Executive Summary

Background to Proposal

This Environmental Assessment (EA) has been prepared to support the development application for an Advanced Waste Treatment facility.

SITA Environmental Solutions (SITA) proposes to build an Advanced Waste Treatment (AWT) facility on approximately 8 hectares (ha) of its existing Elizabeth Drive landfill site in Western Sydney (Elizabeth Drive Site). The intended maximum capacity of the facility is 120,000 tonnes per annum (tpa) of municipal solid, commercial, industrial and organic waste plus 14,400 tpa of biosolids from sewage treatment plants. The facility has the flexibility to be developed in stages, to reflect the amount of waste which is received and requires processing at the facility.

This site is 5 kilometres (km) west of Kemps Creek and approximately 41 km west of Sydney CBD and comprises Lot 1, DP 542395 and Lot 740, DP 810111.

SITA have been awarded two contracts for the treatment of waste at the proposed facility from Liverpool City Council and Penrith City Council (PCC). These contracts are expected to commence in the financial year 2008-2009 once the facility is operational. Both of the contracts are for a period of ten years and it is expected that the amount of waste from the councils to be treated at the facility will increase to approximately 110,000 tpa over the ten year contract period.

Advanced Waste Treatment

The facility will incorporate two existing technologies, SITA Advanced Waste Treatment (SAWT) and BIOWISE, already used by SITA both in Europe and at the BioWise waste composting facility in Perth, Western Australia. The proposed facility will:

- Receive both mixed solid waste as well as source separated organics waste;
- Mechanically separate the putrescible and non-putrescible fractions of the waste;
- Recover recyclables from the waste using manual sorting and other techniques;
- Compost the putrescible fraction of the waste;
- Mature the compost;
- Refine the compost, producing a range of compost products and mulch products; and
- Dispose of the non-putrescible residual material at SITA's existing Elizabeth Drive landfill.

Except for maturation and green waste shredding, the entire SAWT-BIOWISE process will be carried out in fully enclosed buildings.

The Proponent

SITA is an Australian subsidiary of the French-based Suez Group, a major global provider of infrastructure services in the areas of energy, water and waste. SITA currently owns and operates a number of facilities throughout Australia including: an AWT facility in Port Stephens, an AWT facility in Cairns as a joint venture with CEC Resource Recovery; the BioWise composting facility in Perth as a joint venture with the Water Corporation of WA; waste recycling and transfer stations in Western Sydney, Melbourne, and Perth; engineered landfills in Sydney, Melbourne and Perth; and numerous waste collection facilities in all mainland states serving over 800,000 households and more than 30,000 commercial/industrial clients.

Statutory and Policy Context

As part of this EA, statutory requirements and policies have been addressed, and are summarised as follows:

Commonwealth

Environment Protection and Biodiversity Conservation Act 1999

A search of the Schedules to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) showed that matters listed as being of national environmental significance have been recorded around the broad locality of the proposed Site. An assessment by a flora and fauna specialist concluded that no species listed under the Commonwealth's EPBC Act would be adversely impacted by the SAWT-BIOWISE proposal.

State

Statutory Planning Framework

The SAWT-BIOWISE proposal EA has been prepared by the proponent, SITA in accordance with State legislation and the requirements of the Director-General of the Department of Planning (DoP). Director-General's Requirements (DGRs) for the content of this EA were issued in accordance with part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act) on 28 December 2005.

Part 3A (Major Projects) of the EP&A Act

Part 3A applies to major State government infrastructure projects, development previously classified as State significant and other plans, projects or works declared by the Minister.

SEPP (Major Projects)

A Declaration was made under Clause 6 (1) of State Environmental Planning Policy (SEPP) (Major Projects) on the 6 December 2005, by the Minister, confirming that this proposal is to be considered as a Major Project.

Environmental Planning and Assessment Act 1979

The SAWT-BIOWISE proposal is an 'integrated development' and will require an Environment Protection Licence under the *Protection of the Environment Operations Act 1997*.

NSW Waste Avoidance and Resource Recovery Strategy

The SAWT-BIOWISE proposal recovers resources and reduces the amount of waste material going to landfill, and therefore contributes to meeting the *NSW Waste Avoidance and Resource Recovery* (WARR) *Strategy* resource recovery targets for municipal and commercial and industrial waste streams. SITA intends to treat or process up to 120,000 tpa of waste that would otherwise be disposed of to landfill, and potentially a further 14,400 tpa of biosolids, into approximately 28,000 tpa of useable compost each year. The process will also recover up to 8,000 tpa of recyclable materials to be used as a resource.

Local Government Action Plan

The SAWT-BIOWISE proposal will make a major contribution towards the aim of the DECC (2003) Local Government Action Plan requiring councils to achieve a target of diverting 66% of the total domestic waste stream from landfill by 2014.

Regional

Sydney Regional Environmental Plan (SREP) 20 – Hawkesbury-Nepean River (No 2 – 1997)

The proposed SAWT-BIOWISE development is located near a wetland area where Badgerys Creek joins South Creek. The wetland drains into South Creek and eventually the Hawkesbury River and there are implications for the proposed SAWT-BIOWISE development. The proposed SAWT-BIOWISE development has been designed having regard to SREP 20 for the Hawkesbury-Nepean River.

Local

Penrith Local Environmental Plan 201 – Rural Lands

Penrith Local Environmental Plan (LEP) 201 has the general aim of encouraging "proper management, development and conservation of valuable natural and man-made resources" of rural areas in Penrith. Rezoning approval has been granted by PCC for the site to allow a Waste Treatment Facility as a permissible use on the site. The rezoning was approved by the Minister for Planning and gazetted on 16 February 2007.

Consultation with Statutory Bodies

This proposed development has been discussed on more than 15 occasions with various approval authorities, namely, DECC, RTA, DoP and PCC during 2004 and 2005. The proposal was discussed with Department of Planning on 2 May 2006 and since that meeting further consultation has been sought with the RTA, DECC, Sydney Catchment Authority and Department of Natural Resources.

Further discussion and consultation was carried out during January, February and March 2007 with DoP and DECC, including written comments from DoP, dated 28 February 2007.

Project Need

Landfill capacity for untreated organic waste in the Sydney Metropolitan Area is very limited relative and available airspace is rapidly decreasing. The only facilities within Sydney capable of treating putrescible waste using mechanical biological waste treatment technologies are UR3R at Eastern Creek, Earthpower at Camellia, and Ecolibrium located in Camden and to be commissioned in 2008.

Approved landfills servicing the Sydney region accepting putrescible waste between June 2006 and June 2014 have a total available capacity of approximately 11 million tonnes (Mt). Sydney's putrescible waste generation over the same period is expected to be approximately 16.8 Mt, leaving a shortfall of approximately 5.8 Mt. SAWT-BIOWISE would accept 120,000 tpa of waste and 14,400 tpa of biosolids, for a period in excess of twenty years, which will assist in meeting this shortfall.

The aim of the SAWT-BIOWISE proposal is to recover resources from waste entering the facility, contributing to NSW meeting the WARR Strategy and reducing the amount of waste material going to landfill. The increase in the Section 88 Levy, as directed by the NSW Government, will ensure that the SAWT-BIOWISE facility remains financially competitive, encouraging less waste to landfill.

The SAWT-BIOWISE facility will eventually produce approximately 30,000 tpa of compost products once the facility is at full capacity. A market analysis for organic SAWT-BIOWISE clients conducted in March 2007 has identified a future need for the product. The compost produced by the facility is highly suitable for use in rehabilitation and extensive agricultural markets. Compost of a lower standard can be used for rehabilitation of mineral and waste sites and this is increasing in the Greater Sydney Region.

Site Selection

SITA considered several options for siting the waste processing plant. The western part of Metropolitan Sydney was selected as an area with an obvious need for AWT. The area is experiencing strong population growth, and waste generation in Western Sydney is increasing with population growth. Suitable waste management technologies are required to meet this need. Local and State Governments are increasingly looking to AWT to meet requirements to reduce quantities of waste to landfill. Locating the SAWT-BIOWISE facility in the western suburbs will meet a demand for such facilities to cater for the increased waste production in the area.

Other land that was considered included some commercial and industrial land. Such land is generally unsuitable because of insufficient buffer distances to neighbouring properties, the difficulty of obtaining approval and required licences, and the inefficiencies associated with transporting the inorganic material from a site for disposal.

This site was selected as it has the benefit of co-location with the existing landfill, is already cleared and is positioned with good buffers to nearby sensitive receptors, such as residences. This means there is existing infrastructure, established transportation routes and residual waste can be disposed of easily and quickly without the need for the waste to leave the site.

The Site

The Elizabeth Drive Landfill is currently licensed to accept Solid Waste Class 2, Industrial, non-putrescible waste and has sufficient space to allow the construction of the SAWT-BIOWISE facility without interfering with the independent operation of the landfill. The north-western corner of the Elizabeth Drive Site was selected due to its geotechnical stability, undisturbed land and distance from sensitive receptors. The selected location maximises the available void space and minimises any conflicts with the existing landfill.

Badgerys Creek, which forms part of the Hawkesbury-Lower Nepean River System, borders the Elizabeth Drive Site to the west. A vegetative buffer is maintained along much of its length, adjacent to the Elizabeth Drive Site where the creek forms a property boundary for the Elizabeth Drive Site. Existing Landfill operations have been carried out to avoid impacts on the creek by constructing all infrastructure away from the creek banks.

Surrounding Land Use

Land surrounding the Elizabeth Drive Site is rural and consists of a number of residential holdings with stables for horses and rural residential dwellings. Badgerys Creek and the McGarvie-Smith Farm, owned by the University of Sydney, bound the Elizabeth Drive Site to the west. To the north the Elizabeth Drive Site is adjacent to “Fleurs” which is rural land owned by University of Sydney. To the east of the Elizabeth Drive Site are two smaller residential holdings and further away is South Creek. There is an area of agricultural land to the south of the Elizabeth Drive Site and beyond that is Elizabeth Drive.

General Layout of the SAWT-BIOWISE Project

SAWT-BIOWISE requires an area of approximately 8 ha and consists of built structures, hardstand, maturation pads, stormwater and leachate ponds, and access roads. The access road will lead from the main gate of Elizabeth Drive landfill, remaining separate from the road to the landfill area, will generally run along the south and west parts of the landfill area, and will include a weighbridge at the exit of the facility.

The facility has been designed to adapt to different waste collection systems and waste streams. The built structures will include the waste receival area, residual load out area, resource recovery process,

composting tunnels and biocells. Two biofilter units will filter the air out of the building and processes primarily to act as odour control. An enclosed conveyor belt extending approximately 50m from the main building will transport the material from the composting tunnels and biocells to the maturation pads. A refining building will be sited on the edge of the maturation pads.

SAWT-BIOWISE Process

Waste

Two distinct waste streams will be received, municipal solid, commercial and industrial waste and source-separated organics waste

The former is referred to in this EA as Waste and will be received and separated by both mechanical and manual means into different fractions. These fractions including recyclable products such as glass, paper, cardboard, metals and plastics, which are separated before composting begins. The recyclable products will be taken from the site to the markets or for further processing elsewhere. The non-recyclable fraction will be directed to landfill for disposal. The organic material fraction will be directed to the composting tunnels and then to the maturation pad.

The latter will be processed separately in biocells as this will be a clean organic feedstock from PCC that will be returned to PCC as a high-quality compost product.

Green Waste and Biosolids

Green waste may be received separately from Waste and shredded before going directly into the compost mixing area. Biosolids will be mixed with the other source-separated organics waste to increase the nutrient value.

Composting Process

Municipal Solid, Commercial and Industrial Waste

The organic waste fraction obtained from the Waste will be loaded into enclosed composting tunnels, which are a series of concrete structures, similar to large bunkers. The material sits in the tunnels for up to five weeks, being mixed at least once during this time. Air is circulated through the material, to encourage decomposition. Temperature, oxygen, moisture and other parameters of the composting tunnels will be continuously monitored and controlled by Programmable Logic Controller. Water will be sprayed onto the material to maintain temperature and moisture content.

Source-Separated Organics Waste

The clean organics fraction from the source-separated organics waste, green waste and biosolids, will be mixed and placed in biocells. The purpose of the biocells is similar to the composting tunnels, in that the biocells encourage decomposition of the material, but differ in that they have an open top.

Maturation

After completion of composting in the tunnels or biocells, the material will be transported to an outside area to continue the maturation process. This outside area is a hardstand where the material is piled in windrows. The material is turned on a regular basis to assist the maturation process.

Refining

After 2-3 months maturation, the material is ready to undergo a refining process to remove any remaining physical contaminants. The compost will be graded into size fractions to optimise the product quality and meet market needs.

Water Management

The SAWT-BIOWISE will be a net user of water. The water required for the composting process will be supplied from any leachate produced during the process, then from the stormwater dams both within the proposed SAWT-BIOWISE facility and also from those situated around the landfill site. However, in times of low rainfall, water supply may need to be supplemented by mains water.

Operating Hours

The SAWT-BIOWISE facility will be available for waste to be accepted and product collected in line with the current licence for the neighbouring landfill operation. The resource recovery and sorting operation will normally operate 7am to 11pm Monday to Friday. The facility will have the flexibility to operate continuously from 7am Monday to 11pm Friday, 8am to 5pm on Saturdays, 8am to 4pm on Sundays and 7am to 4pm on Public Holidays, as necessary. The composting and maturation processes will be continuous.

Relevant Environmental Issues

The following environmental issues have been identified as being relevant for the EA of the SAWT-BIOWISE project.

Groundwater

Groundwater is currently monitored on a quarterly basis under the Licence for the existing landfill and the level and quality of the groundwater is reported in an Environmental Monitoring Annual Report to both PCC and DECC. Results of monitoring to date show there is no chemical impact of the landfill on the groundwater down-gradient of the Elizabeth Drive Site when compared to up-gradient monitoring. Mitigation measures have been incorporated into the design of the SAWT-BIOWISE facility to reduce the risk of groundwater pollution.

Surface Water

Badgerys Creek forms the western property boundary of the Elizabeth Drive Site and is the receiving environment for stormwater runoff. A buffer of at least 50m is maintained along much of the creek's length and provides substantial amelioration of any pollution entrained in stormwater runoff as well as water flow features.

Sedimentation dams will be used to store and control water quality of stormwater prior to any discharge from site as necessary. Water quality monitoring has been regularly conducted in designated locations along Badgerys Creek as part of the existing landfill licence. Preferential reuse of process and product-related leachate and stormwater runoff will prevent the discharge of untreated water from the SAWT-BIOWISE facility. The use of stormwater for processes will reduce the risk of dam overflow.

Flooding

The 1 in 100 year Annual Exceedance Probability (AEP) flood level coincides approximately with the western boundary of the Elizabeth Drive site and encroaches onto the site of the proposed SAWT-BIOWISE facility.

During detailed design the final levels will be set for the SAWT-BIOWISE site above the flood level and will not be subject to inundation during a 1 in 100 year AEP flood. Sections will be adequately protected to prevent damage and erosion during 1 in 100 year AEP storm events. Runoff for all events up to and including the 1 in 10 year, 24 hour AEP event will be retained on site.

These management measures will assist with the protection of Badgerys Creek. By retaining the water on site for a period of time, runoff into the Creek will be of an appropriate quality and released at a velocity that avoids scouring and erosion.

Flora and Fauna

It is considered highly unlikely that flora of significance occur within the site of the proposed SAWT-BIOWISE facility as targeted searches for species of significance did not locate any of the threatened species.

Given the highly disturbed nature of the site threatened flora are not expected to occur within the area of direct impact. Areas of vegetation around the perimeter of the site could potentially support threatened flora and a targeted survey for these species at the appropriate time of year may be required prior to ground disturbance.

Due to the lack of understorey, the Site is considered of moderate value as fauna habitat. Melaleuca shrubs and mature Eucalyptus trees on site may provide food for fauna however no critical breeding resources, such as tree hollows, were observed on site.

An 8-part test undertaken in 2002 determined that there would be no net impact to Cumberland Plain Woodland. This test was reviewed in 2006 and found to be still valid. In light of the 2002 Amendment to the *Threatened Species Conservation Act 1995* (TSC Act), an Assessment of Significance was reapplied to this community with the same conclusion. A referral will be sent to Department of the Environment and Water Resources for application to remove Cumberland Plain Woodland if required.

River Flat Eucalypt Forest, listed as Endangered under the TSC Act, occurs immediately adjacent to the site in moderate-to-good condition. This area of riparian vegetation to the north/northwest of the existing access track is currently fenced off from existing operations and no impacts are expected to occur to this community if mitigation measures are implemented.

A small area of mapped River Flat Eucalypt Forest occurs to the southeast of the access track. However, field investigations showed this area to support a few isolated *Eucalyptus tereticornis* trees, approximately 15-20m high, over cleared paddock.

Odour

The proposed SAWT-BIOWISE facility has the potential to generate odour from the acceptance and handling of the waste. Particular operations which may generate odour will be the green waste shredding, the biofilters through which all the building's air is dispersed, the leachate ponds and the maturation areas.

Odour dispersion modelling carried out as part of the EA for the SAWT-BIOWISE proposal suggests that residences close to the facility will generally experience odour levels of 4 odour units (ou) or less. The odour performance criteria as set by the DECC Guidelines for Air Pollutants for single dwellings, is 7ou, and the SAWT-BIOWISE facility appears to be within this level. However, because this facility will be on the same site as an operational landfill, cumulative impacts have been modelled and a more stringent criteria, is required to be met. Section 6 provides further detail.

Odour mitigation measures have already been incorporated into the design of the SAWT-BIOWISE facility include: all processes, except maturation and shredding, will be carried out in fully enclosed buildings under negative air pressure; closing roller doors; aeration of the leachate ponds; and all air from the main operation passing through biofilters.

Dust

The proposed SAWT-BIOWISE facility has the potential to generate and export dust. Potential sources of dust during the operation of the facility include compost on the maturation pads, mobile plant operation on material handling areas, and transportation and movement of waste and compost.

Dust modelling carried as part of the EA suggests that the main source of dust will be trucks using the access road from the entrance of Elizabeth Road Landfill to the facility. It is estimated this could generate up to 14,000 kilograms (kg) of dust each year, an amount that could be five times greater if this access road does not have a sealed surface.

At the nearest residences the increments in dust levels are unlikely to result in exceedences of the air quality criteria for dust concentration and deposition. It should be recognised that particulate matter concentrations arising from widespread events, such as bushfires, may continue to result in elevated levels on occasions.

Dust mitigation measures have already been incorporated into the preliminary design of the SAWT-BIOWISE facility, including fully enclosing all processes except maturation and shredding, locating compost maturation stockpiles away from sensitive receptors, regular cleaning of sealed access road, dust suppression by water cart, and minimising traffic movements on exposed areas.

Greenhouse Gas Emissions

Establishment of the SAWT-BIOWISE facility will significantly reduce the volume of greenhouse gases generated by the treatment of waste in preference to landfill disposal. Shifting from disposal of residual domestic waste in landfill to treatment through the technology will be of substantial environmental benefit. The facility will compost the organic fraction of municipal waste that would otherwise go to a conventional landfill. Organic materials make up approximately 56% of Municipal Solid Waste (MSW) with about half of this being food waste and half garden waste.

The SAWT-BIOWISE facility has many mitigation measures built into its process, including recovery of recyclables from the waste stream. Additionally, SITA will plant 300 trees to further mitigate against any impact due to greenhouse gas emissions. SITA has already planted 3500 Cumberland Plain Woodland species around the Landfill Site.

Noise

Noise generated from the proposed SAWT-BIOWISE facility has the potential to affect residents on neighbouring properties. It is expected that this impact will be minimal due to the distances these residents are from the proposed facility. Generally daytime noise levels will satisfy intrusiveness criteria at all receivers during normal operations. However, under adverse meteorological conditions exceedences are predicted of 1-5dBA depending on the conditions and whether or not the green waste shredder is operating. Operational procedures will be produced to manage these scenarios.

The only modelled exceedances are due to Council truck departures leaving Elizabeth Drive Landfill early morning. Traffic noise generated by the proposed additional activity of the SAWT-BIOWISE facility on the landfill Site meets the Environmental Criteria for Road Traffic Noise criteria for traffic noise.

The construction noise levels at McGarvie Smith Farm are predicted to marginally exceed the daytime goal by 2 A-weighted Decibels (dBA). The noise levels at the other receivers, and for all other periods, are within the relevant DECC goals.

Noise mitigation measures have already been incorporated into the preliminary design of the SAWT-BIOWISE facility. SITA will also consider either installing noise insulation or building a noise barrier on

the approach road as applicable. Other specific noise mitigation will be implemented to reduce impacts from operational noise.

Traffic

Once operating at full capacity, traffic flow to and from the Elizabeth Drive Site, including the SAWT-BIOWISE facility, will increase to approximately 320 vehicles per day. This is within the currently permitted amount and represents a marginal increase on existing traffic flows on Elizabeth Drive. The majority of these vehicles will be heavy trucks, and the landfill site entrance and access road has been constructed to a level capable of accepting this traffic.

Heritage

There is one Indigenous Heritage site within the relevant area of search. This site is entirely outside the SAWT-BIOWISE facility area. It has been assessed that there are no direct or indirect impacts on this site. There are no sites of Non-indigenous Heritage within 1.5 km radius of the SAWT-BIOWISE facility and those within a 5 km radius have been assessed as being too distant to be impacted by this proposal.

Visual Amenity

The Elizabeth Drive Site is situated in a relatively open landscape at the peak of a gently raised ridgeline bounded to the east and west by the South Creek and Badgerys Creek valleys respectively. The temporary stockpile to the south-east of the proposed SAWT-BIOWISE Site is the current dominant feature in the local topography.

The main potential visual impact of the SAWT-BIOWISE facility once constructed will be the height of the main building. SAWT-BIOWISE buildings will be designed to sit at an elevation as low as practicable without compromising flood protection or drainage design. Screening by the use of trees and landforms is particularly effective. Viewshed modelling predicts that only the property at 1745 Elizabeth Drive will have a view across the landfill to the SAWT-BIOWISE facility. Only the roof of the main building will be visible initially and the view of the facility will be entirely blocked once the landfill has been constructed to its approved final levels.

Hazardous

A classification of the proposed SAWT-BIOWISE facility was undertaken by applying the process detailed in Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (DoP 1997) (SEPP 33).

Waste to be received may contain a tiny fraction of potentially hazardous materials, primarily within waste from a typical household, though this percentage is extremely small and well below the dangerous goods storage thresholds identified in the screening method. These materials will be temporarily stored on site prior to collection and removal by an appropriately licensed contractor.

Other potentially hazardous materials brought onto the site are related to cleaning and vehicle maintenance and diesel. Assessment of these materials according to SEPP 33 indicates that the development is not considered to be potentially hazardous.

Relevant spill containment and other safety equipment will be installed and maintained. This includes bunds around storage tanks, fire extinguishers and drains.

Offensive

Under SEPP 33, the proposed SAWT-BIOWISE facility could be classified as a "potentially offensive development". However, SEPP 33 has provision for circumstances where a Licence can be granted and then "the development is permissible and can proceed to detailed assessment". Receipt of a Licence under the POEO Act will allow the proposed SAWT-BIOWISE development to proceed because it is no longer a 'potentially offensive development'.

Health

Potential health impacts of the SAWT-BIOWISE facility can be managed satisfactorily by using current and established workplace safety practices and personal protective equipment. Nuisance animals will be discouraged by the SAWT-BIOWISE process being within fully-enclosed buildings and the Site being securely fenced.

Environmental Management

Construction and Operational Environmental Management Plans (EMPs) would be prepared after approval of the project in accordance with DoP EMP guidelines and the Environmental Guidelines: Composting and Related Organics Processing Facilities. The EMPs will specify monitoring and control strategies for relevant environmental issues and address the legal and regulatory requirements that will apply to the SAWT-BIOWISE facility. Both EMPs aim to ensure that on- and off-Site impacts from the facility are controlled and the environmental impact is kept to a minimum. Outline EMPs are provided with this EA.

Environmental Commitments

In accordance with the DGRs issued by the Director-General for Planning, a draft Statement of Commitments (SoC) is required to be included within the EA. The draft SoC provides a list of commitments that SITA is prepared to make to minimise or avoid the environmental impacts of the SAWT-BIOWISE Facility. The draft SoC will be finalised following consideration of the feedback received during the public exhibition of the EA.

Commitments have been included to mitigate potential environmental impacts during the design, construction and operational phases of the SAWT-BIOWISE facility. The broad areas of commitment are to minimise impacts on:

- Geology, soils and groundwater;
- Flooding and hydrology;
- Odour emissions;
- Visual amenity and landscape.
- Surface water quality;
- Flora and fauna;
- Dust;
- Heritage;
- Surface water quality;
- Greenhouse gas emissions;
- Noise during operation;
- Minimise the risk of fire hazard; and
- Minimise potential health and safety impacts to workers and future users of the compost material.