PART D
Conclusion

19. Environmental Management

This chapter outlines the requirements for environmental management plans that would be part of the construction and operational phases of the project.

A summary of the environmental monitoring requirements and lists of the approvals and licences required are also provided.

19.1 Current Environmental Management

Management of activities at the LHWRC is undertaken in accordance with the site Environmental Management Plan (EMP). This includes environmental monitoring as outlined in the Environment Protection Licence EPL 5065. The current monitoring regime is outlined in Table 3-1 in chapter 3 of this environmental assessment.

19.2 Background and Structure

EMPs would be produced for the project, once approval from the NSW Department of Planning has been obtained. Two separate EMPs would be produced, one for the construction phase and one for the operational phase of the project. The general structure of the EMPs is listed below.

19.2.1 Introduction and Purpose

Establishes and details environmental goals and objectives.

19.2.2 Statutory Requirements

Commonwealth and State statutory requirements including licences and approvals would be detailed in the EMP.

19.2.3 Environmental Management Procedures

Describes operational procedures for preventing environmental impacts including:

- Safeguards to be implemented;
- List of actions, timing and responsibilities;
- Reporting requirements;
- Specifications incorporating environmental safeguards;
- Training of personnel (proponent and contractors) in environmental awareness, due diligence and Best Practice Management Systems;
- Environmental accident and incident reporting requirements;
- Process surveillance and auditing procedures;
- Environmental complaint handling procedures;
- Site management and control procedures.

19.2.4 Monitoring Requirements

Environmental monitoring would be required for noise, flora and fauna, air and dust, waste, soils and water and traffic. A monitoring plan would be included in the EMPs which details location, duration and frequency of monitoring and procedures and conditions to be followed for each of these requirements.

19.2.5 Emergency Response

The EMP would include an Emergency Response Plan consistent with the plan for the LHWRC site, incorporating procedures for fires, pollution incidents and accidents. The Plan would detail procedures to be followed, responsibilities, equipment and contact details for responsible site staff and emergency authorities. The Plan would be developed in consultation with local organisations and authorities such as ANSTO, Sutherland Shire Council, Fire Brigade, State Emergency Service, Volunteer Bush Fire Brigade and PCYC.

19.2.6 Review and auditing procedures

This details procedures to:

- Audit the project against the environmental assessment, EMP and any conditions, approvals and licences; and
- Review and amend the EMP if shortcomings are found during the audit.

19.3 Construction EMP

An EMP for the proposed construction works would be developed once a construction contractor has been selected. Each contractor working on the project would prepare a safe work method plan and risk assessment to cover their specific activities, and these plans would be reviewed and approved by the proponent. The Contractor would require an accredited Environmental Management System ISO 14001.

In accordance with the DECCW noise control manual (DECC 1994), construction activities would be restricted to between 7:00 am and 6:00 pm Monday to Friday and 7:00 am to 1:00 pm on Saturdays. No construction work would be undertaken on Sundays or public holidays. Construction work undertaken outside of these hours would be subject to consultation with the DECCW and Sutherland Shire Council.

Control of erosion and sedimentation would be required during the construction period, including temporary works. This includes erosion and sediment control works to prevent sediments from being carried into the stormwater system and natural creek system. The control measures would include cut-off drains, silt fences and other erosion controls.

A site sediment and erosion control plan would be prepared in accordance with the requirement of the Blue Book: Managing Stormwater: Urban Soils and Construction, Department of Housing. These controls would be implanted before any construction commences. A 90th percentile 5 day rainfall duration would be used to determine the volume of temporary sediment dams. As stated in the licence conditions, an upper limit of 50 mg/L of total suspended solids exists for any pumped discharge of stormwater.

The construction EMP would be similar in structure to the *Jacks Gully Waste and Recycling Centre-Alternative Waste Technology Centre Construction Environmental Management Plan* (GHD, 2007).

Specific plans would include:

- **Noise Management Plan** - The plan would address how noise would be mitigated and managed during construction activities. Noise assessments would be carried out in accordance with the NSW Industrial Noise Policy;
- **Flora and Fauna Management Plan** - Site preparation and construction must be carried out in a manner that would minimise impacts on flora and fauna. The Flora and Fauna Management Plan would address how potential construction impacts on Flora and Fauna would be mitigated and managed during the construction phase;
- **Air and Dust Management Plan** – Site construction activities must be carried out in a manner that would minimise dust impacts. The Dust Management Plan would include mitigation measures to control dust from exposed areas, stockpiles, plant & equipment and unsealed roads within LHWRC;
- **Waste Management Plan** – This plan would outline the waste management procedures associated with the construction including disposal requirements, measures to prevent the generation and measures to reduce, re-use or recycle wastes where possible;
- **Soil and Water Management Plan** – The plan will be prepared to address how potential construction impacts in soil and water quality will be mitigated and managed during construction works. These would include drainage controls, erosion controls, sediment controls and dust controls;
- **Traffic and Roadworks Management Plan** – The plan will include truck movements to and from the site, interactions with general public, parking and access requirements for construction personnel and safety signage and training of personnel in traffic management.

The construction EMP would provide a working tool during the detailed design of the proposed development and would form the basis for environmental specifications in any contractual arrangements between the proponents and the contractor. The EMP would also include specific environmental strategies and plans for construction activities associated with the development.

19.4 Operational EMP

The operational EMP would include a number of procedures which would be made more specific following the environmental assessment approval conditions and POEO Licence Application. The plan would be similar in structure to the *Jacks Gully Waste and Recycling Centre – Alternative Waste Technology Operational Environmental Plan* (GHD, 2007).

Specific Plans would include:

- **Stormwater Management Plan** – The plan would include the measures to retain and re-use water on-site and ensure the surface run-off water is maintained at acceptable levels. The plan would also include erosion and sediment mitigation measures;
- **Process Water Management Plan** – The plan would include measures to optimise reuse and ensure that wastewater generation and need for disposal is minimised;

- **Air Quality Management Plan** – The plan would include mitigation measures for control of odours, dust and particles and monitoring undertaken. The plan will also outline procedures to handle customer complaints.
- **Noise and Vibration** – The noise and vibration management plan will include noise and vibration control measures, monitoring and procedures to handle noise complaints.
- **Waste management plan** – The plan would include disposal requirements, measures to prevent the generation and measures to reduce, re-use or recycle wastes where possible.
- **Soil and water management plan** – The plan would address how potential construction impacts on soil and water quality will be mitigated and managed during operation and the required water quality monitoring.
- **Pest, Vermin and Weed Control** – The plan will outline mitigation measures that will control pest and vermin that may be attracted to the waste facility and minimise the degradation of the local amenity caused by pest, vermin and noxious weeds.

19.5 Environmental Monitoring

Environmental monitoring procedures that are currently carried out on-site are in accordance with the monitoring requirements as stipulated in EPL 5065. These procedures are summarised in Table 3-1. Note: the AWT facility will get its own EPL, in addition to the LHWRC EPL.

The monitoring procedures to be implemented during construction and operation are outlined in Table 19-1 and Table 19-2 respectively.

Table 19-1 Monitoring Requirements during Construction

Issue	Monitoring
Noise	Measure noise levels at the boundary prior to construction, at commencement of construction and monthly during construction.
Flora and Fauna	Monitor the extent of clearing to ensure it is confined to areas in the environmental assessment.
	Conduct targeted survey on-site for any threatened flora and fauna species for relocation prior to construction, if feasible.
Air and Dust Quality	Continually monitor dust generation from site (visually) to ensure excessive dust is not being produced and that dust suppression activities are effective.
	Monitor dust generation from site by checking readings from existing dust gauges on site and additional gauges - on a monthly basis.
	Continue to monitor dust generation from continuous dust sampler.
Waste Disposal/Litter	Inspect waste receptacles to ensure they are not overfilled and are being collected regularly.
	Monitor waste recycling and disposal procedures to ensure they are being complied with the current recycling procedures at the main LHWRC site.
Water	Allow for sufficient water retention and capacity in sediment dam for the area, including a first flush tank. Undertake regular surface water monitoring at receiving waterways.

Issue	Monitoring
	Review results from surface water sampling undertaken internally by WSN as part of overall site management – prior to discharging and during discharge to Mill Creek.
Groundwater	Review groundwater levels and sampling results from external monitoring undertaken for WSN as part of overall site management.
Erosion & Sediment Control	Prior to commencement of each stage of construction, inspect site to ensure that sediment and control devices are in place.
	Inspect sediment control devices to ensure they are installed and operating correctly. Inspect devices particularly during wet weather events to monitor water flows and drainage lines and install new devices as required.
Traffic	Inspect trucks to ensure they are not overloaded, adhere to speed limits, cover their loads, correctly licensed and undertake regular inspections and safety checks.
	Inspect signs and hazards markers to ensure they are used appropriately, are in place and clearly visible.

Table 19-2 Monitoring Requirements during Operation

Issue	Monitoring
Water	Monitor water in sedimentation dams and receiving waterways on a monthly basis. Monitor surface water during wet weather events.
	Review results from surface water sampling undertaken by WSN as part of overall site management plan prior to discharging and during discharge to Mill Creek.
Air Quality	Monitor dust generation from site by checking readings from existing dust gauges and additional gauges – on a monthly basis.
	Monitor odour levels once plant is operating and undertake regular odour patrols in the area.
Groundwater	Review groundwater levels and quality sampling results from monitoring undertaken by WSN as part of overall site management.
Noise	Conduct noise monitoring at plant during plant commissioning stage and normal operation.
Pest, Vermin and Weed Control	Arrange for inspection on a annual basis by a licensed pest control and ensure adequate control is implemented. Control weeds using an appropriate biodegradable herbicide.
Traffic	Ensure vehicles are adhering to speed limits, and weights limits and using defined access roads.
Gas Monitoring	Undertake regular gas monitoring at methanogenic tank to ensure nil fugitive gas emissions and escape.

19.6 Environmental Auditing

Independent environmental audits would be carried out annually. The audit report would be made available to WSNs Chief Executive Officer, The WSN Board, Sutherland Shire Council, DECCW and relevant stakeholders.

19.7 Environmental Reporting

19.7.1 Record Keeping

Full record of all environmental procedures observed would be recorded including:

- Monitoring dates, analysis and results;
- Details of quantities of construction and demolition removed from the site and details of materials recovered;
- Details of quantities and types of waste removed from the site;
- Environmental complaints received, including corrective action taken; and
- Details of environmental licences and approvals.

19.7.2 Reporting

An Annual Return would be prepared for submission to DECCW. The return would include:

- A statement of Compliance with licence conditions;
- Monitoring and complaints summary;
- Any shortcomings in site activities or environmental controls identified in the Return would be identified and EMP amended accordingly;
- In addition, incidents causing or threatening material harm to the environment would be reported to the DECCW, in accordance with POEO licence conditions.

The reporting requirements are outlined in Table 19-3.

Table 19-3 Reporting Requirements

Item	Frequency
Annual Return	Annual
Statement of compliance signed by designated representative of operating licensee	Annual
Record of Complaints	Within 48 hours of receipt of complaint.
Notification of Incident of Environmental Harm	Immediate notification through EPA pollution line; Written report required within reasonable time frame of the event occurring.
Gas Incident	Within 7 days of occurring.
Fire or Explosion Incident	Immediate notification through EPA pollution line; Written report as soon as practicable.
Fire Report	Immediate notification through EPA pollution line; Written report within 7 days of occurrence.

20. Draft Statement of Commitments

Section 75F(6) of the EP&A Act states that the Director-General may require the proponent to include in an environmental assessment a statement of the commitments the proponent is prepared to make for environmental management and mitigation measures. In accordance with this requirement, this section provides the commitments for environmental mitigation, management and monitoring for the project.

The proponent commits to implement the measures outlined in Table 20-1.

Table 20-1 Draft statement of commitments

Issue	Commitment
Environmental management plans	As described in chapter 19, a construction environmental management plan (CEMP) would be prepared and implemented to guide environmental management and monitoring activities during construction. The CEMP would include the following sub-plans: ◗ Noise management plan – The plan would address how noise will be mitigated and managed during construction activities, in accordance with DECC (1994) Environmental Noise Control Manual; ◗ Flora and fauna management plan (including tree clearing protocol) – The plan would address how impacts on flora and fauna would be mitigated and managed during the construction phase, including the measures listed in chapter 13; ◗ Air and dust management plan – The plan would outline mitigation measures to control dust from exposed areas, stockpiles, plant equipment and unsealed roads, including the measures listed in chapter 10; ◗ Waste management plan – The plan would include disposal requirements, measures to prevent the generation and measures to reduce, re-use or recycle wastes where possible; ◗ Soil and water management plan – The plan would address how potential construction impacts on soil and water quality will be mitigated and managed during construction works, including the measures listed in chapter 9; ◗ Traffic management plan – The plan will include truck movements to and from the site, interactions with general public, parking and access requirements for construction personnel and safety signage and training of personnel in traffic management. Similarly, an operational environmental management plan (OEMP) would be prepared and implemented to guide environmental management and monitoring activities during operation. The OEMP would include the following sub-plans: ◗ Stormwater management plan – The plan would include the measures to retain and re-use the maximum amount of water on-site and ensure the surface run-off water is maintained at acceptable levels. The plan would also include erosion and sediment mitigation measures; ◗ Process water management plan – The plan would include measures to optimise reuse and ensure that wastewater generation and need for disposal is minimised; ◗ Air quality management plan – The plan would include mitigation measures

Issue	Commitment
	for control of odours, dust and particulates and monitoring undertaken. The plan will also outline procedures to handle any complaints. ◗ Noise management plan – The noise management plan will include noise control measures, monitoring and procedures to handle any noise complaints. ◗ Waste management plan – The plan would include disposal requirements, measures to prevent the generation and measures to reduce, re-use or recycle wastes where possible; ◗ Soil and water management plan – The plan would address how potential construction impacts on soil and water quality will be mitigated and managed during operation and the required water quality monitoring; ◗ Pest, vermin and weed control – The plan will outline mitigation measures that will control pest and vermin that may be attracted to the waste facility and minimise the degradation of the local amenity caused by pest, vermin and noxious weeds. ◗ Traffic management plan – The plan will include parking and access requirements, safety signage and training of personnel in traffic management. Monitoring would be undertaken according to the EPL for the AWT facility issued by DECCW, which would include monitoring set out in section 19.5 of this environmental assessement.
Soil and water	The proponent would implement all practicable measures to minimise soil erosion and discharge of sediments from the site. The erosion and sediment control plan prepared as part of the construction environmental management plan would ensure: ◗ Sediment and erosion control measures, such as sediment fences, are installed and maintained, with particular attention where the drainage is towards a surface water body; ◗ Stockpiles are stabilised and remain covered and appropriate sediment and erosion control measures are installed down slope of all stockpiles; and ◗ Spill kits are made available to construction vehicles. The construction environmental management plan would also set out procedures for the management of accidental spills to minimise potential contamination during construction. Areas containing storage tanks would be fully bunded to contain accidental spills. Opportunities for beneficial reuse of excess process water would be investigated. An asbestos identification protocol would be developed for the identification and removal (by a suitability qualified contractor) of asbestos should it be discovered during the earthworks and construction activities.
Air quality and odour	A dust management plan would be prepared as part of the construction environmental management plan detailing measures for the control of dust generation, including: ◗ Site management measures to limit dust emissions from work sites, including: ○ Managing stockpiles to suppress dust emissions; ○ Watering of unsealed haul roads and disturbed surfaces

Issue	Commitment
	(including construction areas); ○ Restricting the size of disturbed surfaces as much as practicable; ○ Prevention of truck over-loading and covering dusty loads; and ○ Vehicle movement controls, particularly entrance to and exit from construction work sites (and washing down trucks before they leave the site – if necessary). ◗ When conditions are excessively dusty and the dust emissions criteria from operations cannot be maintained, then all dust generating activities must cease until dust suppression can be adequately carried out; and ◗ Dust monitoring would be undertaken during construction. Monitoring would comply with DECCW guidelines for the Sampling and Analysis for Air Pollutants in NSW (DECC 2005). The proponent would ensure the design and operation of the project minimises the potential release of odour emissions. The specifications provided to prospective equipment suppliers would dictate the technical and environmental performance the equipment would be expected to meet, based on the proponent's operational requirements and the conditions of consent for the project.
Traffic and transport	The proponent would ensure that the layout of the proposed car parking areas, including driveways, aisle widths, grades, parking bay dimensions, sight distance requirements and turn paths is designed in accordance with AS 2890.1-2004 and AS 2890.2-2002 during the detailed design phase. Car parking areas and entry/exit points would be clearly delineated through line marking and signage to ensure smooth, safe traffic flow. During the construction of the project, no mitigation measures are required on the external road network. A construction traffic management plan would form part of the construction environmental management plan to ensure safe movement of vehicles and pedestrian into and around the site. The plan would include details on construction vehicle routes, truck numbers, hours of operation, access arrangements and traffic control. The proponent would continue to liaise with the Roads and Traffic Authority regarding the design of Heathcote Road/New Illawarra Road intersection.
Greenhouse gas and energy efficiency	Potential energy efficiency measures including in the areas of lighting, compressed air, ventilation, odour prevention and removal, heating and cooling and process efficiency (as detailed in section 12.6) would be considered in the detailed design phase of the project.
Biodiversity	Biodiversity management measures would be implemented during construction to minimise impacts on remaining vegetation. Management measures would be detailed in the construction environmental management plan and would include: ◗ Chipping/shredding cleared vegetation for use as mulch; ◗ Installation of standard erosion control measures prior to construction to limit erosion which could affect adjacent vegetation communities and watercourses; ◗ Erection of temporary exclusion fencing around areas of vegetation to be retained prior to construction. Locate materials, stockpiles, vehicle access and parking areas on existing cleared and disturbed land;

Issue	Commitment
	◗ Stabilisation of steep banks and bare earth areas as soon as possible after construction or removal of vegetation to limit gully and sheet erosion; ◗ Limit backfilling around the base of trees and shrubs to be retained; ◗ Implement a tree clearing protocol to ensure that any native fauna present are not injured during the clearing process; and ◗ Site inductions to include information on workers' obligations regarding the protection of vegetation and fauna habitats. The design of the site layout has used large areas of cleared land to minimise the required vegetation loss at the site. This includes locating site stormwater and process water dams away from the vegetated area. Planting and landscaping would be carried out in accordance with the landscape management plan that has been prepared to guide the improvement and maintenance of vegetation at the site.
Hazards - risk	To ensure the ongoing safe operation of the project, a comprehensive safety management system would be developed and implemented. The safety management system would take into account the results of the PHA, and include: ◗ Installation of bollards or alternative protection around the biogas buffer tank to prevent vehicle collisions with the exposed piping and associated equipment; ◗ All potential ignition sources should be eliminated from areas containing biogas; ◗ Signage should be placed in suitable locations to indicate the presence of flammable substances; ◗ Local exhaust and general room ventilation to prevent accumulation of explosive mixtures; ◗ Handling equipment and tools grounded to prevent sparking; ◗ Depending on the odour properties of the biogas, an additive may be used to odorise the gas e.g. mercaptans in order to improve detection in case of a release; ◗ Permit to work systems for hot work; ◗ Specific materials of construction due to the flammable nature of the process output; ◗ Development of a maintenance regime; and ◗ Suitable emergency response procedures and equipment. In addition, all materials would be stored in accordance with relevant legislation and Australian Standards.
Hazards - bushfires	To minimise potential bushfire risk, asset protection zones would be provided and maintained, appropriate construction materials and methods would be used, safe access and egress and an adequate supply of water would be provided: 1. Asset protection zone: ◗ Asset protection zones would be provided as detailed above. ◗ Rubbish and other material would not be stored in asset protection zones unless it is fully enclosed in non-combustible containers and removed on a regular basis (at least weekly).

Issue	Commitment
	2. Construction standards: ◗ All building materials would be non-combustible where possible and meet the objectives of construction level 2 of AS 3959-1999. ◗ The administration building would be constructed to level 3 of AS 3959-1999. 3. Access/egress: ◗ Safe access and egress would be provided, including an emergency access gate leading onto Little Forest Road, south of the actual site access. ◗ The Rural Fire Service would be consulted annually as part of the overall fire accreditation for the site with specific consideration of emergency response approaches (fire fighting strategies, evacuation planning). 4. Water supply: ◗ Water supply would meet the requirements of AS 2419.1-2005 Fire hydrant installations. ◗ Two 225,000 L dedicated fire-fighting water tanks would be provided on site. 5. Emergency management: ◗ A bush fire evacuation plan would be prepared and integrated with the LHWRC emergency management plan and ANSTO requirements. 6. Landscaping and site management: ◗ Landscaping would be maintained to meet the standards of an asset protection zone. ◗ Rubbish and other materials would not be stockpiled within the asset protection zone.
Heritage	GLALC would be contacted if any items of Aboriginal heritage significance are identified during the project construction or operation.
Noise	The project would be designed and operated to ensure that noise criteria are not exceeded. A construction noise management plan would be prepared as part of the construction environmental management plan to detail how construction impacts would be minimised and managed. The operational environmental management plan would include noise control measures, monitoring and procedures to handle any noise complaints. Noise monitoring during construction and operation would be undertaken in accordance with DECCW requirements.
Social and economic	The proponent would undertake consultation with relevant stakeholders including during the construction period. Once operational, tours of the project could also be organised. The proponent would maximise the use of arterial roads for construction access, and place controls over the use of local roads for construction vehicles.

Issue	Commitment
Visual amenity	A landscape zone would be provided along the New Illawarra site boundary to allow for landscaping and screening of the project. Landscaping of the site would be undertaken in accordance with the landscape management plan. The landscape plan includes landscaping and screening of the project along both New Illawarra Road and Little Forest Road boundaries. The design of the project would involve consideration of building materials and treatments to minimise the potential visibility of the project. Design recommendations provided in section 18.4 would be incorporated into the detailed design of the project where practicable.

21. Project Justification and Conclusions

21.1 Justification for undertaking the project

The justification for the project is based on a number of factors:

- The project is consistent with the strategic direction for waste management in NSW and the proponent's corporate objectives and strategic drivers;
- The project meets a need for alternative waste technologies needed to increase resource recovery from municipal waste and divert valuable materials from landfill;
- The project would assist in satisfying regional demand for more sustainable waste management facilities;
- The project would enable councils to reduce their long term waste management costs and reduce greenhouse gas emissions associated with landfilling their wastes;
- The site is suitable for the proposed use; and
- The project uses innovative technology already operating locally at a similar scale.

These factors are summarised below.

21.1.1 The strategic direction for waste management in NSW

The project would deliver outcomes consistent with state legislation and strategies for sustainable waste management. These include the *Waste Avoidance and Resource Recovery Act 2001*, the Waste Avoidance and Resource Recovery Strategy 2007, and the Sydney Metropolitan Strategy.

The project aligns with the philosophy of viewing waste as a resource – and recovering resources in their highest net resource value state. The recovery of resources in this manner creates value from the waste stream.

It is estimated that up to 70% of the 100,000 tonnes of waste that the project would process each year, would be diverted from landfill.

21.1.2 The proponent's corporate objectives and strategic drivers

The proponent is committed to the principles of waste avoidance and resource recovery. The proponent is committed to providing environmentally sound and sustainable waste management solutions that improve resource recovery, and reduce the quantities of waste being disposed to landfill.

Landfilling is currently the main method used to dispose of putrescible waste in Sydney. It is widely recognised that this method of waste disposal can result in significant environmental impacts that need to be managed in the medium to long term.

The proponent is transforming its business from one that is based mainly on the disposal of putrescible waste to landfill, to an environmentally sound and sustainable business, using appropriate engineering solutions for waste management such as materials recovery facilities and AWT facilities.

The project would meet the objectives and business strategy of the proponent.

21.1.3 Need for alternative waste technologies

The NSW Government has set targets for waste diversion by 2014. Recycling of municipal waste is to be increased from a baseline of 26% of waste to be diverted from landfill, to 66% to be diverted by 2014. However, the total amount of diversion by recovering paper and recyclable containers alone has leveled out. The only way councils will achieve the 66% diversion target is to recover organic components of the waste stream (e.g. food) through an alternative waste management system.

21.1.4 Suitable site

The site has access to several major roads, including New Illawarra Road, Heathcote Road and the M5 further to the north, which provide efficient access. It is located adjacent to the existing LHWRC facility, and is zoned for the proposed use.

21.1.5 Proven technology

The technology proposed for the project is already operating. A fully functioning plant that was the basis for the project design has been operating in Tel Aviv, Israel for many years, and the proponent recently opened a similar facility (Ecolibrium™ Mixed Waste Facility) at the MRRP in Narellan to service the Macarthur Region of councils.

21.2 Conclusions

This environmental assessment has considered the potential impacts of the proposal to construct and operate an AWT facility at the site and potential cumulative impacts of other proposed projects within the LHWRC at Lucas Heights.

This environmental assessment has been prepared in accordance with the provisions of Part 3A of the *Environmental Planning and Assessment Act 1979* and the requirements of the Director-General of the NSW Department of Planning. The environmental assessment has documented the potential environmental impacts associated with the project, considering both potential positive and negative impacts of the project, and recommending management and mitigation measures to protect the environment where required.

Environmental investigations were undertaken during the preparation of the environmental assessment to assess the potential environmental impacts. These included specialist assessment on issues involving air quality and odour, traffic, noise, greenhouse gas emissions, biodiversity, hazards, bushfire, heritage and visual amenity.

Overall the project would:

- Divert valuable resources from landfill and permit recovery and recycling of resources from the waste stream;
- Significantly reduce greenhouse gas emissions through:
  - Capture of biogas produced through treatment of the organic component of the waste stream;
  - Recovering (for recycling) homogenous streams of plastic, metal and glass;
  - Avoiding emissions from material that would otherwise be landfilled; and
  - Substitution of fossil fuels by generation of green electricity and export to the grid.

- Reduce disposal to landfill of potential resources and assist Sydney councils in achieving their targets for diversion of waste from landfill; and
- Minimise odour, noise and traffic impacts on the local community.

The project would also provide benefits through development of a new industry and new employment opportunities in the region.

The environmental assessment has examined a number of key issues surrounding the project, including identification of potential negative impacts. There are no major environmental issues with this project. The main potential impacts that need to be managed are:

- Potential air quality issues such as dust generation associated with construction of the project;
- Noise-related impacts associated with construction and operation of the project;
- Hazards and bushfire risks;
- Visibility of the project to passing traffic and neighbouring sites; and
- Construction impacts (traffic generation, soil and water management etc).

The environmental assessment concludes that many of the potential issues identified (including air and noise issues) would be effectively managed through project design features. To manage other issues, and in some cases eliminate them completely, a number of mitigation and management measures (commitments) would be implemented. These are outlined in chapter 20.

Commitments made by the proponent include the preparation of a construction environmental management and operational environmental management plan to ensure that the mitigation and management measures are developed, implemented and monitored. These plans would also ensure compliance with relevant legislation and any conditions of approval.

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