) undertook an assessment on the air quality including potential dust impacts cumulatively from the reprofiling works, GO facility and ARRT facility. It was concluded that with the mitigation measures in place:

- There would be no significant impacts on the community or environment

8.4.3 Activities/Frequency

The following activities are undertaken:

- Dust suppression system - *as required*
- Cleaning of sealed roadway areas using street sweeper and water cart – *as required*
- Spraying of windrows and final compost storage areas, particularly prior to transportation and turning – *as required*
- Cleaning of machinery – *as required*
- Increase use of water carts and sprays in case of elevated dust levels – *as required*
- Dust deposition monitoring at six boundary locations on site - *monthly*

8.4.4 Performance Indicators/Targets

- No visible dust from the site beyond the boundary of the site
- Maximum level in dust deposition gauges shall not exceed 4 grams per metre squared (g/m^2) per month as an annual mean
- All on site staff adequately trained in dust minimisation procedures and techniques
- No complaints from neighbouring landholders

8.4.5 Reporting and Review

Daily Operational Checklists are completed by the Landfill Supervisor. The Compliance Officer is responsible for completion of the Environmental weekly checklist.

Additional reporting and review functions include:

- Monthly review of monitoring results

8.5 NOISE CONTROL

8.5.1 Environmental Goals and Principles

The major noise generating sources at the GO facility are operation of mobile plant and machinery, shredder operations and garden organics delivery and transport vehicles. GO facility operations can occur 24 hours from Monday to Sunday.

Noise control on site is aimed at operating within specified limits of the EPL and preventing impacts on local amenity, notably:

- Prevention of noise pollution
- Prevention of the degradation of local amenity
- No significant impact on the community or environment

8.5.2 Management Strategy

The following measures are undertaken to minimise noise emissions from the GO facility:

Prevention measures

- The facility only operates within the permitted hours, except in emergencies
- All vehicles accessing the site use the designated access roadways
- Plant and equipment is selected to minimise noise emissions where possible, whilst maintaining efficiency of function. Residential grade silencers will be fitted and all noise control equipment will be maintained in good order
- Operations are restricted to designated areas
- Maintain collection vehicles in good working order and provide staff training on noise management requirements
- All staff are informed of the importance of noise minimisation and the methods for achieving acceptable levels, and required to implement those methods at all times
- Observe working hours as stated in section 7.1.1
- Restrict noisy activities to daylight hours

Mitigation measures

- Use reverse quackers with a low decibel output rather than beepers for excavators and wheel loaders
- Utilise favourable routes for accessing and exiting the facility to ensure avoidance of residential areas where possible

Rectification measures

- Increase investment in advanced noise reduction techniques
- Monitor and track collection vehicle routes

Lucas Heights Resource Recovery Park Project EIS (GHD, 2015)

The Lucas Heights Resource Recovery Park Project EIS (GHD, 2015) undertook an assessment on the noise including potential noise impacts cumulatively from the reprofiling works, GO facility and ARRT facility. It was concluded that with the mitigation measures in place:

- There would be no significant impacts on the community or environment

8.5.3 Activities/Frequency

The following activities are undertaken:

- Site inspections by the Site Supervisor to ensure that noise levels are not excessive - *daily*
- Noise monitoring by the site Compliance Officer - *as required*. For site vehicles, enforce rules by:
  - Site management of the SOPs – *as required*
  - Back to back performance Key Performance Index (KPI) – *as required*
  - Speed Humps – *as required*
- Vehicle pre-starts to ensure vehicle defects are addressed in a timely manner - *daily*
- Maintenance of the ground surface in operational areas – *as required*

8.5.4 Performance Indicators/Targets

- No noise complaints
- Noise emanating from the site must not exceed a LA10, T sound pressure level of 50 dB(A) when measured or computed at any point within 1 m of any residential boundary or any other noise sensitive areas, over any 10 to 15 minute period, using the 'FAST' response on the sound level meter during the day. Noise emanating from site must not exceed LA10, T of 35dB (A) at night. 5 dB(A) must be added to the measured level if the noise is substantially tonal or impulsive in character
- Compliance with development consent conditions

8.5.5 Reporting and Review

Daily operational checklists are completed by the site supervisor. The compliance officer is responsible for completion of the environmental weekly checklist.

Additional reporting and review functions include:

- Monthly review of monitoring results with the Contractor (if any)
- Quarterly report to the CRG
- Maintaining site environmental checklists
- Maintaining site equipment

8.6 LITTER CONTROL

Any litter generated due to the GO facility will be considered cumulatively with the whole LHRRP. Litter management measures for the whole LHRRP are detailed in the LHRRP OEMP.

8.7 TRAFFIC CONTROL

Traffic control for inbound and outbound vehicles for the GO facility should be considered with traffic associated with the rest of the LHRRP. Traffic management measures for the whole LHRRP are detailed in the LHRRP OEMP.

8.8 PEST, VERMIN AND NOXIOUS WEED CONTROL

Pests and vermin may be attracted to the facility if waste materials and litter generated are not managed or removed within a suitable time frame. Site litter clean up will be controlled as per the sections above.

There is a riparian zone on the eastern boundary of the facility associated with Mill Creek.

The operations of the GO facility is not expected to increase the presence of weeds in the riparian zone as materials are tipped and processed inside the facility in accordance with strict guidelines for compost production.

Pest, vermin and weed management measures for the whole LHRRP are detailed in the LHRRP OEMP.

8.9 EMERGENCY PREPAREDNESS

8.9.1 Environmental Goals and Principles

The ERP for the GO facility is regularly reviewed and updated. The plan describes the general policy and approach to be followed when dealing with an emergency or incident including:

- Identification and address of the various types of emergencies which may be experienced at the site
- Risk minimisation to the SITA employees, contractors, customers, visitors and the community in an emergency
- Control of any incident so as to minimise damage to plant, equipment, property and the environment

8.9.2 Management Strategy

Strategies to manage emergency preparedness are:

Prevention measures

- Provision of adequate resources including staffing, fire-fighting equipment, first aid equipment and personal protective equipment
- Training and retraining of staff so that a high level of preparedness is maintained by all people who may be involved in an emergency
- Periodic review and update of the emergency procedures for the site

Mitigation measures

- Reporting incident to relevant authorities
- Notification of community members who may be affected by the incident

Rectification measures

- Implementation of the Emergency Procedures for the site

8.9.3 Activities/Frequency

The following activities are undertaken:

- Visual checks of fire-fighting equipment - *weekly*
- Testing of fire-fighting equipment - *biannual*;
- Tests of the emergency response procedures (One WH&S related, the other environmental incident related) – *biannual*

8.9.4 Performance Indicators/Targets

- Demonstrate satisfactory performance of the ERP by simulating or controlling an emergency situation on site at least once a year

8.9.5 Reporting and Review

- Immediate reporting of any incidents / emergencies to SITA management
- Immediate reporting is required of any incident or near incident with actual or potential significant off-site impacts on people or the biophysical environment, a report shall be supplied to DoPE or the NSW EPA outlining the basic facts. A further detailed report shall be prepared and submitted following investigations of the causes, and identification of necessary additional preventative measures
- Reporting to the ARA (appropriate regulatory authority - local council or the NSW EPA), the NSW EPA, WorkCover Authority, the Ministry of Health Public Health Unit, the local authority (if not the ARA) and Fire and Rescue NSW immediately of incidents related to pollution incidents where material harm to the environment is caused or threatened. Material harm includes actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial or that results in actual or potential loss or property damage of an amount over $10,000
- Reporting to the NSW EPA Manager Waste Operations, or after hours to the pollution control hotline, where the incident may have environmental ramifications
- Preparation of an incident report for serious incidents
- Maintaining site checklists

8.10 GROUNDWATER

8.10.1 Environmental Goals and Principles

The goals for groundwater are:

- No significant impact on groundwater quality
- No significant impact on the community

8.10.2 Management Strategy

Reprofiling strategies - Lucas Heights Resource Recovery Park Project EIS (GHD, 2015)
The Lucas Heights Resource Recovery Park Project EIS (GHD, 2015) undertook an assessment of groundwater impacts associated with the reprofiling works, GO facility and the ARRT facility. It was concluded that there would be no significant impact to the e the community.

Comprehensive mitigation measures are proposed relating to both the design and the operations of the facilities. The additional mitigation measures and strategies related to operations for the reprofiling works that were developed as part of the Lucas Heights Resource Recovery Park Project EIS (GHD, 2015) are summarised below:

- Implement site practices described in this EMP that minimise the production and spillage of impacted water and/or chemicals used in site activities

If emergence of impacts occurs during operation or post closure then further investigation and potentially remedial measures would be required and would include:

- Additional investigations to isolate the source of impact and characterise the significance of the impact relative to key target criteria for the protection of surrounding sensitive systems.
- Implementation of additional control measures to prevent ongoing impact. This may include:
  - Installation of additional monitoring wells to assess the emergence of significant impacts that may not be considered presently significant
  - Installation of additional wells to capture and treat impacted groundwater. This may include treating the water separately or incorporating the system into the existing leachate treatment system

8.10.3 Activities/Frequency

The following will be undertaken:

- Monitoring – *ongoing*

8.10.4 Performance Indicators/Targets

In accordance with the EPL condition R2.3, the criteria for groundwater ammonia concentration is 1 mg/L

8.10.5 Reporting and Review

Daily operational checklists and weekly checklists are completed by the site supervisor. The compliance officer is responsible for completion of the environment weekly checklist.

Additional reporting and review functions include:

- Reporting at site meetings if problems occur
- Reporting problems that occur to the CRG
- Maintaining site environmental checklists

8.11 COMPLIANCE WITH THE CONDITIONS OF CONSENT

Every three years following the date of consent or at periods otherwise agreed to by DoPE, SITA will arrange for an independent audit of the environmental performance of the development at GO Facility. The audits will:

- Be conducted pursuant to ISO 14010 - Guidelines and General Principles for Environmental Auditing, ISO 14011 - Procedures for Environmental Monitoring and any specifications DoPE
- Be conducted by a suitable qualified independent person approved by DoPE
- Assess compliance with the requirements of the consent (refer Appendix B)
- Assess the implementation of the EMPs and review the effectiveness of the environmental management of the proposal
- Be carried out at SITA's expense

SITA will comply with all reasonable requirements of DoPE in respect of any measures arising from or recommended by the audits.

SECTION 9
MONITORING

THIS SECTION WOULD BE UPDATED PRIOR TO THE RELOCATION OF THE GO FACILITY BASED ON THE REQUIREMENTS IN THE EPL, CONSENT CONDITIONS AND THE EIS.

PRIOR TO THE RELOCATION OF THE GO FACILITY, THE EXISTING OEMP FOR THE EXISTING ORGANICS FACILITY WOULD APPLY

Monitoring at the GO facility incorporates surface water, leachate, groundwater, dust, noise and any other environmental performance indicator in accordance with the relevant EPL. The results of all monitoring carried out on the GO facility are recorded and retained as set out in the relevant NSW EPA EPL. The following section describes those monitoring activities:

All this section is to be reviewed to once the operation is confirmed and the EPL has been granted

9.1 METEROLOGICAL MONITORING

The GO facility relies on data collected by the automatic weather station installed at the LHRRP to measure the following parameters:

- Air temperature
- Humidity
- Solar radiation
- Barometric pressure
- Rainfall
- Wind speed
- Wind direction and sigma theta

Data from the weather station is collected monthly by a contractor and a quarterly report is provided to SITA. The data is also provided in electronic format and incorporated by the Compliance Officer into SITA's environmental monitoring database.

9.1.1 Surface Water Monitoring

No water from the GO facility is to be directly discharged into Mill Creek.

Any water discharged to Mill Creek from a storage dam or pond is to be monitored and tested to confirm that it meets EPL requirements before being discharged.

9.1.2 Groundwater Monitoring

Install additional wells as per the LHRRP EIS recommendations (GHD, 2015)

If emergency of impacts occur then further investigation and remediation would be required and would include:

- Additional investigations to isolate the source of impact and characterise the significance of the impact
- Implementation of additional controls. This may include:
    - Additional monitoring wells to assess the emergence of significant impacts
    - Additional wells to capture and treat impacted groundwater

9.1.3 Leachate Dam Monitoring

The leachate storage dam is sampled quarterly and analysed for the following parameters:

- pH (field)
- Conductivity
- BOD5,
- Nitrogen (ammonia)
- Total Nitrogen
- Phosphate

9.1.4 Dust Monitoring

Dust deposition is monitored (in accordance with Australian Standard 3580.10.1-2003) at six sites shown on Figure 9.1.

Total Suspended Particulates (TSP) will be monitored at the location shown on Figure 9.1.

Dust levels are also monitored visually by the GO facility staff on a daily basis. Dust suppression is carried out on a regular basis on all haul roads throughout the site. The wheel wash is utilised during wet weather events to minimise tracking of mud and debris onto external roads.

9.1.5 Odour Monitoring

In addition to regular site inspections by the LHRRP Centre Manager, members of the community will notify the SITA odour hotline or the NSW EPA pollution hotline when odours are detected.

Records of these complaints are kept and used to identify future odour management work required.

The site responds to the community member if a response is requested or required. Formal responses are returned to the NSW EPA with information on prevailing weather and GO facility conditions.

If and when a complaint is registered, SITA will act in accordance with the complaints register (section 6.3) and engage a specialist to investigate the odour source.

9.1.6 Noise Monitoring

Noise monitoring of GO facility operations is undertaken monthly to confirm that the site is not exceeding the EPL criteria.

The initial noise measurements will be conducted by a suitably qualified person and will quantify and characterise the (LA10(15minutes)) intrusive noise from the GO facility over a 15minute measurement period. In addition the operator will quantify and characterise the overall levels of ambient noise (i.e. L_{Amax}, L_{A1}, L_{A10}, L_{A90}, L_{Aeq}) over the 15 minute interval period. Noise monitoring will be conducted at locations representative of the nearby residents.

After the initial monitoring is undertaken as prescribed, within 3 months of operations commencing the results will be reviewed for comparison with the nose limits and complaints register.

SECTION 10
RISK MANAGEMENT

SITA ensures the effective control of environmental hazards across its facilities so that environmental impacts are prevented or minimised. Two main types of risk assessment are used by SITA at operational / project level to assess environmental and WH&S risk.

10.1 JOB SAFETY AND ENVIRONMENTAL ANALYSIS (JSEA)

The JSEA process is used for new projects, new tasks, any unusual, abnormal or non-routine work or projects and tasks where there is likely to be an increase in the level of risk. This may include but is not limited to any unusual task not normally executed in day-to-day operations. All contractors are required to complete the JSEA process prior to commencing any work on the site.

10.2 PROJECT / SITE BASED RISK ASSESSMENTS

Project based risk assessments are carried out to assist in identifying additional environmental risks that may not have been assessed in the preparation of the OEMP for the site (following commencement of operations).

Site or project based risk assessments are performed when:

- A change in legislation requires a change in SITA practices and processes
- Additional processes or activities are introduced that may increase the level of environmental risk
- When new and additional information concerning an environmental hazard becomes available
- When required by existing legislative requirements

SECTION 11
REFERENCES

Landcom (2004) Soils and Construction – Managing Urban Stormwater.

NSW Department of Environment and Conservation (now NSW EPA) (2004) *Composting and Related Organics Processing Facilities*