



# **Operational Environmental Management Plan**

**For  
Woodlawn Mechanical Biological  
Treatment Facility**

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## Contents

Quality Information.....	<b>2</b>
<b>DEFINITIONS/ABBREVIATIONS .....</b>	<b>4</b>
<b>Section 1 Introduction.....</b>	<b>6</b>
1.1 Overview .....	6
1.2 Scope and Objectives.....	7
1.3 Supporting Environmental Management Plans .....	7
<b>Section 2 Statutory and Policy Considerations .....</b>	<b>8</b>
2.1 Legal and Other Requirements .....	8
2.2 Environmental Approvals.....	11
2.3 Management System.....	12
2.4 Environmental Policies .....	13
2.5 Operational Efficiency.....	14
<b>Section 3 Facility Overview .....</b>	<b>15</b>
3.1 Site Setting .....	17
3.2 Facility Description .....	19
3.3 Operations Overview.....	22
3.4 Operational Environmental Impacts .....	26
3.5 Key Environmental Issues and Management Measures.....	30
<b>Section 4 Implementation of the OEMP .....</b>	<b>37</b>
4.1 Structure, Roles and Responsibility.....	37
4.2 Training .....	40
4.3 Communication and Consultation.....	40
4.4 Incident and Emergency Response.....	43
<b>Section 5 Monitoring and Review of the OEMP .....</b>	<b>49</b>
5.1 Monitoring and Reporting .....	49
5.2 Management Review.....	52
5.3 Environmental Monitoring Program .....	53
References .....	54
<b>Appendices .....</b>	<b>55</b>
Appendix A - Site Plans .....	56
Appendix B1 - Conditions of Consent.....	57
Appendix B2 - Environment Policy.....	58
Appendix B3 - Sustainability Policy.....	59
Appendix C - Operation Condition Compliance Report.....	60
Appendix D - Supplementary Environmental Management Plans .....	61
Appendix E - Environmental Monitoring Program .....	62
Appendix F – Internal Procedures and Site Checklist.....	63
Appendix G – Biofilter System Operating & Maintenance Manual .....	64

## **DEFINITIONS/ABBREVIATIONS**

<b>AEMR</b>	Annual Environmental Management Report
<b>AHD</b>	Australian Height Datum
<b>ARI</b>	Average Recurrence Interval
<b>AS/NZS</b>	Australian and New Zealand Standard
<b>BTT</b>	Banksmeadow Transfer Terminal
<b>BRS</b>	Biological Refining System
<b>CLC</b>	Community Liaison Committee
<b>CTT</b>	Clyde Transfer Terminal
<b>DA</b>	Development Application
<b>DPE</b>	Department of Planning and Environment
<b>DPI</b>	Department of Primary Industries
<b>EA</b>	Environmental Assessment
<b>EIS</b>	Environmental Impact Statement
<b>EMP</b>	Environmental Management Plan
<b>EMR</b>	Environmental Management Representative
<b>EPA</b>	NSW Environment Protection Authority
<b>EP&amp;A Act</b>	Environmental Planning and Assessment Act 1979
<b>EPL</b>	Environment Protection Licence
<b>ERP</b>	Emergency Response Plan
<b>GHG</b>	Greenhouse Gas
<b>GMC</b>	Goulburn Mulwaree Council
<b>kL</b>	Kilolitres
<b>km</b>	Kilometres
<b>IMF</b>	Crisps Creek Intermodal Facility
<b>ISO</b>	International Standard Organisation
<b>LEP</b>	Local Environmental Plan
<b>LGA</b>	Local Government Area
<b>MBT</b>	Mechanical Biological Treatment Facility
<b>ML</b>	Megalitres
<b>m</b>	Metres
<b>m<sup>2</sup></b>	Metres Squared
<b>m<sup>3</sup></b>	Metres Cubed

**PLAN****Operational Environmental Management**

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<b>MP</b>	Major Project
<b>MSW</b>	Municipal Solid Waste
<b>NIMS</b>	National Integrated Management System
<b>OCS</b>	Odour Control System
<b>OEMP</b>	Operational Environmental Management Plan
<b>PIRMP</b>	Pollution Incident Response Management Plan
<b>POEO Act</b>	Protection of the Environment Operations Act 1997
<b>RMS</b>	NSW Roads and Maritime Services
<b>SEPP</b>	State Environmental Planning Policy
<b>SHEQ</b>	Safety, Health, Environment & Quality
<b>SMA</b>	Sydney Metropolitan Area
<b>SML20</b>	Special (Crown & Private Lands) Mining Lease 20
<b>SWLMP</b>	Soil, Water and Leachate Management Plan
<b>TPA</b>	Tonnes per Annum
<b>TSP</b>	Total Suspended Particulates
<b>WARR</b>	Waste Avoidance & Resource Recovery Act
<b>WMA</b>	Water Management Act 200
<b>WMBT</b>	Woodlawn Mechanical Biological Treatment Facility

## **SECTION 1 INTRODUCTION**

### **1.1 Overview**

Veolia Australia and New Zealand (Veolia) will operate the Mechanical Biological Treatment (MBT) Facility, which is located at 619 Collector Road, Tarago. A Site Layout Plan is provided in **Appendix A**.

The MBT Facility has been approved to receive up to 240,000 tonnes per annum (TPA) of mixed waste and 40,000 TPA of garden waste from within the Sydney Metropolitan Area (SMA). The waste will be containerised and loaded onto rail wagons for transportation from Sydney to the Woodlawn Eco Project Site (also owned and operated by Veolia), in the Southern Tablelands (approximately 250 kilometres southwest of Sydney) for processing and production of mixed waste organic outputs (herein referred to as compost).

The MBT Facility includes the following infrastructure:

- An access road for waste trucks (entering and exiting the facility from Collector Road);
- Car parking, weighbridge and amenities;
- Reception building and associated infrastructure;
- Biological Refining System (BRS) drums;
- Refining building;
- Organic buffer storage area;
- Fermentation building; and
- Compost storage area.

The NSW Department of Planning and Environment (DPE) assessed this State Significant development and granted Project Approval for the 'State Significant' development on 6 November 2007, in accordance with section 75J of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The Project Approval (MP 06\_0239) is provided in **Appendix B**.

To incorporate current best available MBT technology and improve environmental controls in line with the NSW Environment Protection Authority (EPA) requirements, Veolia sought a modification to the PA in December 2013. A Notice of Modification (MP 06\_0239 MOD 1), issued under section 75W of the EP&A Act on 17 June 2014, reflects the revised site layout and infrastructure, waste processing technologies and operating hours of the MBT Facility. The modification is provided in **Appendix B**.

The EPA has issued an Environment Protection Licence (EPL) 20476 for the construction stage, under the *Protection of the Environment Operations Act 1997* (POEO Act). The EPL is provided in **Appendix B**.

This Operational Environmental Management Plan (OEMP) has been prepared to satisfy the requirements specified within the Consent Conditions and the EPL.

The OEMP is the environmental management tool for the operation of the MBT Facility, and includes detailed supplementary plans for the management of soil contamination, water quality, leachate, waste, traffic and emergencies. In addition, air quality, greenhouse gas, noise, landscape and vegetation management measures are described in this OEMP.

## 1.2 Scope and Objectives

The purpose of this OEMP is to provide an overview of potential environmental impacts of the MBT Facility, during its operational phase, and describe the management and mitigation measures to protect the environment and sensitive receivers, both on and off site, and minimise potential adverse impacts on the environment.

The objectives of this OEMP are to provide:

- An overview of the MBT Facility operations;
- Guidance on compliance with relevant environmental legislation and Veolia policies in the operational phase of the MBT Facility (refer to Regulatory Documents in **Appendix B** and the Operational Condition Compliance Report in **Appendix C**);
- Provide a means of implementing appropriate mitigation measures for the key environmental issues (refer to supplementary Environmental Management Plans in **Appendix D**)
- Provide a working environmental management tool to follow during the operation stage of the MBT Facility;
- Define roles and responsibilities of the MBT Facility operational team;
- Provide a guide for the interaction with relevant government authorities and other relevant stakeholders, including the community during the operational phase of the MBT Facility; and
- Provide a basis for monitoring, reporting and maintaining compliance with both Veolia and regulatory requirements for the MBT Facility (refer to Environmental Monitoring Program in **Appendix E**);

This OEMP is a live document. The management strategies and control measures detailed within this document and the supplementary Environmental Management Plans will be reviewed and updated, where necessary, to reflect changes introduced by the MBT Facility operational team, site specific outcomes, non-conformances and recommendations arising out of inspections, meetings and audits.

## 1.3 Supporting Environmental Management Plans

A series of environmental management plans were developed to support this OEMP. These plans are provided in **Appendix D** of this OEMP and are as follows:

- Soil, Water & Leachate Management Plan (refer **Appendix D1**)
- Waste Receipt and Vehicle Control Plan (refer **Appendix D2**)
- Emergency Response Plan (refer **Appendix D3**)

The Landscaping Management Plan was developed and approved by DPE prior to the commencement of construction of the MBT Facility and remains current.

## **SECTION 2 STATUTORY AND POLICY CONSIDERATIONS**

This section provides an overview of the environmental planning and statutory context for the operations of the MBT Facility. It also provides a discussion of the MBT Facility operations in the context of Veolia's corporate environmental and sustainability policies.

Veolia is committed to complying with all of its legal obligations and other voluntary commitments made by the company. Compliance to applicable regulatory requirements concerning the operations of the MBT Facility will be achieved through:

- identifying and accessing legal and other requirements which are directly applicable to the organisation;
- consulting and involving relevant government agencies;
- internally communicating relevant information regarding legal and other requirements;
- continually auditing, reviewing and upgrading company systems, management plans and supporting documentation; and
- providing relevant training.

### **2.1 Legal and Other Requirements**

#### **2.1.1 Acts and Regulations**

This OEMP has been developed in the context of the following key NSW legislation:

##### **2.1.1.1 Environmental Planning and Assessment Act 1979 and Regulation**

The MBT Facility was approved by the NSW Minister for Planning under Part 3A of the EP&A Act on 6 November 2007, (MP 06\_0239).

A modification under section 75W of the EP&A Act was granted by DPE on 17 June 2014 (MP 06\_0239 MOD 1), to amend the site layout and infrastructure, waste processing technology and hours of operation.

The Consent Conditions identify measures that are required to:

- prevent, minimise, and/or offset adverse environmental impacts including economic and social impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the MBT Facility.

##### **2.1.1.2 Protection of the Environment Operations Act 1997**

The POEO Act relates to the management of pollution in NSW and is administered by the EPA. Under section 48 of the POEO Act, premise-based scheduled activities (as defined in Schedule 1 of the POEO Act) require an Environment Protection Licence (EPL). The operation of the MBT Facility is considered a premise based scheduled activity as a result of the following scheduled activities to be undertaken:

- clause 12 (Composting) as it involves receiving more than 200 tonnes of organics and/or putrescible organics from the regulated area.
- clause 34 (Resource Recovery) as it would involve having on-site at any one time more than 2,500 tonnes or 2,500 m<sup>3</sup>, whichever is the lesser, of waste and
- clause 42 (Waste Storage) as it involves receiving 12,000 tonnes of waste per annum from off-site.

### **2.1.1.3 Protection of the Environment Operations (Waste) Regulation 2014**

The *Protection of the Environment Operations (Waste) Regulation 2014* (the Waste Regulation) came into effect on 1 November 2015. Part 9, clauses 91, 2 and 93 provide for the use of waste materials outside of certain requirements of the waste regulatory framework, in the form of resource recovery orders and exemptions. These are granted by the EPA where the land application or use as fuel of a waste material is a reuse opportunity that causes no harm to the environment or human health, rather than a means of waste disposal.

A Resource Recovery Order can only be issued by the EPA under cl 93 in relation to the supply by a person of resource recovery waste that has been generated, processed or recovered by the person; in this case Veolia. A Resource Recovery Exemption applies, under cl 91 and cl 92, to any of the following:

- waste consisting of any processed, recycled, re-used or recovered substance that is produced wholly or partly from waste and is, or is intended to be, applied to land by:
  - spraying, spreading or depositing it on the land, or
  - ploughing, injecting or mixing it into the land, or
  - filling, raising, reclaiming or contouring the land,
- waste consisting of any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is, or is intended to be, used as fuel,
- any waste that is used, or intended to be used, in connection with a process of thermal treatment.

While the MBT Facility processes and compost produced are expected to the requirements of the 'organic outputs derived from mixed waste' Resource Recovery Order and Exemption, there are degraded areas of the Eco Project Site (from historical mining operations), where the compost will be applied, that require site-specific criteria in relation to application rates and receiving environment concentrations.

Veolia hence has applied for and granted site specific Resource Recovery Order and Exemption to enable the application of compost to land in areas that currently do not satisfy the receiving environment requirements of the general Exemption. This Order imposes the requirements that must be met by the MBT Facility, as the supplier of the compost derived from mixed waste. The Exemption exempts a consumer of the MBT Facility compost from certain requirements under the POEO Act, in relation to the application of that waste to land, provided the consumer complies with the conditions of this Exemption.

**2.1.1.4 Waste Avoidance and Resource Recovery Act 2001**

The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) is the result of a major overhaul of waste policy objectives and forms the basis of a framework for waste management in NSW. The WARR Act establishes a hierarchy to minimise the consumption of natural resources and final disposal of waste by encouraging waste avoidance, reuse and recycling.

The WARR Act promotes integrated waste and resource management planning, programs and service delivery on a state-wide basis to ensure that waste is managed to reduce environmental harm in accordance with the principles of ecologically sustainable development and the objectives of the POEO Act.

The MBT Facility will deliver an alternative waste management technology solution and beneficial environmental outcome compared to landfilling.

**2.1.1.5 Water Management Act 2000**

The *Water Management Act 2000* (WM Act) aims to facilitate sustainable and efficient use of water in such a way that benefits the environment and communities.

The WM Act provides for the preparation of water management plans that outline arrangements for water sharing, water source protection and drainage management. Since the Woodlawn MBT Facility lies partly within the Sydney water drinking catchment, managed by Water NSW, on-site operations need to be undertaken within the principles of the WM Act to ensure a secure supply of water in order to meet the needs of Sydney, as well as protect the health of the catchment.

**2.1.1.6 Work Health and Safety Act 2011**

The main object of the *Work Health and Safety Act 2011* (WHS Act) is to provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces by:

- protecting workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from work or from specified types of substances or plant, and
- providing for fair and effective workplace representation, consultation, co-operation and issue resolution in relation to work health and safety, and
- encouraging unions and employer organisations to take a constructive role in promoting improvements in work health and safety practices, and assisting persons conducting businesses or undertakings and workers to achieve a healthier and safer working environment, and
- promoting the provision of advice, information, education and training in relation to work health and safety, and
- securing compliance with the WHS Act through effective and appropriate compliance and enforcement measures, and
- ensuring appropriate scrutiny and review of actions taken by persons exercising powers and performing functions under the WHS Act, and
- providing a framework for continuous improvement and progressively higher standards of work health and safety, and

- maintaining and strengthening the national harmonisation of laws relating to work health and safety and to facilitate a consistent national approach to work health and safety in this jurisdiction.

The WHS Act requires that workers and other persons should be given the highest level of protection against harm to their health, safety and welfare from hazards and risks arising from work or from specified types of substances or plant as is reasonably practicable.

## 2.1.2 Other requirements

### 2.1.2.1 Environmental Guidelines for Composting & Related Organics Processing Facilities

The focus of these guidelines is on the appropriate environmental management of organics processing facilities

Veolia has incorporated several of the environmental control elements prescribed in the *Environmental Guidelines for Composting & Related Organics Processing Facilities* (the Composting Guidelines, EPA, 2004) into the design of the MBT facility, which include:

- enclosing all processing and Fermentation areas of the MBT Facility;
- using biofilters as a best practice odour control system (OCS); and
- using Veolia patented aeration and compost maturation technology to additionally mitigate fugitive emissions from compost piles.

## 2.2 Environmental Approvals

The relevant environmental approvals in place for the MBT Facility are summarised in the following table (refer **Table 2.1**):

**Table 2.1 - Environmental Approvals**

Description	Number
Project Approval under Section 75J of the Environmental Planning and Assessment Act 1979 (issued by Department of Planning and Environment)	MP 06_0239
Notice of Modification under Section 75 W of the Environment Planning and Assessment Act 1979 (issued by Department of Planning and Environment)	MP 06_0239 MOD1
Environmental Protection Licence under Section 55 Protection of the Environment Operations Act 1997 (issued by EPA)	20476
The Woodlawn organic outputs derived from mixed waste order 2015	

Description	Number
Project Approval under Section 75J of the Environmental Planning and Assessment Act 1979 (issued by Department of Planning and Environment)	MP 06_0239
Notice of Modification under Section 75 W of the Environment Planning and Assessment Act 1979 (issued by Department of Planning and Environment)	MP 06_0239 MOD1
Environmental Protection Licence under Section 55 Protection of the Environment Operations Act 1997 (issued by EPA)	20476
The Woodlawn organic outputs derived from mixed waste exemption 2015	
Permit for movement of solid waste from Sydney to Woodlawn Bioreactor for deep burial or composting for mine rehabilitation on account of the pest Phylloxera (issued by Department of Primary Industries)	OUT16/49145

## 2.3 Management System

Veolia has developed and implemented a National Integrated Management System (NIMS) to assist in meeting the corporate objective of its waste operations through sustainable development. “Hippo Station” is the information and contractor management system or technology platform that houses NIMS documentation and information on contractors and “The Vault” is Veolia’s system for reporting and managing incidents, recording audit and regulator enforcement information. The Vault is designed to log all issues arising from;

- audits
- workplace inspections
- complaints
- risk assessment/hazard identifications
- debriefs
- change notifications, or;
- casual observations.

These systems allow Veolia employees to access Veolia policies and processes. Veolia continually audits, reviews and upgrades company systems, management plans and supporting documentation to maintain business and best practice standards, as well as to comply with relevant legislation. To achieve this, Veolia maintains a program for independent third-party certification/accreditation to the following standards (shown in **Table 2.2**).

**Table 2.2 Certification**

Description	Number
ISO 9001 Quality Management System	FS 603945
AS/NZS 4801 Work Health and Safety Management System	OHS 603946
ISO14001 Environmental Management System	EMS 603944

## 2.4 Environmental Policies

Veolia’s business strategy is guided by five elements: our business, our customers, our people, our environment and our community. These elements shape all aspects of Veolia’s current and future performance. Its corporate policies and practices are linked to delivering excellence in one or more of these elements.

Veolia has developed a variety of company-wide policies to support sound management of its facilities. All policies have been endorsed by Veolia’s Executive Committee and are reviewed periodically. All Veolia employees are required to commit to the implementation of these policies.

Veolia environmental policies support the minimisation of emissions to land, air and water and the wise use of natural resources. This commitment is documented in Veolia’s environmental and sustainability policies (see below).

### 2.4.1 Environment Policy

Veolia is committed to minimising the environmental impacts of its operations and continually improving its environmental performance within a framework of sustainable development by:

- Effectively managing our significant environmental impacts, monitoring progress and reviewing environmental performance against objectives and targets on a regular basis.
- Driving continual improvement, and meeting the requirements of ISO 14001 environmental management systems standard as part of the integrated business management system.
- Complying with applicable environmental legislation, contractual and other necessary requirements related to our activities and assist customers and suppliers to use products and services in an environmentally sensitive way.
- Striving to ensure that our policies, objectives and achievements are communicated to all persons working for and on behalf of the business and to educate and train employees and ensure competence in environmental issues and the environmental effects of their activities.
- Preventing pollution and harm to the natural, heritage and built environments and to reduce the use of all raw materials, energy and supplies.
- Consulting with relevant stakeholders, taking into account local environmental conditions and working with local communities to achieve shared and lasting outcomes. All managers, employees, contractors and visitors are responsible for being aware of, and complying with this policy.

Veolia’s Environment Policy is appended to this OEMP (refer **Appendix B3**)

### 2.4.2 **Sustainability Policy**

For Veolia, sustainable development means adopting business strategies and activities that meet the needs of Veolia and its stakeholders today, while protecting, supporting and enhancing the human and natural resources that will be needed in the future. This outcome is expressed clearly in Veolia's Sustainability Policy:

- Being ethically responsible, to create value in what we do, and to use sound risk and hazard management principles in conducting our business. As part of its 'non-negotiables' Veolia will comply with all relevant legislation including pollution prevention and will strive to develop and improve our integrated business management system to support a consistent and disciplined approach to business processes. We will ensure that appropriate resources (both internally and externally) are utilised to assist in achieving our goals.
- Partnering in innovation and to understand and support our customers in achieving their business objectives.
- Attracting and retaining diverse and talented employees. This will include providing development opportunities so our employees are continually learning, communicating, providing workplace consultation, and creating an 'Always Safe' workplace, with an aspiration of no workplace injury or illness for our employees, visitors and contractors. Continually designing and implementing sustainable solutions to develop access to resources and to protect and replenish them. Additionally, Veolia is committed to providing environmental leadership in its operations and solutions, which includes the management of its own environmental impacts, improving waste, water, energy and carbon outcomes, as well as protecting and conserving biodiversity and natural capital.
- Working closely with local communities to achieve shared and lasting outcomes. Additionally Veolia will engage with government, policy makers, advocacy groups, industry associations and other stakeholders in the areas which we operate to create better value and outcomes in sustainable practices.

Veolia's Sustainability Policy is appended to this OEMP (refer **Appendix B4**)

## **2.5 Operational Efficiency**

In line with the Sustainability Policy, Veolia is committed to the protection of our community and the environment through efficiency, research and innovation

### SECTION 3 FACILITY OVERVIEW

The MBT Facility forms part of the Eco Project Site located on 619 Collector Road, Tarago.

The Eco Project Site, owned and operated by Veolia, and is located within the Goulburn Mulwaree Local Government Area (LGA) and is comprised of 6,000 hectares (ha) of equally portioned properties, namely Woodlawn and Pylara. The operations that form part of the Eco Project Site is described in **Table 3.1**.

The MBT Facility is sited on 30 ha of the Woodlawn property and is comprised of Lot 1, DP 241092, Lots 33, 34, 69 & 97, DP 754919, and Lot 4, DP 830765.

**Table 3.1 Other Eco Project Operations**

Operation	Description
The Bioreactor, including the Woodlawn Bioenergy Power Station (the Power Station);	<p>The Bioreactor was the first stage of the Eco Project Site developed by Veolia. Landfilling operations, which commenced in September 2004 are located in the void of the former open cut Woodlawn Mine.</p> <p>Waste is deposited in the Bioreactor and with optimal moisture and temperature conditions, achieves enhanced production of landfill gas, which is collected through a vast network of infrastructure within the void.</p> <p>Methane is extracted from the landfill gas within the Power Station for conversion and supply as electricity into the energy grid.</p>
The Crisps Creek Intermodal Facility (IMF)	<p>The IMF, forms an integral part of the logistical operations of the Eco Project Site, and is located 8km from the Bioreactor in the township of Tarago, adjacent to the Goulburn-Bombala Railway line. Waste containers transported from the Sydney region via rail are unloaded and transferred onto road trailers at the IMF for transport to the Bioreactor. The IMF was approved to accept 1,180,000 TPA from Sydney when the Bioreactor was granted expanded operations.</p>
Aquaculture and horticulture operations;	<p>Waste heat from the Power Station's engines is utilised in aquaculture operations to cultivate fish, with a horticultural system operating to remove excess nutrients.</p>
Woodlawn and Pylara farms;	<p>The surrounding land on the 3,000 ha Woodlawn property is utilised either for farming practices or requires rehabilitation from former mining activities. Adjacent to the south of the Woodlawn property is the 3,000 ha Pylara property, a working farm which utilises sustainable farming practices such as a sheep breeding program that includes genetic selection, nutrition and grazing rotation, to increase meat and wool productivity and reduce impacts on soils.</p>

<p>The Woodlawn Wind Farm (the Wind Farm) operated by Infigen Energy and</p>	<p>The 48 MW Woodlawn Wind Farm comprises 23 turbines and is located along a ridgeline running through both the Woodlawn and Pylara properties. This operation commenced in 2011. The Woodlawn Wind Farm is owned and operated by Infigen Energy and provides the Eco Project Site with renewable energy.</p>
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The Eco Project Site and its operations form part of Veolia’s integrated waste management services and are augmented with the following transfer facilities:

- The Clyde Transfer Terminal (CTT) in Sydney , which receives up to 500,000 TPA of putrescible waste from the SMA from municipal, commercial and industrial sectors of the SMA, which is unloaded, screened, compacted and containerised into shipping containers for transport via rail to the IMF; and
- The Banksmeadow Transfer Terminal (BTT) in Sydney, which receives up to 400,000 TPA of putrescible waste similarly to the CTT. Waste from the BTT is destined for either the Bioreactor or the MBT Facility, depending on Veolia’s contractual obligations with its customers.

**Figure 3.1** depicts the inputs and output from the Eco Project Site operations.

In addition to these operations, Heron Resources Limited (formerly TriAusMin Pty Ltd) was granted planning approval for the Woodlawn Mine Project (Application No. 07\_0143) to recommence mining operations within the Eco Project Site for both re-mining of existing tailings dams and further underground mining.

The remnant mining degraded areas within the Eco Project Site that are subject to remediation requirements under the former mining lease obligations. The compost produced from the MBT Facility shall be generated and applied to land under the requirements of the site specific Resource Recovery Order and Exemption as described in the previous section.

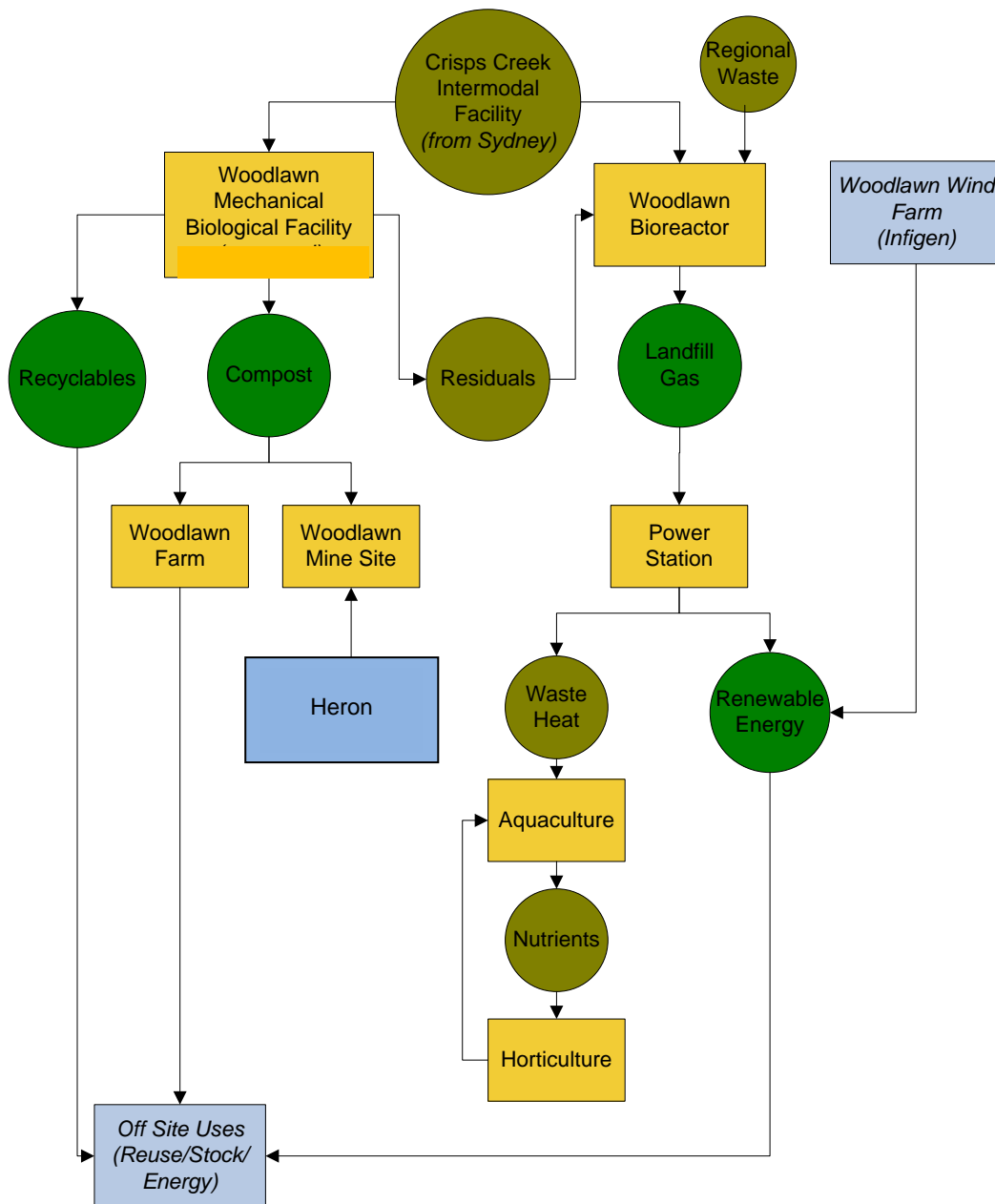


Figure 3.1 The Eco Project Site Context

### 3.1 Site Setting

#### 3.1.1 Soils and Geology

The soil landscape mapping of the Eco Project Site area depicted in the Soil Landscapes of the Braidwood (Jenkins, 1996) indicates that the MBT Facility footprint overlies the Duckfield Hut and Duckfield Hut variant soil landscapes, which are generally loam and clay based soils. The Disturbed soil landscape, also occurring in the area, is due to human activities such as clearing for pastoral land and mining that renders the land not suitable for cultivation and with moderate limitations for grazing (Umwelt, 2006). Grazing at the site was undertaken historically, prior to the Woodlawn Mine operations in the 1970s and, anecdotal evidence suggests, converted as clay borrow pit towards the north eastern part of the site.

Land capability relates to the ability of the subject land to accept a type of intensity of use without damage. Based on the rural land capability classes developed for NSW, the MBT Facility site has been deemed not suitable for cultivation and there is a generally low to moderate soil erosion hazard. This may be controlled through adequate land management practices. Furthermore, while the MBT Facility site is considered disturbed with poor drainage and fertility, there is negligible existing soil contamination present (Umwelt, 2006).

The MBT Facility is located on the south-eastern part of the Lachlan Fold Belt, consisting of Ordovician and Siluro-Devonian bedrock which has been metamorphosed, faulted and folded in the past. Sediments and volcanic rock of the Mount Fairy Group form the Late Silurian – Early Devonian geological sequence, along, with more recent piedmont deposits accumulated during the Tertiary – Quaternary period, in the vicinity of the MBT Facility (Umwelt, 2006).

According to the Geological Survey of NSW (1977), geological sequences within the MBT Facility are comprised of the Woodlawn Volcanics and the Currawang Basalt. The former being an acidic volcanic rock sequence dominated by rhyolite overlain by the latter, a volcanic rock dominated by pillowed basalt flows.

### 3.1.2 Topography and Drainage

The Eco Project Site is located 9 km southwest of Lake Bathurst and 8 km east of Lake George, at an elevation of approximately 800 metres relative to Australian Height Datum (AHD). The land is on a ridgeline that forms part of the Great Dividing Range, with the surrounding area comprising undulating hills rising up to 1000 mAHD, predominantly to the north and south (Umwelt, 2006).

The MBT Facility site has an approximate 5% slope falling from a high point in the centre of the site to a northerly direction towards Collector Road and in an easterly direction towards the Bioreactor. Hence, drainage occurs towards Lake George via the Allianoyonyiga Creek. The surrounding terrain, while elevated, is generally flat and therefore not prone to flooding. An existing drainage channel is located along the northern boundary of the MBT Facility site.

### 3.1.3 Meteorology

Meteorological data affects the ambient air quality surrounding the site and may contribute to impacts identified at sensitive receivers. A meteorological station, installed at the Eco Project Site, continuously monitors ambient weather conditions. Parameters, as listed below, are logged in 15 minute intervals and are averaged and recorded on an hourly basis:

- Average wind speed (Degrees)
- Average wind direction (Degrees)
- Standard deviation (Sigma theta) wind direction (Degrees)
- Maximum wind speed (m/s)
- Temperature at 10m (Kelvin and °C)
- Temperature at 2m (Kelvin and °C)
- Solar Radiation (W/m<sup>2</sup>)

- Barometric Pressure
- Relative Humidity (%)
- Total Rainfall (mm)
- Total Evaporation (mm)

Rainfall and evaporation are also summed daily

Servicing and calibration of sensors is completed on a quarterly basis to ensure data remains accurate. The meteorological station will continue to operate while the MBT Facility operations occur.

### **3.2 Facility Description**

The MBT Facility has been designed with a maximum capacity to accept 240,000 TPA of mixed waste and 40,000 TPA of green waste that has been railed to the IMF from the SMA via the CTT and BTT.

The waste is containerised at the CTT and BTT and loaded onto rail wagons for transportation from Sydney to MBT Facility, within the Woodlawn Eco Project Site, where processing of mixed waste will enable the production of compost.

The MBT Facility includes the following infrastructure:

- Site access road;
- Weighbridge;
- Office and amenities;
- BRS Drums
- Waste processing buildings;
- Fermentation building and compost storage area.
- Water infrastructure
- Biofilters

#### **3.2.1 Site access road**

The access road provides trucks with direct access to the MBT Facility from Collector Road without passing through the Bioreactor Site. This allows for separate tracking of waste brought to the MBT Facility, therefore minimising potential conflicts with the Bioreactor operations. The access road is also sealed with two coats of bitumen seal to minimise dust emissions from the site.

#### **3.2.2 Weighbridge**

The weighbridge is located at the entrance of the MBT Facility and is used for the weighing of incoming waste vehicles from the IMF..

Consistent with current Veolia operations, a waste classification and coding system devised from the EPA's material composition codes, will be utilised for the MBT Facility.

Material leaving the MBT Facility (for disposal or recycling), are recorded at the weighbridge prior to being transported to appropriate destinations.

Waste inputs and outputs will be tracked and recorded in accordance with the requirements of the POEO Act and associated regulations.

### **3.2.3 Office, Amenities and Carpark**

The main office building and amenities block for drivers is located adjacent to the reception building which is near to the site entrance.

There are 21 spacing car parking for the visitors and office staff located outside the office building (refer to **Appendix A**).

### **3.2.4 BRS Drums**

The BRS drums are designed to accelerate biological decomposition and separation of waste matter prior to composting, fulfilling a critical pre-treatment stage. Hence, effective separation of the organic fraction within a mixed putrescible waste stream is achieved, optimising the quality and quantity of organics available for composting.

### **3.2.5 Reception Building Pit (RBT)**

The estimated volume of the Reception Building Pit is 3830 m<sup>3</sup> or slightly over 3 days of holding capacity. The RBT will be managed not be full (approx. 50% or more) at most days to allow for contingency. RBP will not be cleaned as the waste is generally moisture adsorbing and with the sliding in and extraction (material handling) it is self-cleaning. The floor has been designed to collect moisture in a sump pit that can be used to collect and pump out fluid should it ever be required. This would then be put into the leachate collection system pits at the NW or SW of the reception building and pumped to the leachate dam.

### **3.2.6 Waste Processing Buildings**

The waste processing buildings comprise;

- Reception building—receipt, unloading and screening of mixed putrescible waste and commencement of the initial pre-treatment phase by loading the waste into the drums via hoppers;
- Refining building— mechanical separation for secondary pre-treatment of waste
- Buffer storage— temporary storage of organic and non-organic material (in appropriate stockpiles no higher than 4 m) prior to the fermentation process or removal offsite for disposal/recycling respectively.

### **3.2.7 Fermentation Building and Compost Storage Area**

The 2004 *Environmental Guidelines Composting and Related Organics Processing Facilities* (the Composting Guidelines), published by the Department of Environment and Conservation (now EPA), specifies that composting mix residual waste containing putrescible organics is best processed within enclosed facilities. To be consistent with

these Guidelines, composting will be carried out within the enclosed Fermentation Buildings and the outputs stored in the adjacent compost storage area.

### **3.2.8 Water Infrastructure**

Water management infrastructure for the MBT Facility includes;

- 2 x 475 kL process water tanks;
- 2 x 144 kL firewater tanks;
- 1 x 30 kL rainwater harvesting storage tank;
- 1 x 1.9 ML leachate aeration pond;
- 1 x 4.5 ML stormwater storage pond;

Further details of the water management infrastructure are outlined in the Soil, Water and Leachate Management Plan (refer Appendix D1)

### **3.2.9 Biofilters**

Odour is one of the primary concerns of large scale composting operations. The management of odour emissions from each of the proposed processing stages will be maintained by the use of biofilters. Biofilters are pollution control mechanisms which use living material to biologically degrade and filter pollutants which may cause odours. These pollutants are absorbed into the biofilter material whereby it is broken down by microorganisms.

Two biofilter odour control systems (OCS) are located adjacent to the processing areas at the Site. Each biofilter is set to a bed depth of 2.0m. The total active bed area, number of cells and designed airflow for each biofilter system are as follows:

- **OCS Biofilter 1** - 344m<sup>2</sup> polypropylene crate units, each crate contains five stabiliser bars (three internal bars plus two wall bars). The active surface area of the biofilter is 394m<sup>2</sup>, and includes a portion of the sloping embankment outside the crated area (1000m<sup>3</sup> of the medium). This volume allows for a 30% decrease in volume when placed and consolidated; and with a medium installed to a bed depth of 2.0m.
- **OCS Biofilter 2** – 850m<sup>2</sup> polypropylene crate units, each crate contains five stabiliser bars (three internal bars plus two wall bars). The active surface area of the biofilter will be 961m<sup>2</sup>, and includes a portion of the sloping embankment outside the crated area (2,500 m<sup>3</sup> of the medium). This volume allows for a 30% decrease in volume when placed and consolidated; and with a Medium installed to a bed depth of 2.0m.

Performance of the biofilters will be maintained by automatic control of inlet air humidity (through automatism) and maintaining the moisture of the biofilters media. As a part of the 6-monthly independent biofilter condition and performance assessments following key performance indicators will be measured:

- Inlet airflow to the biofilter;
- Airflow resistance through the medium via the measurement of biofilter inlet back-pressure;
- Biofilter outlet odour concentration performance (and odour character); and
- Biofilter inlet air moisture levels through the measurement of relative humidity.

The above components will be carried out as part of the post-commissioning assessment for the biofilter systems , and will serve as a benchmark for subsequent assessments.

For further details of the Operations and Maintenance of the Biofilters refer to the Biofilter Operational Maintenance Manual (**Appendix G**)

### **3.3 Operations Overview**

The Woodlawn MBT approved operating hours are Monday-Saturday, 6am to 10pm.

The MBT Facility will be operated in two stages, with a maximum capacity to accept and treat up to 280,000 TPA of waste during biological and mechanical stages.

Mechanical biological treatment (MBT) refers to several combinations of hybrid processes which combines:

- mechanical techniques (sieving, separating and sorting techniques used to sort waste into fractions such as inert recyclable material); and
- biological techniques (aerobic or anaerobic processes used to convert biodegradable waste fractions into more stable and organic waste fractions – compost).

#### **3.3.1 Process Flow**

##### **3.3.1.1 Receival**

After receipt of waste from Sydney via rail, containerised waste from the IMF, designated for processing in the MBT Facility, will be delivered on transfer trailers to the reception building. The contents of the containers will be unloaded in the reception pit using a fixed tipper.

A grapple attached to overhead gantry cranes (on rails) is be used to move the unloaded waste from the pit into elevated hoppers located in front of the BRS Drums, which form the first, pre-treatment process of the waste separation stage

The use of overhead cranes enables the loading of the BRS Drums and also improves operational safety by preventing any large mobile plant interacting with the transfer trailer tipping process. The cranes can also be used to sort and/or remove any non conforming material manually by the crane operator, housed in the control room above the bunker. The control room shall also include a Supervisory Control and Data Acquisition (SCADA) system for operating several plant parameters.

Any bulky or non-conforming, reject material removed from the waste here shall be disposed.

#### **3.3.1.2 Pre-treatment: Biological**

The variability of the feedstock from MSW sources has resulted in the incorporation of drum-based biological pre-treatment in the MBT Facility prior to mechanical treatment, which includes size and density separation.

The applicability of this pre-treatment process is suitable for composting organics particularly from a mixed waste stream, allowing decomposition to be achieved earlier.

The BRS drum technology, comprised of 50 m long cylinders, installed adjacent to the Reception Building, shall use the combined action of rotation, rising temperatures and slow wear on waste to reduce the organic material within the mixed waste into a fine size.

This organic fraction can then easily be separated from the inert fraction, including recyclable material and physical contaminants in the later mechanical stages before fermentation.

The BRS shall be loaded and unloaded in batches to ensure a maximum residence time of 3 – 4 days.

#### **3.3.1.3 Pre-treatment: Mechanical**

The mechanical treatment stages involve the use of sorting equipment which is found within the Refining Building. This equipment includes trommels to separate waste into different sized fractions, magnets to remove ferrous material and ballistic separators to segregate light, organic material from inorganic material for composting.

The efficiency of the sorting and preparation processes in the pre-treatment stages of the MBT Facility shall determine the quality of organic material available for production of compost.

Recovered ferrous metals are stored in the bins located outside the refining building for transport offsite and any residual material sent to the Bioreactor for disposal.

#### **3.3.1.4 Fermentation Building**

Organic material is transferred to the fermentation building for composting, The formation of aerated stockpiles in specially designed cells shall be created through an automated delivery system.. The stockpiles will be inclusive of the Biokap® fermentation system. **BioKap®**: A system called BioKap®, which is another Veolia patented technology, shall be used to enhance fermentation and treat odour emissions from the compost. (BioKap® works by placement of a layer of mature compost, nominally 200 mm, on top of a fresh windrow) Oxygen, temperature and moisture levels shall be regulated through the SCADA system to ensure optimum and controlled conditions for composting to occur.

.The fermentation processing Technology adhere to the Resource Recovery Order under part 9, Clause 93 of the Protection of the Environment Operations (waste )regulation 2014 (The Order), generating a final compost product suitable to meet the output requirements of the Order.

### **3.3.1.5 Compost Storage Area**

The process of fermentation will effectively create a biological stable product, at the end of which, the compost produced shall be moved into the Compost Storage Areas, located on side of the Fermentation Buildings, until required for use around the Eco Project Site for mine rehabilitation

Following management measures will used to manage the compost storage area:

- Runoff water from the Compost Storage area will drain to the leachate aeration pond.
- Street sweeper will be used to clean the area; &
- Wetting system (sprinklers) will wet the compost stored in the compost storage area to avoid any dust escape with the wind

### **3.3.2 Outputs**

Outputs from the MBT technology process will be as follows:

- Bulky or non-conforming, reject material removed from the waste for disposal;
- Residual material from all waste processing areas for disposal;
- Recovered ferrous metals from the refining building for transport offsite;.
- Mixed waste derived compost for application on the Eco Project Site, subject to the requirements of the site specific Resource Recovery Order and Exemption.

**Figure 3.2** depicts the MBT processing technology, described as follows:

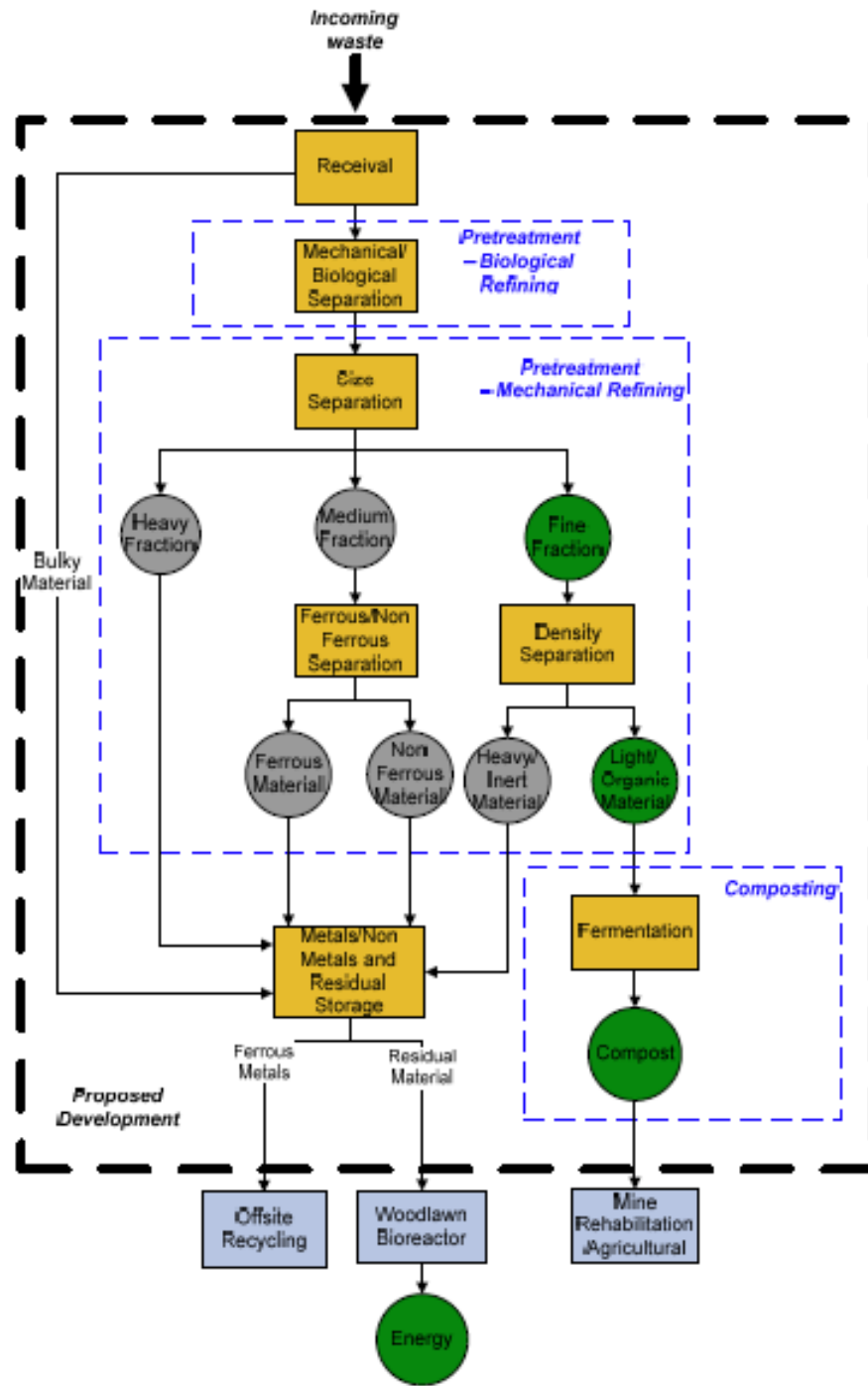


Figure 3.2 – MBT processing technology

### 3.3.3 General Considerations

#### 3.3.3.1 Access Controls

The site displays signage to advise visitors and the general public that the site is private and not for public use. Additional signage includes the following:

- Details of the types of waste accepted at the site;
- Information to relay that flammable liquids are not permissible to the site;

- Directional and speed limit signs for vehicles; and,
- Adequate signage to satisfy work health and safety requirements.

Security is maintained by gates which are locked outside of normal operating hours. Fences are inspected routinely for signs of damage and/or intruder entry.

### **3.3.3.2 Plant and Equipment Maintenance**

All plant and equipment installed or used within the Woodlawn MBT Facility will be operated and maintained in accordance with the Consent Conditions and EPL requirements. This includes all processing infrastructure and pollution control equipment. The NSW Plant Maintenance and Registration procedure (PRO-NSW-000-149)(**Appendix F1**) outlines maintenance instructions.

### **3.3.3.3 Fire Prevention**

If an on-site fire occurs, all necessary measures to extinguish associated fires will be implemented immediately.

Adequate fire prevention resources have been put in place, and all personnel are able to access fire-fighting equipment and manage fire outbreaks at any location at the Woodlawn MBT Facility in accordance with the guidance provided in the draft Emergency Response Plan (**Appendix D3**).

### **3.3.3.4 Dangerous Goods Storage**

All fuels or flammable solvents for operational use will be appropriately stored in a secure and well-ventilated area in accordance with the Consent Conditions and EPL requirements. The Chemical and Hazardous Materials Management (PRO-COL-000-038) provides guidance regarding the proper storage of such substances on Veolia sites. This storage is located on unfilled land, and all flammable liquids stored within a bund of 110% capacity of the volume of those flammable liquids so that any release of raw or burning fuel do not cause a fire in the filled waste or impact on surface water. A Hazardous Substances and Dangerous Goods Register will be developed to record chemicals used at the MBT Facility.

### **3.3.3.5 Litter Control**

Litter control for the MBT Facility will be carried out in accordance with Housekeeping and Inspection Procedure (PRO-COL-000-029-5)(**Appendix F2**) which provides guidance on litter management on Veolia sites. Inspection is undertaken by the Facility Manager and/or operators daily to ensure the items on site specific inspection checklists are undertaken as part of the site's housekeeping requirements, which determines the effectiveness of the measures.

Entry and exit signs will advise transport operators that fines apply for littering public roads resulting from improper transport of waste.

## **3.4 Operational Environmental Impacts**

The assessment of MBT Facility operational activities (Umwelt 2006; Veolia 2013) along with consultation with key stakeholders, both regulators and the community

identified the following potential environmental impacts for use in defining the level of environmental risk associated with the operations of the MBT Facility.

- **Soil and water:** Potential for impacts from waste processing activities and uncontrolled water management on the underlying soil and receiving waters in proximity to the MBT Facility;
- **Waste management and reduction:** Consideration of resource recovery targets under the WARR Act, as well as any operational inefficiencies with processing of waste;
- **Traffic:** Consideration of existing and introduced traffic from MBT Facility operations on the surrounding road network.
- **Noise:** Noise impacts from the MBT Facility on residential receivers.
- **Visual Impact:** Visual Impact on local amenity of local area due to building height of the MBT Facility.
- **Greenhouse gas emissions:** Greenhouse gas emissions as results of the waste and transport operations associated with the MBT Facility
- **Air quality:** Dust and odour impacts on surrounding area and measures to mitigate.
- **Cumulative Impacts:** Possible cumulative impacts include air quality (odour and dust), noise, traffic and greenhouse gas due to operations of the MBT Facility

The assessment of these environmental risks took account of the following:

- The planning and legislative requirements affecting the MBT Facility;
- The environmental context of the MBT Facility area and the region;
- The outcomes of the community and stakeholder consultation;
- Existing operational and management plans used by Veolia; and
- The findings of the specialist environmental studies undertaken for EA.

### 3.4.1 **Environmental Risk Assessment**

The environmental assessment undertaken for the MBT Facility sought to identify potential impacts and risks associated during its operational phase.

**Table 3.2** lists these impacts and risks. This risk assessment determined the level of mitigation required for those impacts.

**Table 3.2 Potential Environmental Impacts**

Issue	Potential Impacts	Comment/Source	Preliminary Risk Ranking	Key Issue? (Yes/No)
Soil	Soil Contamination	Negligible existing soil contamination;  Contamination possible from leachate infiltration, without control measures	Low	No, addressed in design of facility;  Construction of concrete pads and the leachate barrier system in all areas where waste is to be handled restricts leachate migration

**PLAN**

**Operational Environmental Management**

				<p>pathways into underlying soil.</p> <p>Refer to Section 4.1 of the SWLMP</p>
Water	Leachate generation	<p>Uncontrolled rainfall and contact of water with waste in operational areas;</p> <p>Release of leachate from operational areas, causing pollution of receiving waters.</p>	Low (net benefit)	<p>No, addressed in design of facility;</p> <p>Diversion of clean rainwater/stormwater into tanks/ponds;</p> <p>Reduced leachate generation due to enclosed processing areas.</p> <p>Containment of leachate in leachate pond;</p> <p>Refer to Sections 4.2 and 4.3 of the SWLMP</p>
Waste	Potential change in recovery rate based on waste inputs and processing technology	Low risk due to expected waste Composition based on waste audit data.	Low	<p>No, addressed in design of facility;</p> <p>Addressed in the Waste Receipt and Vehicle Control Plan</p>
Traffic	Impact on main site access road and surrounding local road network.	Minimum impact	Low	<p>No, addressed in design of facility;</p> <p>Addressed in the WRVCP</p>
Air quality - odour	Odour emissions escaping from the MBT Facility at levels that exceed odour limits and impact sensitive receptors.	Moderate level of risk due to the large buffer distance between the site and nearest residences.	Moderate	<p>No, addressed in design of facility and ongoing operational management;</p> <p>Addressed in Section 3.4.2.3 of this OEMP</p>

**PLAN**

**Operational Environmental Management**

Air quality - dust	Wind erosion from the stock piles in the compost storage area;  General dust emissions	Low level of risk due to moisture levels will be maintained	Low	No  Section 3.4.2.3 outlines the measures that will be adopted to ensure that dust levels are adequately controlled  (Depositional dust monitoring)
Greenhouse gas	Increase in greenhouse gas emissions resulting from the operation of the MBT Facility	Moderate level of risk due to processing equipment used in the MBT Facility.	Moderate	No  Addressed in Section 3.4.2.4 of this OEMP
Noise	Noise impacts (including traffic noise) from construction and operational activities resulting in noise that exceeds noise criteria at sensitive receptors.	Moderate level of risk due to large buffer distance between the site	Moderate	Yes  Addressed in Section 3.4.2.5
Visual Impact	Decreased visual amenity of local area due to building height increase	Low level of risk due to the location of the site well away from the local road network and from neighbouring properties.	Low	No, addressed in design of facility;
Cumulative Impacts	Possible cumulative impacts include air quality (odour and dust), noise, traffic and greenhouse gas due to proposed modification.	Low level of risk due to the nature of the modifications; to enable best practice processing technology to be utilised at the facility along with adequate control measures and management plans.	Low	Yes  Management of overall Eco Project site in an environmentally sound manner as described in this OEMP

### **3.5 Key Environmental Issues and Management Measures**

The key findings of the environmental risk assessments undertaken for the operations of the MBT facility and the management measures that will be implemented on site are detailed below:

#### **3.5.1 Soil, Water and Leachate**

##### **3.5.1.1 Soil**

As identified in the EA (Umwelt 2006), soil on the onsite is unlikely to be contaminated by human activity due to its history as grazing land and a clay borrow pit facility. During the lifetime of the MBT Facility, soil will be protected from the potential contamination by the construction of a hardstand and leachate barrier system. Supplementary sedimentation control measures will be implemented on site, further details of which and the mitigation strategies are provided in the Soil, Water and Leachate and Water Management Plan (refer **Appendix D1**).

##### **3.5.1.2 Water**

A water balance was prepared to describe the source of water collected or stored at the MBT Facility, as well as the likely site demand and discharge limits. The water balance study indicated water storage infrastructure will achieve the storage capacity, comply with regulatory requirements and sustain onsite water usage during the MBT Facility operation stage, while minimising the use of potable water. Further details of the management of water and associated infrastructure are provided in the Soil, Water and Leachate Management Plan (refer **Appendix D1**).

##### **3.5.1.3 Leachate**

Enclosed processing buildings significantly reduce the likelihood of surface water being exposed to waste, therefore reducing the quantity of leachate. The water balance undertaken for the MBT Facility confirms a net benefit due to reduced leachate generation from enclosed processing areas and water management. Further details of the leachate assessment and the mitigation strategies are provided in the Soil, Water and Leachate Management Plan (refer **Appendix D1**).

#### **3.5.2 Traffic and Transport Impacts**

A transport impact assessment was undertaken as part of the environment assessment for the MBT Facility. Given that waste transportation to the MBT Facility will occur six days a week, 52 weeks a year, utilising containers with a capacity of 32.5 tonnes, approximately 30 daily truck trips would be required to transport waste from the IMF to the site.

An assessment of the traffic impacts due to waste receipt operational hours, capacity of the containers transporting the waste and site access to the MBT facility, was undertaken for the operation phases (at year of opening and at a 10-year horizon) of the MBT facility.

The results indicated that the site access intersection, haulage route and surrounding roads operate at a very good level of service in all assessment periods. Therefore, the MBT facility is likely to have a minimal impact on traffic operations and road safety.

Further details of traffic management is detailed in the Waste Receipt and Vehicle Control Plan (WRVCP) (refer to **Appendix D2**).

### 3.5.3 Air Quality

A comprehensive air quality (dust and odour) and greenhouse gas impact assessment was undertaken for the MBT Facility to determine the potential impacts of dust, suspended particulate matter, odour and greenhouse gas emissions.

The predicted air quality modelling results as shown in **Table 3.3** indicated that the MBT operations are anticipated to meet the criteria of the air quality goals set for the facility for dust.

**Table 3.3-Predicted Particulate Matter Results**

Receptor ID	Predicted Results
<b><i>Predicted Particulate Matter Impacts - Operations</i></b>	
<b>Maximum 24hr PM<sub>10</sub> (µg/m<sup>3</sup>) – Criterion 50 µg/m<sup>3</sup></b>	
1. "Woodlawn Farm"	40.4
2. "Cowley Hills"	45.6
3. "Pylara"	38.2
4. "Torokina"	37.9
5. "Tarago Village"	37.9
<b>Annual Average PM<sub>10</sub><sup>1</sup> (µg/m<sup>3</sup>) – Criterion 30 µg/m<sup>3</sup></b>	
1. "Woodlawn Farm"	9.3
2. "Cowley Hills"	9.7
3. "Pylara"	9.2
4. "Torokina"	9.1
5. "Tarago Village"	9.2
<b>Annual Average TSP (µg/m<sup>3</sup>) -Criterion 90 µg/m<sup>3</sup></b>	
1. "Woodlawn Farm"	18.6
2. "Cowley Hills"	19.5
3. "Pylara"	18.4
4. "Torokina"	18.2
5. "Tarago Village"	18.5
<b>Annual Average Dust Deposition (g/m<sup>2</sup>/month)– Criterion 4 g/m<sup>2</sup>/month</b>	
1. "Woodlawn Farm"	<3.1
2. "Cowley Hills"	<3.1
3. "Pylara"	<3.1
4. "Torokina"	<3.1
5. "Tarago Village"	<3.1

#### 3.5.3.1 Dust - Particulate Matter (PM10)

During MBT Facility operation, maximum 24-hour PM10 concentrations resulting from the MBT Facility operation are predicted to be less than 7.7 µg/m<sup>3</sup> at all receptors.

The addition of predicted impacts due to the Bioreactor operation, and the Heron Woodlawn Project, plus a background, regional particulate matter component indicate that the NSW EPA criterion of  $50 \mu\text{g}/\text{m}^3$  will be achieved at all receptor locations.

Predicted annual average PM10 concentrations are anticipated to easily meet the EPA criterion of  $30 \mu\text{g}/\text{m}^3$  when considering all sources during operation of the MBT Facility, with the MBT Facility itself providing a minor contribution of up to  $1.6 \mu\text{g}/\text{m}^3$ .

### **3.5.3.2 Dust - Particulate Matter (Total Suspended Particulates)**

Annual average TSP concentrations are predicted to easily meet the EPA criterion of  $90 \mu\text{g}/\text{m}^3$  during the operation of the MBT Facility. MBT Facility operations will contribute up to  $3.9 \mu\text{g}/\text{m}^3$  at any modeled receptor.

### **3.5.3.3 Dust - Deposition**

Dust deposition impacts resulting from the operation of the MBT Facility are shown to meet the EPA criterion of  $4 \text{ g}/\text{m}^2/\text{month}$  at all receptors, with the addition of a  $3.0 \text{ g}/\text{m}^2/\text{month}$  background concentration dominating the cumulative predictions

### **3.5.3.4 Dust – Management Measures**

- Waste handling will take place within enclosed buildings;
- Regular cleaning of the site haulage and access roads;
- Dust suppression on unsealed surfaces and work areas using water carts or alternative;
- Minimising traffic movements on exposed areas;
- Dampening of stockpiles;
- Removing mud from vehicles before leaving the site, where necessary;
- Cleaning up materials that might act as dust sources, as soon as possible;
- Conducting regular cleaning maintenance of machinery and vehicles;
- Ensuring any procedures for outdoor activities include a requirement for dust minimisation;
- Providing awareness training in the importance of minimising dust generation at its source, and;
- Compost stockpiles have been located away from sensitive receptors.

### **3.5.3.5 Odour**

The adopted odour criterion of 6 OU is achieved at all receptors with the exception of the Heron administration building which is predicted to experience a 99th percentile odour concentration of 8.5 OU. This concentration is predicted to be dominated by the existing source of the Bioreactor, rather than the operation of the MBT Facility which is predicted to result in a 99th percentile concentration of 1.7 OU when modelled alone.

The Air Quality Monitoring Program was developed and approved by the DPE prior to the commencement of construction of the MBT Facility.

Odour control measures for the operations that have since been installed are detailed below based on the results of odour assessment criteria adopted for the MBT Facility.

### **3.5.3.6 Odour - Management Measures**

- A cover system for compost will be used to enhance fermentation and limit odour emissions (Biokap - Veolia patented technology);
- Automated aeration technology for accelerating the process of fermentation to achieve stability of organic matter;
- Rapid lift-and-close roller doors in the fermentation building which enable openings to be closed at all times rather than maintaining and moving compost;
- Biofilters used to treat air within the reception building, refining building, buffer building and fermentation building; In case of the failure of the Biofilters, following control contingencies will be in place:
  - As the Waste operations infrastructure is enclosed, the potential of the escape of the odour is minimum, further in case of the failure of the biofilter, all the door including roller door will be kept closed all times
  - Critical Spare for the biofilters will be kept on site to minimize the disruption to the operations of the Biofilter.
- Maintenance of oxygen and moisture levels and feedstock composition within optimum range for composting;
- Windrow stockpiles on the compost storage area will be kept aerobic and moisture levels will be adjusted to minimise anaerobic conditions, which can lead to higher odour levels;
- Aeration of the leachate pond as required to ensure the pond remain aerobic; and
- Preferential reuse of stored leachate in the process to avoid long-term storage of leachate.

### **3.5.3.7 Greenhouse Gas**

A greenhouse gas (GHG) assessment was carried out which quantitatively estimated the emissions impact is directly associated with the MBT Facility operations, as well as other indirect, wider GHG impacts.

The total annual Scope 1 and 2 emissions for this project, assuming the maximum tonnage for the MBT Facility is 280,000 tonnes per annum, is estimated to be 36,791 t CO<sub>2</sub>-e pa..The NSW Office of Environment and Heritage (OEH) published the NSW state emissions profile for 2010 as 157 million tonnes of CO<sub>2</sub>-e. Therefore, in the NSW state context this project represents approximately 0.02% of the total state emission.

### **3.5.3.8 Greenhouse Gas – Management Measures**

The feasibility of implementing cost-effective energy conservation measures has been investigated at the MBT to minimise greenhouse gas (GHG) emissions. Where practical, MBT Facility may include the following control measures to minimise greenhouse emissions:

- Regularly serving all stationary plant and machinery within the MBT Facility;
- Using sensor lighting and/or high efficiency lighting;
- Turning off vehicles and/or plant and machinery when not in use; and/or
- Installing energy efficient lighting to meet the product and performance specifications under best practice industry rating schemes.

### 3.5.4 Noise

A Noise and Vibration Assessment was carried out in December 2013, which addressed potential noise and vibration impacts during the operation of the MBT Facility.

Noise originating from the operation of the MBT Facility is predicted to comply with project specific noise levels under calm and prevailing conditions, at all receiver locations.

The predicted noise emission levels from the modelled operational scenario at the nearest most potentially affected receivers are provided in **Table 3.4** below.

**Table 3.4 Noise Modelling Results**

Receiver Location	Period	Predicted Noise level LAeq(15 Minutes) (dBA)			Project Specific Noise Level
		Calm	Prevailing Wind	Temperature Inversion	
Woodlawn Farm	Day	<30	N/A	N/A	38 dBA LAeq(15 Minutes)
	Evening	<30	N/A	N/A	38 dBA LAeq(15 Minutes)
	Night	<30	<30	32	35 dBA LAeq(15 Minutes)
Cowley Hills	Day	<30	N/A	N/A	35 dBA LAeq(15 Minutes)
	Evening	<30	N/A	N/A	35 dBA LAeq(15 Minutes)
	Night	<30	<30	<30	35 dBA LAeq(15 Minutes)
Pylara	Day	<30	N/A	N/A	35 dBA LAeq(15 Minutes)
	Evening	<30	N/A	N/A	35 dBA LAeq(15 Minutes)
	Night	<30	<30	<30	35 dBA LAeq(15 Minutes)
Torokina	Day	<30	N/A	N/A	35 dBA LAeq(15 Minutes)
	Evening	<30	N/A	N/A	35 dBA LAeq(15 Minutes)
	Night	<30	<30	<30	35 dBA LAeq(15 Minutes)
Willeroo	Day	<30	N/A	N/A	35 dBA LAeq(15 Minutes)
	Evening	<30	N/A	N/A	35 dBA LAeq(15 Minutes)
	Night	<30	<30	<30	35 dBA LAeq(15 Minutes)
Heron (Administration Area)	Day	<30	N/A	N/A	70 dBA(period)
	Evening	<30	N/A	N/A	
	Night	<30	<30	32	

**3.5.4.1 Noise – Night Time Sleep Disturbance**

Night time sleep disturbance noise goals are also predicted to be met at all receiver locations

Predicted cumulative amenity noise from existing, approved and proposed industrial sources and the MBT Facility are below the relevant acceptable amenity levels for rural receivers at all assessment locations during daytime and evening period.

During the night>time period cumulative noise levels are predicted to be below the relevant maximum amenity levels for all privately owned residences .

**3.5.4.2 Noise – Night Time Sleep Disturbance – Management Measures**

Control measures, which will be implemented to mitigate noise emissions include the following:

- Operations shall take place during permitted standard daytime operating hours, which are between 6:00 am and 10:00 pm from Monday to Saturday,
- Noise generated by the operations of the MBT Facility will not exceed the noise assessment criteria as specified in **Table 3.5** below

**Table 3.5 –Noise Impact Assessment criteria dB(A)**

Receiver	Day/Evening/Night (LAeq(15 minutes))
Residences on privately-owned land	35

**3.5.4.3 Noise – Road Transport Code of Conduct**

Drivers are trained in a specific road transport code of conduct developed for Woodlawn. This provides drivers with an understanding of how to drive in a safe and efficient manner, which minimises noise generated from vehicular movements. The Road Transport Code of Conduct is provided in **Attachment 2.2 of Appendix D 2-Waste Receipt and Vehicle Control Plan**.

**3.5.4.4 Noise – Plant and Equipment**

It is expected that no exceedance relating to on-site noise emissions will originate from plant and equipment used during the operation stage. However, operations will be limited within the operating hours to minimise impacts on sensitive receivers.

Noise emission levels of all critical plant and equipment are expected to comply with manufacturers' specifications with noise limits appropriate to those items.

**3.5.5 Pest, Disease and Agriculture**

The potential for the spread of small insects, disease and weed seeds from the MBT Facility will be limited through appropriate management techniques in the waste processing building and outdoor operations area.

The composting organic material, which may contain insect eggs or larvae, weed seeds and spores, will be subject to temperatures in excess of 55 degrees for at least three days.

This will ensure that potential pests and diseases within the waste stream are destroyed, and will thereby be prevented from spreading throughout the local area.

**3.5.5.1 Pest, Disease and Agriculture – Management Measures**

Management measures of potential pests and diseases at the MBT Facility will be undertaken in accordance with the existing Pest and Weed Management Plan implemented for the Eco Project Site.

A permit for the transport of the movement of solid waste from the SMA to the Eco Project Site to manage the pest Phylloxera for deep burial or composting for mine rehabilitation has been approved by the Department of Primary Industries based on the waste management measures employed at the site.

These measures also include the following:

- all containers will be sealed during waste transportation;
- all waste will be received at the enclosed waste processing buildings;
- temperatures will be monitored to ensure that the compost is exposed to temperatures in excess of 55 degrees for at least 3 day.

## **SECTION 4 IMPLEMENTATION OF THE OEMP**

### **4.1 Structure, Roles and Responsibility**

Error! Reference source not found. demonstrates the staffing/organisational structure or the operation of the MBT Facility, which will be amended as required.

#### **4.1.1 Roles and Responsibilities**

All MBT staff will be made aware of the manner in which the site is to be operated and managed, to ensure compliance with this OEMP. A summary of the authorities and environmental responsibilities of key personnel for the operation of the MBT Facility is outlined below:

##### **4.1.1.1 Woodlawn MBT Manager**

- Ensure that the site complies with relevant licenses, acts and regulations
- Approve and implement the OEMP;
- Allocate project resources to handle environmental issues;
- Take action to resolve major non-conformances and notify the site's Safety Health Environment Quality (SHEQ) Officer or NSW Environment Officer;
- Authorize and confirm the implementation of mitigation measures
- Ensure suppliers and subcontractors comply with requirements;
- Review the OEMP and associated documentation, as required;
- Provide support to site personnel to ensure they are aware of their environmental obligations and enable them to meet environmental commitments;
- Ensure that site personnel receive appropriate environmental awareness training;
- Report to senior management on the performance of the system, environmental issues/breaches etc. and improvement opportunities;

##### **4.1.1.2 Environmental Officer or Site nominee (Woodlawn)**

- Ensure that the site complies with relevant licences, acts and regulations;
- Undertake and/or co-ordinate environmental monitoring requirements specified within the EPL;
- Ensure that environmental records and files are maintained;
- Identify non-conformances and notify the Woodlawn MBT Manager/ Safety Health Environment Quality (SHEQ) Representative/ NSW Environment Officer;
- Ensure that environmental non-conformances are recorded and actioned;
- Review and updates the OEMP and associated documentation, as required;
- Prepare environmental performance reports;
- Deliver environmental awareness training; and
- Collate and maintain records of complaints, and respond accordingly.

**4.1.1.3 Safety Health Environment Quality (SHEQ) Representative/ NSW Environment Officer**

- Ensure that the site complies with relevant licences, acts and regulations;
- Liaise with regulators on behalf of the site;
- Assist with environmental incident investigations;
- Audit environmental records;
- Review the OEMP and associated documentation, as required;
- Review environmental performance reports;
- Develop and deliver environmental training; and
- Provide technical advice as required.

**4.1.1.4 Subcontractors**

- Comply with all legal and contractual requirements;
- Comply with management / supervisory directions; and
- Participate in induction and training as directed.

**4.1.1.5 All Personnel**

- Comply with the relevant Acts, Regulations and Standards;
- Comply with Veolia policies and procedures;
- Promptly report any non-conformances and/or breaches of the system to management; and
- Undergo induction and training in environmental awareness as directed by management.

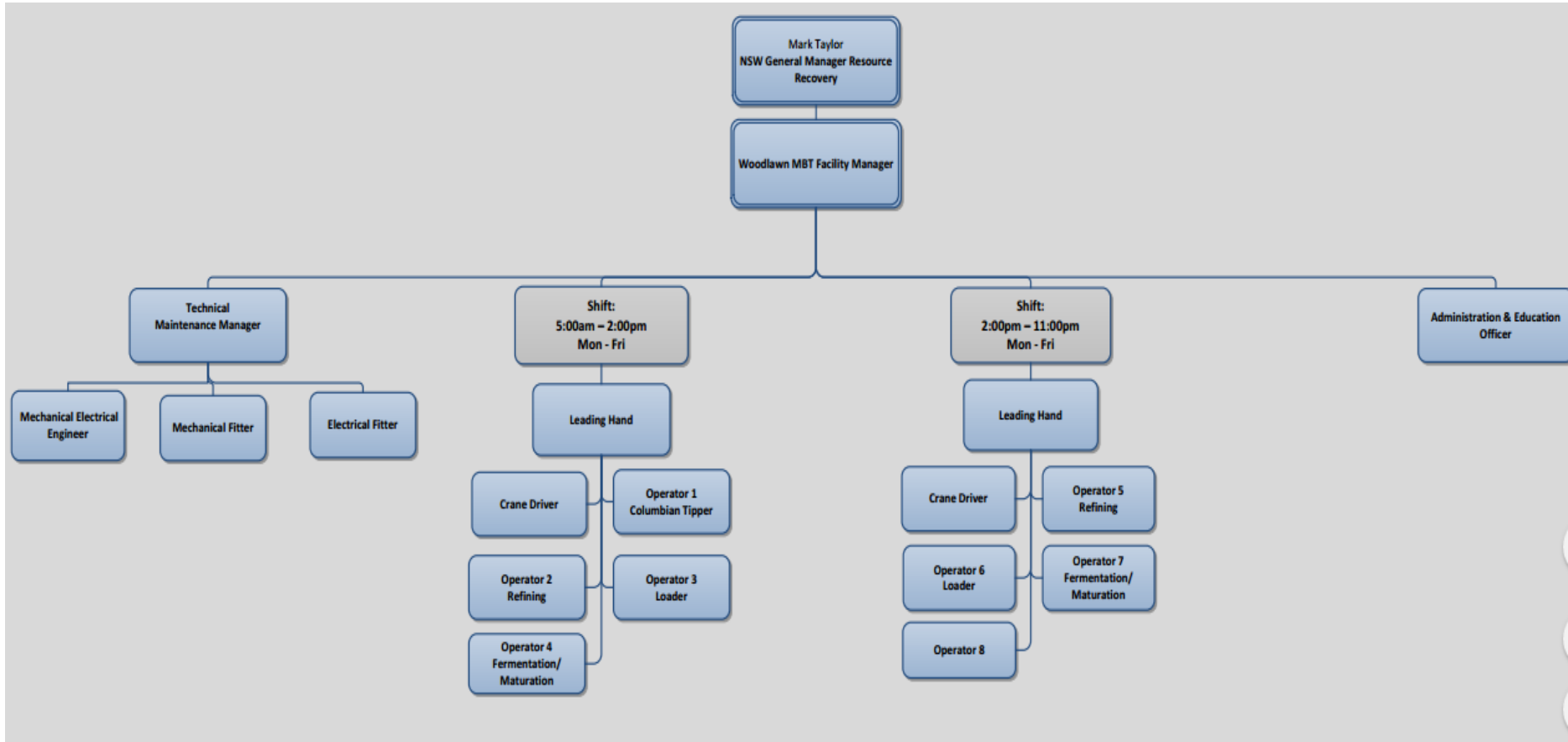


Figure 4.1 Woodlawn MBT Facility Organisational Chart

## 4.2 Training

All MBT Facility employees and subcontractors (as necessary) receive suitable environmental training, to ensure they are aware of their responsibilities and are competent to carry out their work.

Environmental requirements are explained to employees as part of Veolia corporate inductions and refreshers and national sustainability awareness training. Training will be provided during site inductions and on an ongoing basis as required. All inductions and ongoing training shall be recorded.

All employees and subcontractors (as necessary), will receive induction/training in the following areas:

- Veolia environmental and sustainability policy;
- OEMP and related documents;
- Woodlawn MBT Facility environmental objectives and targets;
- Understanding individual authorities and responsibilities;
- Significant risks, environmental aspects, impacts and controls;
- Potential consequences of deviating from procedures;
- Emergency procedure and response; and
- Understanding their legal obligations.

Personnel performing tasks that may cause significant environmental impacts will have appropriate education, training and/or experience.

In addition to routine environmental awareness, the minimum requirements for training exercises pertaining to incidents and emergencies are provided in the Emergency Response Plan (refer **Appendix D3**).

All MBT Facility employees will be trained to respond to and understand the potential impacts of operational failures and environmental incidents. Such training will include theoretical sessions and practical emergency scenarios.

Depending on the type of scenario, the training simulations may be run as simple desktop exercises, practical exercises involving MBT Facility staff or broad exercises involving emergency services (when deemed necessary).

All scenarios will be followed by a formal debrief session. Any issues/actions raised will be managed via The Vault.

## 4.3 Communication and Consultation

Veolia is committed to meaningful stakeholder engagement and has worked in collaboration with relevant government agencies and the local community in the township of Tarago since the commencement of operations at the Woodlawn MBT Facility. Such engagement will help to resolve any issues that impact local environmental amenity as a result of facility operations.

#### **4.3.1 Government Bodies**

The following government agencies have been consulted with in relation to the operations of the Woodlawn MBT Facility and the requirements of this OEMP:

- NSW Department of Planning and Environment;
- NSW Environment Protection Authority;
- Water NSW

#### **4.3.2 Community**

Veolia aims to ensure that the local community is kept informed of the progress of the project in a pro-active and responsive manner. This is undertaken by way of local newsletters, leaflets, newspaper advertisements, and community notice boards to include information such as:

- Operating hours.
- Contact details (telephone number).
- Major changes to the program relating to work required outside the normal operating hours; and
- Any major proposed works which may impact the community.

Veolia will also prepare and circulate an annual community newsletter providing an overview of the MBT Facility's operation and the Company's performance against its statement of commitments

Key objectives of the community consultation program include:

- Educating stakeholders regarding key aspects of the Woodlawn MBT Facility and
- To understand any concerns of local community groups.

Community consultation activities include:

- A dedicated Veolia webpage, offering general information on the MBT Facility (refer section 4.3.3);
- A community telephone line to provide a central point of contact for community enquiries (refer section 4.3.3);
- Proving sponsorship and regular columns in the local newspaper, The Tarago Times, which is non-profit community service, published monthly by the Tarago Sporting Association Inc. It is distributed throughout Tarago, Lake Bathurst, Mayfield, Boro, Taylors Creek and the surrounding district. Veolia will keep residents informed of the activities within the Eco Project site through the Tarago Times and will promote the use of the feedback telephone line.
- Active participation in the Tarago Progress Association Inc (TADPAI), which is a community group aimed at promoting the district and assisting the community in the development and maintenance of a rural lifestyle.

**4.3.2.1 Community Liaison Committee**

Veolia formed a Community Liaison Committee (CLC) in 2004, which acts as an open forum to interface between the residents of Tarago and Veolia to proactively resolve issues that impacts local amenities. The CLC is comprised of representatives from Veolia, the local community and Goulburn Mulwaree Council. The CLC's meeting schedule is on a quarterly basis and its minutes are available to the public. Details of the MBT Facility operations will also be provided to the CLC in this forum.

The Woodlawn MBT Manager will ensure that the results of these CLC meetings, as well as an interpretation of monitoring required by regulations are accessible to the public.

**4.3.3 Information Availability**

The following avenues will provide information relating to the Woodlawn MBT Facility:

- A dedicated Veolia webpage specifically for the Woodlawn MBT Facility  
<http://www.veolia.com.au>
- A community telephone line:

Location	Contact
Woodlawn 24 hour feedback line	1800 241 750
Woodlawn MBT Facility Reception	TBA

- Published monitoring data:
- <http://www.veolia.com.au>

In accordance with the Consent Conditions, the following information will be made available on the webpage:

- a copy of all current statutory approvals;
- a copy of the Environmental Management Plan required under this approval;
- a copy of any Annual Environmental Management Reports including monitoring results;
- a copy of any Independent Environmental or Odour Audits and Veolia's response to the recommendations in any audit; and
- any other matter required by the DPE.

**4.3.4 Complaints Handling**

Close liaison is maintained between residences near the MBT Facility site to provide effective feedback in regards to perceived emissions.

In this manner, operations can be co-ordinated where necessary to minimise disturbance to neighbouring residents, and to ensure prompt response to complaints, should they occur.

The telephone feedback line 1800 241 750 will be used to receive public feedback, including complaints and is published locally so that the community understands how to contact Veolia.

Complaints or adverse reports received from any external source will be recorded and the Woodlawn MBT Manager and/or Environmental Officer (Woodlawn) will be notified for response. Records of all complaints will be kept for at least four years after the complaint was made.

All received public complaints (either written or verbal) will be documented to record the;

- Nature and extent of the complaint;
- Method by which the complaint was made;
- Name and address of the person lodging the complaint;
- Details of all related factors including location, dates, frequency, duration, site conditions and effects of the complaint; and
- Action taken to address the complaint including follow up contact with the complainant.

The Woodlawn MBT Manager and/or Environmental Officer (Woodlawn) or nominee will record the details of all complaints received in an up-to-date log-book to ensure that a response is provided to the complainant within 24 hours or as soon as practicable.

The Woodlawn MBT Manager, or their nominee, shall investigate and determine appropriate corrective/preventive actions to be taken to address all complaints. The complainant will be informed in writing of the results of the investigation and action to be taken to rectify or address the matter(s). Where no action is taken the reasons why are to be recorded.

The corrective action may involve supplementary monitoring to identify the source of the non-conformance, and/or may involve modification of operational techniques to avoid any recurrence or minimise its adverse effects.

The Woodlawn MBT Manager or nominee will make a report available, which details the complaints received by the CLC and relevant parties upon request.

The Woodlawn MBT Manager will establish and maintain procedures for the collection, indexing, filing, storage and maintenance of site records. Archived records will be kept in accordance with Veolia's document control procedures.

#### **4.4 Incident and Emergency Response**

A key objective of this OEMP is to identify potential risks, and to develop, and maintain measures to manage them.

Veolia operates under an Emergency Response Plan (**Appendix D3**) whenever a major incident, emergency or crisis could lead to public health, safety or environmental issues.

Veolia's approach to incident and emergency response management includes:

- Risk Analysis - The identification of hazards and risks that could impact the community, environmental and operational implications.

- Prevention – The planning and documentation of prevention and mitigation activities for all major hazards, and allocation of responsibility for their implementation.
- Preparedness – The development, implementation and review of specific incident management plans and processes to manage identified risks, the training of staff, and establishment of facilities to ensure the company can respond effectively to an incident.
- Response – The issue of warnings and establishment of processes for effective notification of incidents, and mobilisation of resources to combat the incident or threat.
- Recovery – The return to normal operations, management of debriefs, and implementation of lessons learnt from the response process.

The following priorities are adopted when combating an incident / crisis:

- Protection of human life and welfare;
- Protection of the environment; and
- Protection of Veolia's assets.

Potential threats to the environment or public health that may arise in relation to the operation of the MBT Facility include:

- Fire;
- Explosion;
- Overflow / spillage;
- Structural damage;
- Power or other utility failure;
- Natural disaster;
- Surface water contamination, and;
- Traffic accident.

#### **4.4.1 Emergency Response Management**

The Emergency Response Plan (ERP) incorporates fire and emergency management measures and Pollution Incident Response Management Plan (PIRMP) requirements.

A ERP has been developed by Veolia as a means of identifying and concentrating on potential incidents and emergencies at the Woodlawn MBT Facility as summarised in **Figure 4.2** below, and describes the general policy and approach that should be followed when dealing with an emergency or incident and is aimed at:

- Addressing various types of emergencies, including fire, explosion, rock falls, traffic accidents and wind and structural damage
- Minimising the risk to all personnel in an emergency
- Controlling any incident to minimise damage to plant, equipment, property and the environment.

The ERP is appended to this OEMP as **Appendix D3** and outlines:

- Facility description, site plans and maps
- Incident identification and notification process;
- Emergency contact details;
- Emergency response procedures; and
- Training requirements

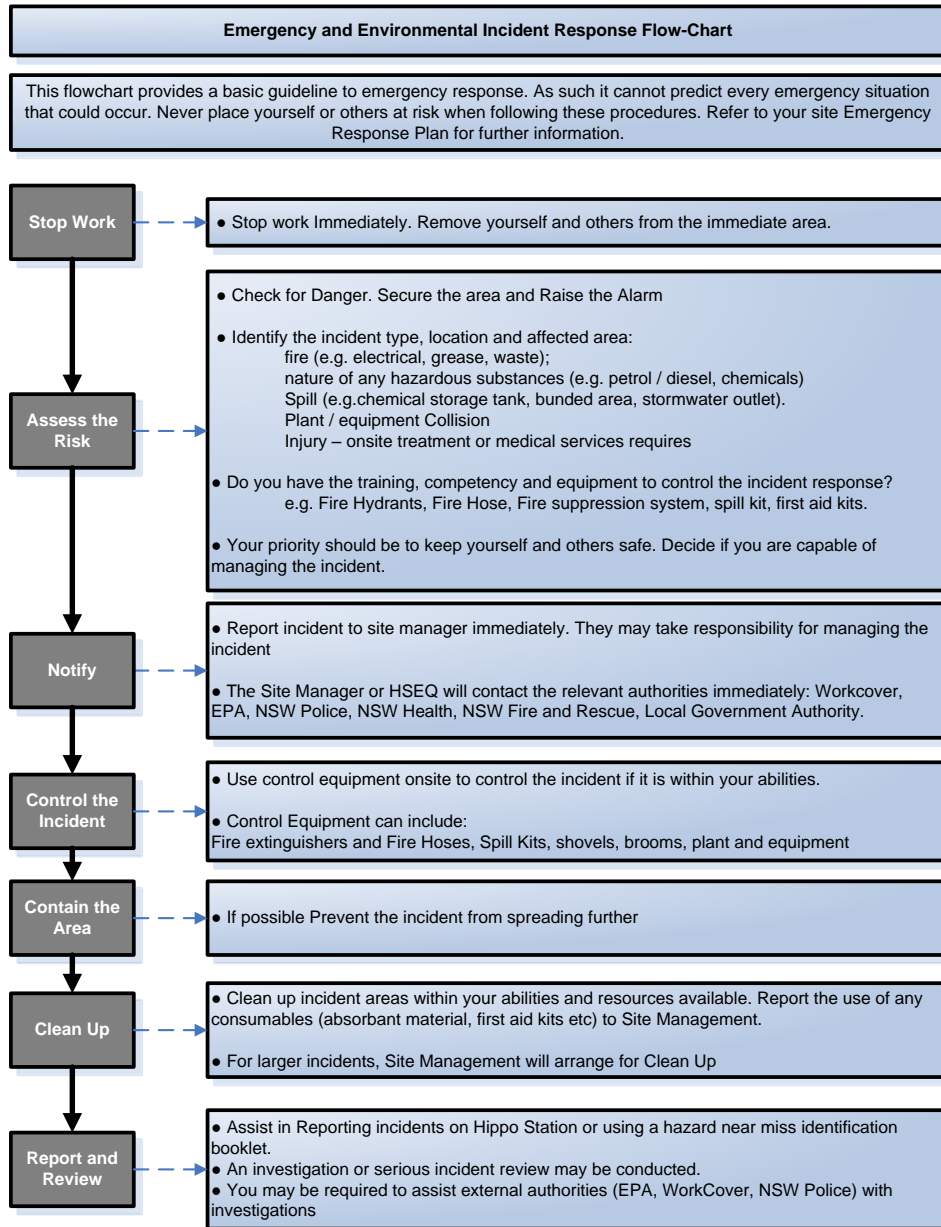


Figure 4.2 Emergency Response Flow Chart

## 4.4.2 Incident Notification Requirements

### 4.4.2.1 Incident Reporting

Incident notification processes will reflect the extent of the event and the incident classification and will accord with the NSW Incident Reporting Procedure (PRO-NSW-

000-134)(Appendix –F3) as summarised in Figure 4.3 below. This procedure is used for the identification and reporting of hazards and/or incidents that have affected or have the potential to affect the environment or health and safety of a worker, contractor, subcontractor or a visitor to Veolia.

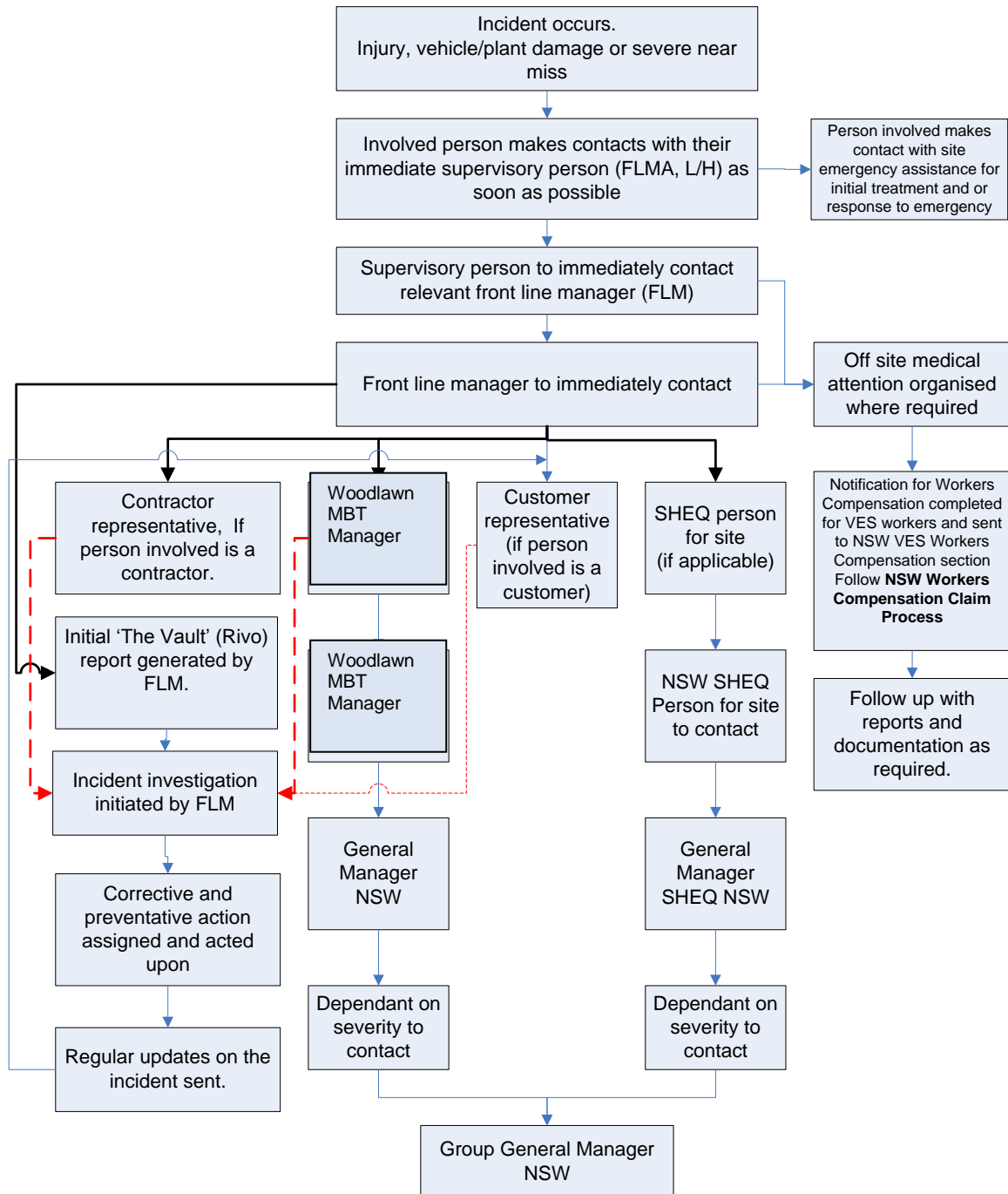


Figure 4.3 Incident Reporting Flow Chart

Incidents are logged in the Vault and managed in the following sequence:

- Log incident;
- Investigate incident;

- Close incident;

If further action is required, an issue can be raised or logged in Rivo as an assigned action to a Veolia personnel. Corrective action will be implemented to prevent recurrence.

Veolia will **immediately** notify the DPE and other relevant agencies of any exceedance of the limits/performance criteria stipulated in the PA or the occurrence of a notifiable incident.

A **notifiable environmental incident** is a pollution incident where there is a risk of causing or threatening material harm to the environment. A pollution incident includes a leak, spill or escape of a substance or circumstances where this is likely to occur.

Material harm includes onsite and offsite actual or potential harm to:

- The health and/or safety of humans;
- The environment; or
- Property damage resulting in significant costs to remediate

If a notifiable environmental incident occurs, Veolia staff will immediately notify any of the following personnel (refer Section 4.4.4.2 Emergency Contacts):

- The Woodlawn MBT Manager
- NSW Environment Officer
- General Manager SHEQ NSW

It will then be decided whether to notify the DPE and/or EPA. Where these regulators are notified, other regulatory authorities that may require notification under the PIRMP include:

- local councils (Goulburn Mulwaree Council or Palerang Council) where the pollution incident occurred;
- Ministry of Health;
- Fire and Rescue NSW; and
- Any other relevant authorities.

The EPA will also be notified of any incident that represents a threat to the environment due to breaches of EPL conditions, via the EPA's 24-hour Pollution Line (131 555) and a written notice should follow within 7 days. Such incidents include, but are not limited to:

- Fires at the MBT Facility, either surface or subsurface;
- Identification of any failure of an environmental protection system;
- Any other incident or observation that could potentially pose an immediate environmental hazard outside normal operating conditions.

#### **4.4.2.2 Emergency Contacts**

The following are the internal emergency contacts for the Woodlawn MBT Facility. For a comprehensive list, including regulatory authorities, local community and emergency services, refer to the ERP.

**PLAN****Operational Environmental Management****Table 4.2 Emergency Contacts**

<b>Position</b>	<b>Name</b>	<b>Phone Number</b>	<b>Mobile Number</b>
General Manager Resource Recovery	Mark Taylor	9841 2912	0418 675 320
Woodlawn MBT Manager	TBA	TBA	TBA
Maintenance Supervisor	Pierre Paturel	4844 6252	04 5228 7440
Environmental Officer	TBA	TBA	TBA
Administration	TBA	TBA	TBA
NSW Environment Officer	Ramona Bachu	9841 2928	0407 668 199
SHEQ - Central & Southern Region Manager	Robert Petrevski	-	0419 000 242
Woodlawn 24 hour feedback line	-	1800 241 750	

## SECTION 5 MONITORING AND REVIEW OF THE OEMP

### 5.1 Monitoring and Reporting

#### 5.1.1 Inspections, Testing and Monitoring

Regular environmental inspections are undertaken by MBT Facility personnel to ensure that environmental controls have been implemented, meet specification, and are being maintained in accordance with the NSW Inspecting and Testing Program (PRO-NSW-000-228) as summarised in **Table 5.1 below**.

**Table 5.1 Woodlawn MBT Facility Environmental Inspection and Testing Schedule**

Plant/Process/Substance	Type	Frequency	Responsibility
Quality assurance and quality control	Inspection & Testing	Continuous	Woodlawn MBT Manager
Biofilter	Following up air flow in ducts / pressure	Every year	Woodlawn MBT Manager
	Moisture of the biofilter beds as per the procedure in Biofilter Operational & Maintenance Manual	Monthly	Woodlawn MBT Manager
	Management of weeds & dry spots as per the procedure in Biofilter Operational & Maintenance Manual	Fortnightly	Woodlawn MBT Manager
	Check –drainage sumps as per the procedure in Biofilter Operational & Maintenance Manual	Weekly	Woodlawn MBT Manager
	Replacing medium	Every 4-5 years depending on the operating conditions	Woodlawn MBT Manager
MBT Facility Site Inspection	Inspection	Monthly	Environmental Officer or nominee
Water management infrastructure	Inspection	As required/After rainfall event	Woodlawn MBT Manager or operational personnel

Environmental monitoring	Testing	As required	Environmental Officer or nominee
Fire Alarm Systems & Equipment	Inspection/Testing	Monthly/ 6 Monthly /Annually	Contractor
First Aid Kits	Inspection & refill	Quarterly	Contractor

In addition, some aspects of environmental monitoring and checks will be included in the routine operator duties, as per the inspection and testing register that will be developed for the MBT Facility and recorded in appropriate checklists. For compliance related environmental monitoring, refer to Section 5.3.

At completion of each inspection, any corrective actions required are to be recorded in the Vault and managed in accordance with the NSW Corrective Action procedure (PRO-NSW-000-132)(**Appendix F4**) in a timely manner (refer Table 5.2).

**Table 5.2-Corrective Action Timeframe**

Priority	Action	Timeframe
Low	May not require immediate action. Monitor situation and schedule control action	Action typically required within 15 to 29 days
Medium	Control actions as soon as possible	Action typically required within 7 to 14 days
High	Significant and immediate control	Action typically required within 1-7 days

Compliance with all environmental regulatory criteria is a priority for Veolia and its staff. Specific compliance obligations are detailed and controlled in the supplementary EMPs appended to this OEMP (refer **Appendix D**).

Environmental non-compliances will be managed in accordance with the NSW Incident Investigation Procedure (PRO-NSW-000-130)(**Appendix F5**) or on a case-by-case basis depending on the severity of the incident as described in the **Table 5.3** below.

**Table 5.3**

Incident Classification	Investigation Team or Person	If the incident involves an injury
1. Insignificant 2. Minor 3. Moderate	A suitable competent person from the organisational unit or functional area where the incident occurred.	An Injury/ Occupational Illness Report form must also be completed by the relevant Line Manager using the short investigation form completed in the Vault
4. Major 5. Catastrophic (Crisis)	Appropriately independent qualified person appointee as a	Long investigation form to be completed in the Vault for any injuries/occupational illness

Incident Classification	Investigation Team or Person	If the incident involves an injury
	single Lead Investigator	

### 5.1.2 Compliance Reporting

Compliance reporting is required to produce systematic, comprehensive and informative reports on the environmental performance of the MBT Facility's operations in accordance with legislative requirements. The reports required are summarised in **Table 5.4**. The reporting parameters, frequency of reporting, and items to be included in the reports are also provided in this table.

For reporting requirements that relate to specific environmental aspects, refer to the relevant supplementary EMP (**Appendix D**).

**Table 5.4 Woodlawn MBT Facility Reporting Requirements**

Type of Report	Frequency	Distribution	Report Inclusions
Incident reporting	Within 24 hours  Within 6 days	DPE & EPA	Exceedance of PA limits /performance criteria or incident causing harm to environment.  Written report detailing the date, time, nature, cause of the incident and preventative /corrective actions.
Annual reporting (Annual Return and AEMR)	Yearly	DPE EPA (and other relevant agencies )	Annual Return Form; and An Annual Environmental Management Report (AEMR) including annual monitoring undertaken, summary of complaints, compliance with EPL conditions and overall environmental performance of the Woodlawn MBT Facility
Independent Environmental Audit	Within 2 years of the commencement of operations and 3 years thereafter	DPE (and EPA as required)	Assessment of environmental performance of facility

### 5.1.3 Environmental Audits

Both internal and external audits will be undertaken on a routine basis to ensure that the Woodlawn MBT Facility meets compliance objectives, as well as to support continuous improvement in facility operations.

The audits shall assess:

- the effectiveness of the OEMP to meet Veolia policies, legislative and industry standards;
- whether the measures and/or corrective actions carried out conform to the objectives of the OEMP;
- the adequacy of implemented controls to minimise high risk environmental issues or operational activities; and
- identify areas for continuous improvement.

Audit findings are to be reported to the management for inclusion in management review processes or compliance reporting.

Audit reports are to be maintained in The Vault's audit management module to enable non-conformances and opportunities for improvement identified through internal and external audit processes at the Woodlawn MBT Facility to be recorded, reported and responded to.

## **5.2 Management Review**

Management reviews of the OEMP and the environmental performance of the Woodlawn MBT Facility will be scheduled annually to assess the continuing suitability, adequacy and effectiveness of the measures implemented.

The inputs to the management review process shall include (but not be limited to):

- internal and external audits findings;
- incidents management and investigation of non-conformance events, incidents, near misses and management of all complaints received;
- implementation of all compliance and legislative changes as identified at a corporate level; and
- trend analysis on operational data.

The output from the management review shall include any decisions and actions related to:

- possible changes to the management plans, procedures, practices, objectives and targets associated with the environmental management of the Woodlawn MBT Facility
- improvement of the effectiveness of the Veolia management system and its processes; and
- resource needs.

In addition to yearly reviews, periodic meetings will be conducted to review all site-specific key performance indicators pertaining to the environment and relevant business systems. The following forums will form part of the management review process at the Woodlawn MBT Facility, conducted periodically by the site management, in conjunction with operators as required:

- Meetings;
- Toolbox talks;
- Hazard review groups;
- Serious incident reviews; and

- Miscellaneous environmental workshops

The following processes will be used for continual improvement:

- root cause identification and correction of incidents, complaints and issues of non-conformance
- root cause identification and prevention of potential incidents and non-conformances
- process/performance review, and
- enhancement of processes and generation of new initiatives.

### **5.3 Environmental Monitoring Program**

Detailed sampling and analytical methods for the Woodlawn MBT Facility will be defined in relevant procedures and work instructions stored on hippo station. These have been prepared in-line with relevant requirements, and industry standards.

The implementation of monitoring requirements based on the EPL 20476 is the responsibility of the Environmental Officer (Woodlawn) or nominee.

All sampling strategies and protocols undertaken as part of the monitoring program will be conducted in line with industry best practices. Sampling will be performed by the Environmental Officer (Woodlawn) or nominee in accordance with the requirements set out in this OEMP and supporting EMPs. All analysis for compliance reporting will be performed in a NATA registered laboratory.

Where monitoring and measuring devices are used to provide evidence of conformity of product to determined requirements, these devices will be calibrated in accordance with the manufacturer's recommendations. Records of calibration will be maintained and the calibration status of the device will be clearly communicated.

Depending on the equipment to be calibrated such as analysers and/or laboratory equipment, the calibration process will be scheduled and performed using a variety of methods as per various work instructions or supplier manuals.

If the results of a calibration are not satisfactory (if the required accuracy is not reached) or if an item of testing equipment is out of service, the equipment shall be removed from use and marked out of calibration / for repairs.

The environmental monitoring regime includes the sampling criteria, locations, parameters and frequency as identified in each of the relevant Supplementary Environmental Management Plans (refer to **Appendix D**).

## References

- Australian Standards. (2012). *AS4454-2012: Composts, Soil Conditioners and Mulches*
- Pogson D. J. and Felton E. A. 1977. Geological Survey of New South Wales Excursion: Cobar - Mineral Hill area. Geological Survey of New South Wales. 35 pp.1977, Geological Survey of New South Wales Excursion: Cobar-Mineral Hill Area
- Road and Maritime Services (RTA). (2002). *Guide to Traffic Generating Developments version 2.2*
- Umwelt Environment Consulting. (2006). *Environmental Assessment: Woodlawn Expansion Project Volume 1 – Main Report.*
- Veolia Environmental Services. (2014). *Construction Environmental Management Plan*

## **Appendices**

**Appendix A - Site Plans**

## **Appendix B1 - Conditions of Consent**

## **Appendix B2 - Environment Policy**

## **Appendix B3 - Sustainability Policy**

## **Appendix C - Operation Condition Compliance Report**

## **Appendix D - Supplementary Environmental Management Plans**

**Appendix D1 Soil Water & Leachate Management Plan**

**Appendix D2 Waste Receipt and Vehicle Control Plan**

**Appendix D3 Emergency Response Plan**

## **Appendix E - Environmental Monitoring Program**

## **Appendix F – Internal Procedures and Site Checklist**

**Appendix F1 -NSW Plant Maintenance and Registration procedure**  
**Appendix F2 – Housekeeping and Inspection Procedure.**

**Appendix F3 –NSW Incident Reporting Procedure**

**Appendix F4- NSW Corrective Action and Non-Conformance Procedure.**

**Appendix F5- NSW Incident Investigation Procedure**

**Appendix F6- MBT Site Checklist**

## **Appendix G – Biofilter System Operating & Maintenance Manual**