

Brookhurst Wood - Open Windrow Compost Facility

Environmental Permit Variation EPR/AB3700LS/V006
Updated Management Plan for ATRF and OWC

Biffa Waste Services Ltd

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Prepared by	Checked by	Verified by	Approved by
Diane Jeffery Senior Engineer	Caroline Braithwaite Principal Consultant	Angela Graham Associate	Angela Graham Project Manager

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# Hard Copies	PDF Required	Association / Company Name
	1	Neil Sumner / Biffa Waste Services Limited

Prepared for:

Biffa Waste Services Ltd

Prepared by:

Diane Jeffery
Senior Engineer
M: 07786 395693
E: diane.jeffery@aecom.com

AECOM Limited
6th Floor, 2 Charlotte Place
Southampton SO14 0TB
United Kingdom

T: +44 23 810 2180
aecom.com

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1. Report Context

1.1 Introduction

AECOM has been commissioned by Biffa Waste Services Limited (“the Operator” or Biffa) to prepare an application to develop a new Open Windrow Composting Facility (OWC) at Brookhurst Wood, Warnham, West Sussex. Given the locality of the new development on site, the new OWC will be added as an additional operation to the environmental permit (EPR/AB3700LS) for the Aggregate Treatment and Recycling Facility.

The new OWC facility is being developed to treat up to 60,000 tonnes per annum (tpa) of green waste and 30,000 tonnes per annum of wood waste.

This document is the updated ATRF Management Plan which has been prepared to support the permit application. The report should be read in conjunction with other supporting application information.

1.2 Proposed Facility

There are no changes proposed to the existing Aggregate Treatment and Recycling Facility (ATRF) processes although a new crushing operation will be included, and some additional waste codes will be added to the permitted waste list including mixtures of waste from the mechanical treatment of wastes that contain a high proportion of recoverable aggregate.

The proposed OWC facility will comprise new plant to facilitate the receipt, shredding and subsequent composting of green waste and the shredding of wood waste. Waste types accepted at the facility will be defined according to their List of Waste (LoW) Code and will generally consist of:

- wood waste;
- green waste;
- leaves;
- grass clippings; and
- horticulture type waste.

The facility will not receive or accept any waste covered by the Animal By-Product (Enforcement) (England) Regulations 2013 (ABPR).

The new plant will be designed to effectively shred the constituent parts of the incoming green waste, which is then transferred to open air windrows for composting and maturation. Green waste will be treated through the composting process while wood waste will only be shredded.

The intention is to produce a PAS 100 compliant product and as such it will be deemed to have reached end of waste criteria and has achieved product status. The product can be utilised for a wide range of beneficial after-uses including landfill restoration, community projects within West Sussex, use in domestic gardens and for agriculture.

2. Site Management Arrangements

2.1 Management Structure

2.1.1 Corporate Structure

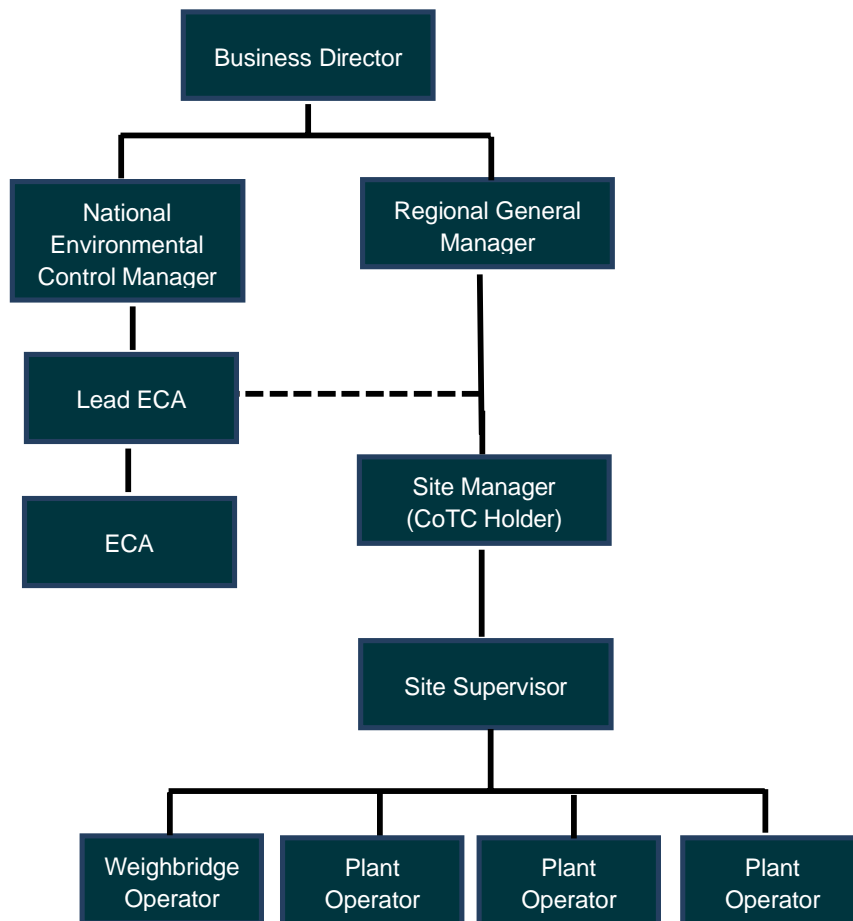
Biffa operates on a predominately divisional structure with a number of shared centralised functions including Finance, Safety, Health and Quality, Environment, Compliance and External Affairs, Human Resources and Engineering.

Environmental responsibility has been assigned throughout the organisation and is defined throughout the management system. Overall responsibility for the development of the system and implementation throughout the company rests with the Environment, Sustainability and Health and Safety Teams across the business.

2.1.2 Site Management Arrangements

Operational staff at the ATRF and adjacent landfill will be share with the proposed OWC facility to provide operational flexibility and line responsibilities of staff are presented in Figure 1 below.

Figure 1 Site Organogram



Some brief descriptions of the responsibilities of those staff involved in operating the facility are outlined in Table 1 below.

Table 1 Responsibility of Role Function

Position	Responsibility
Business Director	The Business Director will have overall responsibility for employees and operations; will report into and liaise with the Resources and Energy (R&E) Chief Operating Officer (COO) on contract and operational issues; will have overall responsibility for maintenance and refurbishment; and will work with the R&E COO to source suitable third-party waste for treatment in the Facility. May hold a COTC.
General Manager	The General Manager will have day to day responsibility for the site management team and operations; will report into and liaise with the R&E Business Director on day to day operational and management issues.
National Environmental Control Manager	Will work with the Business Director, Regional General Manager and ECA to oversee the management of the environmental monitoring and compliance. Will hold a COTC.
Site Manager	Will act as the day-to-day manager of facility operatives, will have responsibility for ensuring that structural and moving parts are operating as per the operating manual and in line with SHE requirements; and will be responsible for ensuring that sufficient replacement parts and consumables are on site for continuous operation to occur. COTC holder.
Site Supervisor	Will be responsible for overseeing team operatives in the operation of the facility will have responsibility for ensuring plant operation in line with the operating manual and in line with SHE requirements and is a COTC holder or will be working towards achievement of a COTC.
Lead Environmental Control Advisor	Will work with the National Environmental Control Manager, Site Manager and ECA to oversee the management of the environmental monitoring and compliance.
Environmental Control Advisor (ECA)	Responsible for environmental monitoring and compliance of the facility with the Permit and other related consents.
Plant Operators	Will be responsible for day-to-day operation of the facility, which will include ensuring steady material flow through, daily and periodic cleaning, start up and shut down at the beginning and end of each day and loading of output materials. Responsible for a range of duties including: <ul style="list-style-type: none"> • Operation of the site mobile plant. • Managing all containers on site. This will include both the storage and movement of the containers used for; residual material to be sent for disposal. . • Sorting residual material into treatable and non-treatable material.
Weighbridge Operator	Will operate the weighbridge, ensuring that only Authorised Waste is accepted, and that all documentation is up to date and accurate.

2.1.3 Technical Competence

A technically competent person will be available on site in accordance with the regulatory attendance requirements. In his absence a nominated deputy will be available. The technically competent person, or nominated deputy, will be responsible for the control of incoming and outgoing vehicles, checking Duty of Care documentation, inspecting waste to ensure compliance with permit conditions, and the keeping and maintaining all records. The technically competent person, or nominated deputy, will have overall responsibility for ensuring good general tidiness of the site as a whole.

The Certificates of Technical Competence are contained within Appendix A..

2.2 Training and Competence

2.2.1 Introduction

The Human Resource management arrangements in respect of training and competence requirements are developed such that the requirements specified in the EA and BREF guidance documents, namely:

- Appropriate measures for the biological treatment of waste (6 July 2023);
- Non-Hazardous and Inert Waste: Appropriate Measures (NHIAM) for Permitted Facilities (1 August 2023), Section 2.2; and
- “Best Available Techniques (BAT) Conclusions for Waste Treatment under Directive 2010/75/EU of the European Parliament and of the Council” (Decision 2018/1147), BAT Conclusion No 1.

Sub-sections 2.2.2 to 2.2.5 below provide an overview of the relevant details of the training and development system which will be in place.

2.2.2 Skills and Competency development

The Operator aims to achieve a high success rate of individual and job compatibility at the recruitment stage. This selection will then be complemented by providing training to meet priority needs for each individual dependant on the job requirements. The needs will be identified during the individual’s appraisal and can be defined as:

- Mandatory; or
- Job based; or
- Skills based.

The individual needs will then be managed through a training needs database, which will be maintained at the site. The database will serve several uses, namely it:

- Identifies the skills and competence matrix required for each job function;
- Records training undertaken, and competence level achieved – summary sheet is available; and
- Provides a mechanism for identifying when renewals for training certificates are required.

An example of the skills identification matrix is shown in Appendix B.

To support the effective identification and implementation of the training and development programme, the system will be reviewed annually by site management, taking into consideration:

The results of audits;

- Agreed appraisal targets and objectives;
- Defined site operating standards;
- Recommendations from Biffa corporate level; and
- Any changes to site operations (e.g., process developments, changes to legislation, etc).

Following this review an annual training plan will be agreed detailing the training areas, target audience and timeframe for completion.

2.2.3 Training Provision

All staff will receive instruction and training, both verbal and documented, in all relevant aspects of operational procedures, permit requirements in relation to operations and the environment, health and safety and general requirements of the site management plan. A copy of the permit and approved site management plan will be kept available on site for reference when required by all site staff carrying out work under the requirements of the permit.

Wherever possible, training will be delivered in the workplace by internal training staff or by managers. Key target areas include but are not limited to:

- Safety, health and environmental responsibilities;
- Plant operation including competence checks and ongoing development;
- Site Permit and consent conditions;
- Duty of care and waste acceptance;
- Waste processing;
- Emergency procedures including near miss and incident reporting;
- Certificates of technical competence as required by Waste Management Licensing Regulations (1994);
- Risk assessment and management; and
- Safety awareness/competence – Permit-to-work, and safe working procedures.

In addition, staff will receive appropriate training in first aid, manual handling, firefighting, use of PPE and RPE, use of plant and equipment and for appropriately experienced and/or qualified staff training in COSHH assessment, pump and process plant monitoring and maintenance, tank integrity testing and other skills as considered appropriate to their role.

Senior staff and other key personnel will attend formal training courses as required to develop technical, managerial and health and safety skills. These will include external courses as well as in-house training programmes.

The General Manager will ensure that site staff are directed and trained in relevant emergency procedures for their particular site or activity. These procedures will be documented within the Site Operational Plans, and periodically reviewed.

Training will be carried out following the identification of new techniques, new services being offered, new skill requirements, regulatory and environmental requirements, health and safety considerations, etc. or the implementation of new internal procedures and development needs identified through appraisal.

The records of personnel and their skills will be maintained to ensure that skills and tasks are adequately matched, and the effectiveness of any training undertaken.

2.2.4 New Employees

Each position at the site will be covered by a general job description detailing key skills, responsibilities and reporting structure. It will be standard procedure for new process operators to be given comprehensive “on the job” training before they take full responsibility for their post. Supervision will be provided for as long as is necessary to ensure that the required skills have been imparted. In addition, specific full training on key tasks will be given to both new and experienced operators as necessary.

2.2.5 Contractor Management

There will be an ongoing target to continue safety, health and environmental awareness training and refresher training targeting poor performers as necessary.

Contractors which may be used will be selected based on their experience and competence relating to a specified task. Each will submit a relevant method statement which is retained and crosschecked by the Operator.

Site rules will be provided to all contractors using or visiting the site, which will describe basic safety and operational precautions to be observed while at the site. Instances of drivers or contractors not following site rules, or behaving inappropriately, will result in warnings and a Site User Violation form will be completed. If necessary, requests to leave site and/or barring from future visits to the site will be implemented.

2.3 Management System

2.3.1 Introduction

The facility will be operated in accordance with an environmental management system which will be certified to ISO 14001 standards in conjunction with:

- Related Management Systems;
- External Corporate environmental reporting; and
- Site management controlled by appropriately qualified and experienced personnel.

This meets the requirements specified in the EA and BREF guidance documents, namely:

- Appropriate measures for the biological treatment of waste (6 July 2023);
- Non-Hazardous and Inert Waste: Appropriate Measures (NHAM) for Permitted Facilities (1 August 2023); and
- “Best Available Techniques (BAT) Conclusions for Waste Treatment under Directive 2010/75/EU of the European Parliament and of the Council” (Decision 2018/1147), BAT Conclusion No 1; and
- The latest EA Guidance “Develop a Management System: Environmental Permits”.

Sub-sections 2.3.2 to 2.3.4 below provide an overview of the management system which will be in place.

2.3.2 Business Management System

Biffa operates an integrated management system (IMS) combining environmental, quality, health and safety issues for the operational site. The system embeds the practices of corporate responsibility within the day-to-day management of the Company. The system is designed to demonstrate compliance and drive continuous improvement.

The system has been independently assessed against the environmental management standard ISO 14001 for all operational sites. Certification for the ISO 14001 EMS was originally obtained in 2003 – 04, and certificate renewal occurs on three-year cycle, during which time the assessment body carries out surveillance visits at the operational sites to assess the compliance status of the EMS with the requirements of the ISO 14001 standard.

The IMS is established for the ATRF facility and will be extended to the new OWC processes, these will be assessed against the requirements of BS EN ISO14001 and will be included in the overall company certificate. A copy of the current certificate against BS EN ISO14001: 2015 is attached in Appendix C.

2.3.3 Extent of Business Management System

The IMS applies to all activities being undertaken by Biffa. This includes the design and building of new waste facilities, such as the new OWC Facility, as well as their subsequent operation.

2.3.4 Integrated Management System Outline

The system will incorporate the following elements:

- Corporate policies for health and safety, environment, social and ethical;
- Organisation and responsibilities;
- Arrangements for health and safety;
- Objectives and targets;
- Management review;
- Audit procedures;
- Environmental aspect and health and safety risk assessment;
- Permit procedures;
- Occupational health and safety; and
- Consultation.

This system will ensure consideration of environmental issues at all stages of management and control including aspects in Table 2 below.

Table 2 Management System Overview

System Aspect	Issues Incorporated
Policy	<p>Biffa has issued several policy statements covering environment, sustainability, carbon management, health , safety and wellbeing, corporate social responsibility, business principles which are contained in Appendix D. These policies reflect the principles set out by the main board of Biffa.</p> <p>The Corporate Social Responsibility Policy, and its implementation, is reviewed annually, and the policy is revised and updated as required.</p> <p>The Policy and its implementation will be reviewed annually, and the policy revised and updated as required.</p> <p>The Policy gives a commitment to:</p> <ol style="list-style-type: none"> Comply with applicable environmental legislation as a minimum. Pursue continuous improvements in its environmental performance and management system; and Contribute to long-term economic, environmental, and social sustainability through the sourcing of possible source materials and services locally to minimize transport impacts and support the local economy.
Planning	<ol style="list-style-type: none"> Identification of potential/actual environmental impacts of an activity, including significance. Identification of legal requirements affecting an activity including the requirements for obtaining a permit or planning permission. Identification of site controls required to reduce the potential/actual impact, actions required to mitigate any actual issues and actions required to ensure compliance with site legal requirements. Determination of site resource levels (e.g., manpower, equipment, etc.) required for the above controls to be effective; and Identification of key environmental performance indicators.
Implementation	<ol style="list-style-type: none"> Ensuring review of competence requirements and levels for key personnel – including contractors where required. Provision of adequate levels of training and written instruction to ensure that personnel have knowledge of or access to information required to ensure safe and efficient operation of the facility. Implementation of process control procedures including records maintenance, and logging of events/issues with the potential to impact on the environment; and Ensuring effective maintenance of the plant to ensure performance is optimised and risk to the environment especially in the event of plant failure is minimised.
Monitoring	<ol style="list-style-type: none"> Emissions monitoring and reporting requirements. Waste Monitoring – this addresses the ongoing checking of waste at pre-acceptance, acceptance and during processing; and Non-Compliance and Corrective Action – detailing reporting requirements in the event of an incident (Actual/potential) and the action required to mitigate the issue and prevent a recurrence.
Auditing	<p>Internal auditing is undertaken by site personnel trained in auditing techniques and is used for an ongoing assessment of the compliance of the site with specified controls, EMS and legal requirements.</p>
Management Review	<p>Management undertakes a review of key data to ensure ongoing effective operation of the facility. The information review will include – audit report, performance against operational targets, risk identification and incident management.</p>
Reporting	<p>Biffa will openly report on its health and safety, environmental, sustainability and social performance through several mechanisms, including:</p> <ol style="list-style-type: none"> Annual report to stakeholders containing financial and other business performance information including a summary of environmental performance. Annual sustainability/corporate impact report. . The Annual Report and carbon emissions data are subject to independent verification.

A copy of the IMS Index of Documents which make up the system is provided in Appendix E.

3. Site Operations and Maintenance

3.1 Introduction

The operational control and maintenance arrangements for the facility have been developed to comply with the requirements specified in EA and BREF Guidance, namely:

- Appropriate measures for the biological treatment of waste (6 July 2023);
- Non-Hazardous and Inert Waste: Appropriate Measures (NHIAM) for Permitted Facilities (1 August 2023); and
- “Best Available Techniques (BAT) Conclusions for Waste Treatment under Directive 2010/75/EU of the European Parliament and of the Council” (Decision 2018/1147).

Sections 3.2 to 0 below provide an overview of the relevant details of the operational control and maintenance arrangements which will be in place.

3.2 Plant Capacity

No changes are proposed to the ATRF Plant Processes and intake capacity is expected to remain up to 60,000 tpa and acceptance will be dependent on characteristics of the incoming waste streams. Any oversize material from the ATRF process will be stored and processed through a new crushing process along with additional specified wastes which only require crushing.

The new OWC processes at the facility are being developed to treat an additional 60,000 tonnes per annum of suitable organic non-hazardous waste to be subjected to picking, shredding, composting, screening, and despatch. The OWC will also accept up to 30,000 tpa of wood waste for shredding.

Any oversize material from the OWC screening process will be stored in the screening area and reintroduced at the front end of the composting process and mixed with new incoming waste for recomposting or further processed for biomass production to be used as a fuel.

Plant capacities are summarised in Table 3 below.

Table 3 Plant Capacity

Plant Area	Annual Throughput (Tonnes)	Daily Throughput (Tonnes)
ATRF	60,000	250
OWC	90,000	400

3.3 Operating Procedures

To enhance the work / process experience provided by operators, procedures will be defined covering relevant aspects of the ATRF and OWC operations to ensure safe operation and to minimise the risk of impact on the environment. Such procedures will be subject to review at least annually.

As part of the development of the new OWC facility, a full set of operating procedures will be drafted to ensure that each facility is operated to its optimal potential. These will include:

- Site opening hours;
- Management and operational manpower required including qualifications;
- Plant requirements;
- Waste acceptance procedure including load verification, auditing and load rejection;
- Storage of waste on site by category, location and handling procedures;
- Management of vehicles on site; and
- Emergency procedures.

A detailed set of commissioning procedures will also be followed whilst the site processes are being signed off for operation.

3.4 Hours of Operation

The site will receive waste during the existing ATRF operating periods as identified in Table 4 below:

Table 4 Normal Waste Acceptance Hours

Day of the week	Opening Hours
Monday to Saturday:	07:00 to 18:00
Sunday:	Closed for deliveries
Public Holidays:	07:00 to 10:00

It is recognised, however, that in emergency situations, waste may need to be accepted outside the above time periods (e.g., in response to a request from HCC or EA under Civil Contingencies Act 2004 obligations or similar). Waste accepted during these periods will be received and managed in line with standard plant waste acceptance and operating procedures.

3.5 Permitted Wastes

3.5.1 ATRF Permitted Wastes

The waste types accepted at the ATRF are street cleansing residues and similar aggregates which fall under the List of Waste (LoW) codes shown in Environmental Permit EPR/AB3700LS, Schedule 2, Table S2.1. A number of additional of waste codes are being applied for and is reflected in the Appendix B of the Technical Plan (ref: 60684371-ACM-XX-00-RP-OWC-TECH-R03) submitted with this variation. This will include a 19 12 12 to include wastes (including mixtures of waste) from the mechanical treatment of wastes that contain a high proportion of recoverable aggregates.

3.5.2 Crusher Permitted Wastes

Waste types to be processed through the crusher include:

- Oversize materials screened from the ATRF process; and
- Aggregate and glass wastes accepted for crushing without the need for other treatment.

The LoW codes approved for crushing are summarised in Table 5 of the OWC Technical Plan (Application part 4) and we anticipate will be detailed in Environmental Permit EPR/AB3700LS, Schedule 2, Table S2.2.

3.5.3 Open Windrow Composting Permitted Wastes

Waste types proposed to be accepted at the OWC facility will be defined according to their LoW code, but will generally consist of:

- wood waste
- green waste;
- leaves;
- grass clippings; and
- horticulture type waste.

The proposed list of wastes to be accepted at the OWC facility are detailed in Appendix C and D of the Technical Plan (ref: 60684371-ACM-XX-00-RP-OWC-TECH-R03) submitted with this variation. The OWC facility will not receive or accept any waste covered by the Animal By-Product (Enforcement) (England) Regulations 2013 (ABPR). The intention is to produce a PAS 100 compliant product from the inputs.

It is expected the EWC codes approved will be detailed in Environmental Permit EPR/AB3700LS, Schedule 2, Table S2.2 and S2.3.

3.6 Waste Acceptance Procedures

The site requirements for the waste acceptance are defined in a written procedure, which may include flowcharts, procedure, work instruction or similar written guidance, and the associated records which are generated as a result will be retained for a minimum of 6 years. The procedure has been developed to comply with the requirements specified in:

- “Non-Hazardous and Inert Waste: Appropriate Measures”;
- “Biological waste treatment: appropriate measures for permitted facilities”; and
- “PAS 100:2018 Specification for composted materials” where applicable.

The waste acceptance procedure will be subject to ongoing review and revision as appropriate. The current version will be kept at the site and will be made available for inspection.

General aspects of waste acceptance at the site are detailed below and specific considerations for the new OWC treatment process are detailed in Section 3 of the Technical Plan (ref: 60684371-ACM-XX-00-RP-OWC-TECH-R03) which has been submitted with this variation.

3.6.1 Waste Acceptance

The Level 1 characterisation and Level 2 compliance checks will be undertaken by the waste producer.

The operator will collect the following information prior to accepting waste onto site:

- Type of waste;
- Specific process from which the waste is derived;
- Quantity of waste;
- Form of waste (liquid, solid, sludge etc.);
- Hazards associated with the waste.

Level 3 on-site verification checks will be undertaken by site personnel in line with defined procedure. The general requirements of the checks are outlined below:

- All vehicles entering the site must stop and report to the weighbridge where they will receive further instruction from the weighbridge operative. Where appropriate, first time visitors will be required to confirm their registration as a waste carrier and will be issued with instructions on health and safety and site procedures. Visitors other than suppliers bringing waste to the site must sign the Visitors Book before proceeding onto the site, and sign out prior to leaving;
- Vehicles entering the site must provide a waste transfer note which details the source, location and description of the waste (including LoW number) they are carrying for Duty of Care purposes; these notes will be held at the site office;
- The weighbridge operative will question drivers about the waste description to ensure compliance with the requirements of the permit. A visual check will be made, whenever possible, to ensure adequate description has been provided;
- If the weighbridge operative is satisfied that the waste is acceptable for receipt at the site within the terms of the permit, the contractor will be provided with the tipping code for the ATRF or OWC areas and will be directed to the correct waste reception area;
- If the weighbridge operative is not satisfied by either the waste description or the content of the incoming load, the vehicle will be directed to a waste checking area. The load will be inspected thoroughly to decide on its acceptability; and
- If the weighbridge operative deems that the waste is unacceptable under the terms of the permit, entry to the site will be refused and the registration number of the vehicle recorded separately in the site diary/log.

Wastes shall only be accepted on site if it:

- Is of a type and quantity listed in Environmental Permit EPR/AB3700LS/V006, Schedule 2;

- Conforms to the description in the transfer documentation; and
- Conforms to the Environmental Permit.

All waste received will be weighed in and out at the weighbridge to obtain a net weight for individual loads.

3.6.2 Waste Quarantine and Rejection

The waste acceptance procedure will identify those waste materials which can be accepted at the site in accordance with its Environmental Permit. Materials which cannot be accepted will be rejected if they are not on the waste acceptance list in Schedule 2 of Environmental Permit EPR/AB3700LS or if the waste does not meet the waste acceptance criteria advised to the customer during pre-acceptance checks.

In the event that an unauthorised waste (i.e., it is not on the permitted wastes list) is identified by the site operators during load discharge/offloading, then the following action will be taken:

- The waste load will be segregated in an isolation area and photographed;
- The Site Supervisor, Waste Collection Authority and Environment Agency will be notified as appropriate;
- The isolated load will be made available for inspection by the Authority and/or the Regulator; and
- An appropriate disposal route for the load will be determined and agreed with the Regulator. The load will then be transferred to the agreed treatment or disposal facility.

The rejection will be recorded in line with the site acceptance procedure.

3.6.3 Waste Sampling and Analysis

Due to the nature and source of the waste material permitted for acceptance at the ATRF and OWC, no detailed sampling and analysis of the waste will be undertaken on a routine basis.

It is recognised that waste sampling and detailed analysis may be required in circumstance where there is a quarantined material of unknown origin/composition and where additional information on waste characterisation is required to enable the correct disposal route to be determined. The level of sampling and analysis will be agreed with the Environment Agency and will be undertaken in accordance with recognised standards.

Further details of waste sampling and acceptance checks for the OWC are provided in Section 3 of the Technical Plan (ref: 60684371-ACM-XX-00-RP-OWC-TECH-R03) submitted with this application.

3.7 Determining the Mass of Waste Materials

3.7.1 Waste Measurement During Acceptance/Export

All vehicles carrying waste to the facility or exporting material from the facility will have to pass over the weighbridge. Currently the ATRF facility uses the weighbridge on the landfill access road and will continue to do so until the new OWC facility is constructed. Once the OWC is operational, vehicles coming into the ATRF and the OWC will pass over the new weighbridge installed on the new internal access road to the south of the OWC treatment area.

Vehicles will be directed to the ATRF or OWC tipping area as appropriate if it meets the site waste acceptance requirements. All waste movements on and off site will need to be weighed in metric tonnes.

All site records will be collated and stored at the site office so to ascertain waste throughputs by weight and to meet Duty of Care obligations.

3.7.2 Weighbridge Availability

The weighbridge is calibrated and tested annually in line with the requirements of Section 11 of the Weights and Measures Act 1985. Calibration will be undertaken by an independent certification company.

Maintenance contracts are in place with both the weighbridge and software suppliers. Management of a breakdown will be undertaken in line with site maintenance procedures and will include a valid and auditable manual recording system that will be immediately instigated and maintained until the weighbridge is again in normal operation

3.7.3 Permitted Site Activities

The activities at the site are regulated under the Environmental Permitting Regulations 2016, as amended, and are detailed under Schedule 1, Table S1.1 of the environmental permit for the facility as shown Table 5 below:

Table 5 Permitted Activities

Activity Reference	EPR 2016, Schedule 1 Reference	Description of Activity
WASTE TREATMENT ACTIVITIES		
AR1	S5.4 A(1)(b)(i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tpd involving biological treatment.	Open windrow composting facility (OWC) Activity is limited to: a. Treatment of waste by composting. b. Sanitization, stabilization, and maturation. c. Physical treatment of waste, restricted to storage, sorting, shredding, blending, and screening. d. Managing storage of feedstock prior to windrow formation to prevent anaerobic conditions.
AR2	Not Applicable – ATRF Waste Operation	Aggregate Treatment and Recovery Facility (ATRF) Treatment consisting only of sorting, screening, separation, washing and dewatering of waste into difference components for recovery
AR3	Not Applicable – Crushing Waste Operation	Treatment and/or recovery of waste materials through an enclosed mechanical crushing process.
AR4	Not Applicable – Shredding and screening of Wood Waste Operation	Physical treatment for recovery through a shredding, screening and separation process
DIRECTLY ASSOCIATED ACTIVITIES		
AR5	Not – applicable Recycling/ reclamation operation	Recycling/reclamation of organic substances which are not used as solvents.
AR6	Not – applicable Recycling/ reclamation operation	Recycling/reclamation of metals and metal compounds.
AR7	Not – applicable Recycling/ reclamation operation	Recycling/reclamation of other inorganic materials
AR8	Not Applicable – Waste Input Storage	Temporary storage of non-hazardous waste prior to treatment.
AR9	Not Applicable – Output Storage	Temporary storage of finished products (compost, aggregates) and recovered waste fractions.
AR10	Not applicable – Process Water	Management and treatment plant of process water to facilitate recirculation in ATRF.
AR11	Not applicable – Process Water	Management and treatment plant of process water to facilitate recirculation in OWC.

Activity Reference	EPR 2016, Schedule 1 Reference	Description of Activity
AR12	Not-applicable – surface water	Collection and storage of surface water prior to use or discharge.

In accordance with Annex II of the Waste Framework Directive, as amended in 1996 (96/350/EC), the waste management operations to be undertaken at the site are as follows in Table 6:

Table 6 Waste Management Operations

Activity Reference	Description of Activity	Disposal or Recovery Activity	
AR1	Open Windrow Composting (OWC) Facility	R3	Recycling or reclamation of organic substances (not solvents) including biological treatment processes.
		R4	Recycling or recovery of metals and metal compounds (bulky Recyclable)
AR2	Aggregate Treatment and Recovery Facility (ATRF)	R3	Recycling or reclamation of organic substances (not solvents) including biological treatment processes.
		R4	Recycling or recovery of metals and metal compounds (bulky Recyclable)
		R5	Recycling or recovery of other inorganic materials (e.g., glass, plastics, sand)
AR3	Recovery of waste materials through an enclosed mechanical crushing process.	D9	Physico-chemical treatment resulting in final compounds or mixtures which are discarded by any of the operations numbered D1 to D12
		R5	Recycling or recovery of other inorganic materials (e.g., glass, plastics, sand)
AR4	Shredding and screening of Wood Waste	R3	Recycling or reclamation of organic substances (not solvents) including biological treatment processes.
		R4	Recycling or recovery of metals and metal compounds (bulky Recyclable)
		R5	Recycling or recovery of other inorganic materials (e.g., glass, plastics, sand)
AR5	Organic Recycling/ reclamation operation	R3	Recycling or reclamation of organic substances (not solvents) including biological treatment processes.
AR6	Metal Recycling/ reclamation operation	R4	Recycling or recovery of metals and metal compounds (bulky Recyclable)
AR7	Inorganic Recycling/ reclamation operation	R5	Recycling or recovery of other inorganic materials (e.g., glass, plastics, sand)
AR8	Temporary storage of Incoming non-hazardous waste.	R13	Storage of recyclable waste prior to any R1 – R12 operations. For this site this will include onsite recycling/recovery activities or storage prior to transfer to a recycling or recovery activity.
		D15	Storage pending any of the operations numbered D1 to D14
AR9	Temporary storage of process product outs and non-hazardous waste outputs.	R13	Storage of recyclable waste prior to any R1 – R12 operations. For this site this will include onsite recycling/recovery activities or storage

Activity Reference	Description of Activity	Disposal or Recovery Activity	
			prior to transfer to a recycling or recovery activity.
		D15	Storage pending any of the operations numbered D1 to D14

3.7.4 Materials Storage

Materials including incoming waste streams, process outputs and residues will be stored as follows:

Table 7 Materials Storage

Material	Maximum Storage Period	Maximum Storage Volume (Tonnes)
Incoming Waste Streams		
Incoming to ATRF	10 Days*	1,500
Incoming to OWC – Green Waste	5 days	500
Incoming to OWC – Wood Waste	5 days	400
Incoming to the Crusher	30 Days	1,000
Biological Treatment		
Composting Windrows	84 Days minimum	19,890
Outputs and Residues - ATRF and Crusher		
Organic Fractions	10 Days	500
Sand Fractions	3 years	8,000
Metals	30 Days	100
Silt/Fines/Fractions	30 Days	1,000
Filter Cake Fraction	30 Days	500
Aggregate Fractions	3 years	6,000
Oversize	3 years	5,000
Outputs and Residues - OWC		
PAS 100 Products	6 months	1,400
Non-PAS Residues	6 months	700
Wood	30 Days	500
Oversize	5 Days	500
Metals	30 Days	100
Plastics	30 Days	100

* 10 days during normal operating conditions, but during plant servicing and maintenance this may take longer, typically between 15 – 20 days.

3.8 Maintenance Management

Maintenance management for the facility will include:

- A series of maintenance procedures will be developed for the main items of plant at the site including mobile and fixed plant equipment. This procedure will provide an indication of reference documents along with procedural steps including who will undertake the work, the relevant mechanism for recording the information and the action/reporting to be completed if an issue is identified.
- There will be a significant element of planned preventative maintenance to ensure high standards of performance.

- Maintenance scheduling will be undertaken referring to statutory requirements, manufacturer's recommendations and from plant history.
- Following maintenance, details of work undertaken will be recorded.
- Monthly reports relating to maintenance activities and effectiveness are provided to senior management including any recommendations for further action.
- All plant items will be serviced and maintained according to manufacturer's schedules and recommendations. Plant and equipment will be inspected and serviced by Biffa Waste Services Ltd utilising a plant inspection pro-forma.
- Critical spares will be identified and held as appropriate.

4. Amenity Management and Monitoring

4.1 Introduction

The arrangements for managing and monitoring possible amenity impacts for the facility have been developed to meet the requirements specified in relevant EA and BREF Guidance, namely:

- Appropriate measures for the biological treatment of waste (06 July 2023);
- Non-Hazardous and Inert Waste: Appropriate Measures (NHIAM) for Permitted Facilities (01 August 2023), sections 6 and 7; and
- “Best Available Techniques (BAT) Conclusions for Waste Treatment under Directive 2010/75/EU of the European Parliament and of the Council” (Decision 2018/1147).

The sub-sections to follow provide an overview of the relevant details of the operational control and maintenance arrangements which will be in place.

4.2 Prevention of Pollution

Prevention of pollution at the facility will be achieved through a combination of techniques including:

- Design of the facility in accordance with recognised standards for construction (e.g., British Standards, Building Regulations) and for pollution control (e.g. CIRIA);
- Undertaking operations in strict accordance with site operational control procedures developed to minimise the potential for pollution risk;
- Employing competent operators with the relevant experience and qualifications;
- Implementing the site controls and mitigation measures; and
- Maintaining an emergency response plan and associated equipment to ensure that spills, releases and other incidents can be dealt with quickly and effectively.

4.3 Management of Potentially Polluting Leaks and Spillage

All vehicles, plant and equipment used on site in connection with the permitted waste installation and waste management operations will be operated and maintained with the objective of preventing potentially polluting leaks, spillages of wastes or other potentially polluting materials.

Site control measures include:

- Pavements, treatment areas and roads will be constructed from concrete designed to BS EN: 12877, parts 1 – 3 or equivalent using anti-crack mesh to enhance surface durability. Pavements and treatment areas will be laid to falls which facilitate surface water drainage;
- Storage tanks and associated containment will be designed in accordance with CIRIA C736 requirements;
- Daily site inspections will check all containment bunds and plant areas for signs of leak or defect – repairs will be undertaken promptly and accumulated material in the containment bund will be removed to ensure that containment capacity is not compromised; and
- Tanks, pumps and site vehicles will be maintained in line with a defined preventative maintenance schedule to ensure the plant integrity and operational efficiency is maintained.

In the unlikely event of a pollution incident occurring on site:

- Minor spillages will be dealt with by use of appropriate absorbent materials and used absorbent will be subsequently appropriately disposed; and
- In the event of a major spillage, immediate action will be taken to contain the spill. Absorbent materials will be used for spillage control and containment. Absorbents will be stored in waterproof container(s) and all operatives will be made aware of their location. Immediately following clean up and appropriate containment the Environment Agency shall be informed in accordance with environmental permit requirements and a note to this effect will be made in the site diary.

4.4 Noise Management

The activities of this facility are not expected to cause high levels of noise or vibration. A Noise and Vibration Management Plan (ref: 60684371-ACM-XX-00-RP-OWC-XXX-R01) is provided with this application and general controls to be used include:

- Motors associated with the external tanks and pumps will be acoustically enclosed;
- Plant and equipment will be maintained in accordance with the manufacturer's instructions to avoid unnecessary noise and vibrations; and
- Plant and equipment will be stopped when not in use.

In the unlikely event that the Environment Agency determines that the site operates at a noise level which is too high, the noise and vibration management plan will be reviewed and submitted for approval. Once approved, this plan will be implemented immediately.

4.5 Point Source Releases

4.5.1 Point Source Release to Air

There are no point source releases to air associated with either the ATRF or the OWC.

4.5.2 Point Source Releases to Water

There are no point source releases to water associated with either the ATRF or the OWC.

4.6 Fugitive Emissions of Substances

The operations in place at the proposed Facility will ensure that the risk of fugitive emissions of substances is carefully controlled and mitigated against. The site will be maintained in a clean condition with inspections to ensure this practice is maintained / enforced. Controls for specific issues are reviewed below.

4.6.1 Dust and Particulates

Dust will be prevented on the site wherever possible and the following mitigation measures will be employed:

- On-site vehicle movements over concrete and tarmac surfacing will operate to specific speed limits, reducing the potential for dust to become air-borne;
- Lorries transporting the waste materials into and from the site will be enclosed or sheeted to reduce emissions;
- The site will operate with high standards of housekeeping, and the plant will be maintained to high standards to minimise fugitive emissions;
- Incoming waste will be stored in a reception areas designated for the individual treatment routes.
- Storage bays for incoming waste to the OWC will be stored in bays constructed with 3 walls to reduce the potential for dust emissions.
- Drop heights will be minimised for all material transfer points, when forming stockpiles and windrows, and when packing the finished product;
- Water suppression to minimise dust emissions in dry weather will be available. Incoming waste that has been allowed to drain will not be relocated in high winds;
- Products from the treatment processes will be stored in designated bays or stockpiles which can be covered in periods of high winds;
- Storage of all other waste materials will, where necessary, be undertaken in enclosed skips or containers to minimise the potential for fugitive release; and
- In the event of a sustained period of dry weather the potential for dust emissions is likely to be increased. Under these conditions dust will be suppressed and controlled by periodic sweeping and/or water dowsing on site and on the access and egress roads

For further details of controls refer to the Dust Emissions Management Plan (reference 60684371-ACM-XX-00-RP-OWC-DEMP-R01).

4.6.2 Mud and Debris

The site will be constructed to ensure that all vehicle movements are undertaken on paved or concreted surfaces, and thus the potential for mud and debris being carried onto the public highway is minimal.

To ensure that the deposit of mud and debris onto public highways does not become an issue, the following additional controls will be employed:

- The site will be maintained in a clean condition with operational surfaces cleared of any potential debris by the use of sweepers deployed by site management;
- During periods of dry weather, the introduction of water to dampen surfaces will be used to reduce any potential for dust emissions from vehicular movements;
- Regular daily inspections of operational areas will be carried out by site operational staff to ensure standards are suitably maintained; and
- There is a vehicle wash down area which will be available for all vehicles to use.

4.6.3 Litter

Due to the nature of the permitted wastes, litter is not likely to present a nuisance to any surrounding receptors; however, the following measures will be implemented:

- Wastes entering and leaving the site will be in sheeted/sealed/containerised vehicles;
- Staff will be required to keep the site and its surrounds tidy; and
- Daily inspections will be carried out; any litter will be retrieved and deposited within the waste reception areas.

4.7 Odour

4.7.1 Normal Operations

The minimisation and control measures in place with regard to odour are detailed in the updated Odour Management Plan for the site (see 60684371-ACM-XX-00-RP-OWC-OMP-R01 in Application Section 6) and summarised below:

- Staff training includes raising employee awareness with respect to normal plant operational odour levels and actions to be taken to rectify any faults;
- Dust suppression available when required. Mist sprays can be supplemented with de-odourising agents if required;
- Rejection of highly odorous materials at pre-acceptance stage screening or rejecting it if a odorous waste is detected at acceptance;
- Material to be stored for a maximum of indicated storage days and removing the ATRF recovered organic fraction as soon as practicable to minimise on site storage time;
- Ensure regular turning of windrows to maintain aerobic conditions and prevent anaerobic conditions from developing coupled with regular monitoring of the open windrows during the treatment period;
- Good housekeeping; and
- Vehicles use the existing wheel wash to ensure mud and debris is not transported around site or onto main highway.

4.7.2 Routine Maintenance Inspection Requirements

Biffa will ensure good performance of all plant and working procedures which are each critical to maintaining efficient odour control. A planned inspection and preventative maintenance regime will be applied, which will include a written maintenance plan and a record of maintenance.

4.8 Vermin and Pests

The site will be inspected for vermin and pests on a regular basis, and if their presence is detected, the site operator will implement appropriate control measures. A pest control firm will be contracted to carry out regular controls, records of which will be available for inspection on site.

Scavenging animals and birds will be discouraged by ensuring waste is covered and cannot be easily accessed.

4.9 Cleanliness of Access Road and Highway

The site access and highway outside the site will be kept free from mud and debris. The opportunity for vehicles using the site to collect such mud and debris on their wheels is minimal, as the entire operational area consists of hardstanding and site access roads are surfaced and will be maintained.

Regular inspections throughout the working day will be carried out on the roads, in the event that any mud or debris is noted it will be cleared at the earliest opportunity. A vehicle wash down area is available for use by all vehicles using the site.

5. Resource Management

General management arrangements and policies are detailed in the sections below. Specific details of raw material, water and energy consumption requirements are provided in the Technical Plan associated with each process:

- ATRF Amended Technical Plan (EPR/AB3700LS/V002, September 2014); and
- 60684371-ACM-00-XX-RP-BHW-TECH-R03 OWC Technical Plan (Application Part 4).

5.1 Raw Materials Management

5.1.1 Raw Materials Procurement

Raw materials will be selected and procured in accordance with defined IMS procedural requirements, taking into consideration:

- The environmental impact of materials across their entire life cycle;
- The impact on human health by considering harmful or hazardous properties;
- Sourcing from renewable and sustainable sources, where practicable;
- Sourcing from local sources, where practicable; and
- The quality of the materials to be used, and the efficient use on site.

5.1.2 Raw Materials Inventory

A raw materials inventory for the site is shown in Table 5 including anticipated storage requirements and potential environmental impacts.

Table 8. Raw Materials Inventory

Raw material	Composition	Annual Consumption	Fate	Environmental Impact	Storage	Control Measures
Hydraulic oil	Hydrocarbon	<1 tonne	Recovery – used oil will be stored in sealed containers or tank, and sent to specialist recovery facilities where feasible	None, material sent to recovery	None identified	Spill kits and absorbent material on site
Engine oil	Hydrocarbon	<1 tonne	Recovery – used oil will be stored in sealed containers or tank, and sent to specialist recovery facilities where feasible	None, material sent to recovery	None identified	Spill kits and absorbent material on site
Gear Box oil	Hydrocarbon	<100 litres	Recovery – used oil will be stored in sealed containers or tank, and sent to specialist recovery facilities where feasible	None, material sent to recovery	None identified	Spill kits and absorbent material on site
Antifreeze	Typically, ethylene glycol	<500 litres	Recover, where feasible, otherwise dispatched to an authorised facility for disposal	Insignificant	None identified	Spill kits and absorbent material on site

Raw material	Composition	Annual Consumption	Fate	Environmental Impact	Storage	Control Measures
Diesel	Hydrocarbon	As required	Waste diesel unlikely to arise	Release of combustion gases	None identified	Spill kits and absorbent material on site

5.2 Energy Management

5.2.1 Introduction

This section provides evidence of the existence of relevant controls for the management of energy to the standard indicated by the Environment Agency guidance in:

- “Energy Efficiency Standards for Industrial Plants to Get Environmental Permits” ; and
- “Reference Document on Best Available Techniques for Energy Efficiency”.

5.2.2 Energy Policy

Biffa recognises and accepts its responsibility for the environment as an integral part of its services and operations and will be committed to excellence and leadership in protecting the environment. This is evidenced within its Environment and Carbon Management Policy which commits to:

- Meet all applicable compliance obligations;
- continually evaluate environmental risks and opportunities associated with aspects and impacts of its operations including those associated with energy consumption and carbon impact;
- addressing the use of energy, raw materials, water and emissions to the environment, including waste by providing active resources for the planning , provision and maintenance of environmental plans;
- plan and support the continued application of its Environmental Compliance Strategy and evaluate performance;
- maintain its Carbon Saver Gold Accreditation; and
- identify risks and opportunities and direct resources where it can make significant improvements in environmental performance, specifically reducing greenhouse gas emissions, resource efficiency, energy, water, life cycle and end of life treatment and own waste management.

5.2.3 Planning

As part of its management system, the Operator will implement an Environmental Programme which includes the assessment of environmental effects, preventive action, targets and objectives and responsibilities. As part of the Environmental Aspects addressed in this manner there will be a focus on energy use and energy recovery

5.2.4 Implementation and Operation

5.2.4.1 Organisation and Responsibility

Responsibility for effective energy management will lie across various levels of the organisation, with the main areas being:

- Site Manager – will be responsible for the overall efficiency of the treatment operations with to regards energy consumption , ensuring that processes are operated in line with operational control procedures while optimising throughput;
- Maintenance personnel – will be responsible for maintaining all plant and equipment within the facility in efficient operating order, and for ensuring that energy efficiency considerations are undertaken when plant or equipment needs to be replaced.

It is also acknowledged that all staff will have a part to play in the successful implementation of the energy management system at the site.

5.2.4.2 Motivation and Training

The Company has established procedures to ensure that its employees, at all levels, are aware of:

- their roles and responsibilities in achieving compliance with the Environmental Policy and Objectives, the requirements of the standard and, in particular, the correct implementation of management system procedures;
- the potential environmental effects of their work activities and the environmental benefits of improved performance; and
- the potential consequences of departure from agreed operating procedures.

To ensure the effective communication of policies and procedures, the Operator will utilise team meetings and formal training sessions to ensure that individuals fully understand the energy management requirements for the site.

5.2.4.3 Control Measures

All plant and equipment will be operated by trained personnel, in accordance with management procedures defined within the site's management system. Where necessary, operational control procedures will be developed to ensure efficient operation of equipment particularly during start up and shut down when energy usage is at its optimum.

5.2.4.4 Energy Monitoring and Reporting

Effective monitoring of energy consumption is essential in order to achieve improvements across the site, and as such energy consumption will form one of the Key Performance Indicators (KPIs) set within the BMS. Performance against the KPIs will be reviewed on a monthly basis, to identify trends.

5.2.5 Control and Corrective Management

5.2.5.1 Monitoring and Measurement

As part of the management system, the Operator has established and maintains documented procedures for monitoring and measuring the key characteristics of operations and activities which have a significant impact on energy efficiency. Such procedures are linked with defined key performance indicators (KPIs) as agreed in the environmental programme.

The KPIs for energy will be monitored monthly to identify trends and facilitate the prompt rectification of issues.

5.2.5.2 Corrective and Preventive Actions

As part of the management system, the Operator has established and maintains procedures for defining responsibility and authority for the management and investigation of non-conformance with permit conditions, legal requirements and KPIs.

The outcome of such investigations will result in action to mitigate any impact along with corrective and preventive action to prevent a recurrence of the identified issue. Such action will be commensurate to the magnitude of the issue and the energy efficiency impact encountered.

5.2.5.3 Records and Reporting

As part of the IMS management system, reports on energy use and progress against specific KPI targets will be produced in line with the operator's benchmark reporting system.

5.2.5.4 Audits

A preliminary energy audit will be completed during the commissioning and testing phase of the new process operation in order to ensure the energy efficiency performance of the installation meets the design basis.

Subsequent energy audits will be undertaken in the following circumstances:

- When future performance of the facility as measured through the agreed KPIs indicates potential deterioration in efficiency then an energy audit may be initiated on either the installation as a whole or on a specific area of operation; or
- Following a major change to the facility in the future (e.g., for initiation of CHP operations), an energy audit may be carried out to ensure relevant performance measures are achieved.

Improvements will be introduced through an energy audit and energy efficiency plan. The energy efficiency plan will include an estimate of CO₂ savings that would be achieved over the measures' lifetimes, information on the annual costs of implementation, costs per tonne of CO₂ saved, and the priority of implementation.

5.2.5.5 Reviewing Performance

An annual management review is completed under the management system requirements during which the energy plan and performance against the previous year's KPI targets will be reviewed by site management. The review will include:

- Consideration of company policy;
- Comparison of quantitative performance against targets;
- Comparison with benchmark data where available; and
- Review of the implementation of energy efficiency improvements.

The energy plan will subsequently be revised to take account the results of this review.

5.2.6 Energy Efficiency Techniques

5.2.6.1 Energy Efficient Design

For a waste treatment plant of this type, the process technology is essentially pre-determined by the selected technology provider, although the design team will work with the suppliers to optimise any opportunity to improve on process efficiency. The energy efficiency considerations that have been assessed at the design phase include:

- The design and layout of individual items of plant and equipment has been optimised to provide as small a footprint for the facility as can be achieved, this means that transport systems have been designed in such a manner as to reduce distances travelled, thus reducing power consumption required to facilitate such material movement;
- Optimised operation and monitoring of heat treatment process;
- Selection of energy efficient equipment (e.g., compressors and variable speed motors where appropriate);
- Real-time monitoring of electricity demand.

5.2.6.2 Efficient Process Control

Optimised Plant Start-Up

The site operational control system will include appropriate start-up sequences, treatment rates and instructions for starting up plant in the most efficient manner possible.

Process Optimisation

This will be implemented in order to achieve benefits of improved operational throughput and improve the efficiency of the treatment processes. This will be achieved by:

- Optimising throughput - this seeks to ensure that the optimum amount of waste is treated for every unit of energy utilised. Improvements to maximise throughput will be delivered through process monitoring to determine plant performance, followed by subsequent work to optimise the process, which may include changes in waste input batching requirements, plant operational control or improving the awareness of operators; and

- Stabilising the process – by reducing, as far as practical, the variability of waste inputs to the various plant systems, to will help to maintain steady plant operation and optimised throughput.

Process optimisation activities will commence during plant commissioning.

Encourage the Use of Operational Best Practice

Operational best practice will be encouraged at the site through the application of general common sense throughout the operations, in particular:

- Maintaining housekeeping standards across the plant will not only reduce environmental impact of related emissions but if the root cause is identified and addressed then issues such as spillage will be minimised;
- Operators will be encouraged to switch off non-essential plant and equipment when not in use, this is particularly important on planned maintenance days and during breakdown response;
- Operators will be encouraged to report faults promptly with respect to process control and general plant operation – this means that repairs to systems can be completed quickly and issues such as spillage and reduction of throughput are addressed; and
- Development and implementation of operational control procedures particularly covering plant start-up and shut-down – these procedures will be controlled within the process standardisation system and will be developed to ensure that energy is not wasted through over-extended start-up periods, while ensuring that other process conditions, such as minimum operating temperatures, are not compromised.

5.2.6.3 Maintaining Plant Reliability

This applies to all areas of the process and is aimed at reducing the number of stops on each item of plant. As energy drawn is generally higher during start-up/shut down, reducing the number of stops on an item of plant will assist with reducing overall energy consumption. This will be achieved by:

- Effective planned maintenance which will ensure that equipment is kept in good operational order, thus minimising energy consumption during operation, and also reducing the number of breakdown stops – the site will utilise a computerised system to assist tracking and monitoring of equipment condition and effectively plan maintenance;
- Stabilising the process by reducing the variability, where possible, of waste inputs to the various plant systems will help maintain steady plant operation and optimised throughput;
- All maintenance will be undertaken by trained/experienced personnel, and particular areas which will benefit from regular maintenance with respect to energy management are:
- Maintenance of heating systems is undertaken to ensure effective heat transfer and reduce the associated energy consumption;
- Lubrication of plant drives and motors on defined lubrication strategy supplemented by planned maintenance checks ensures the load on motors and drives is minimised as much as possible – this reduction of load, in turn assists in improving energy efficiency; and
- Regular cleaning and maintenance of filtration systems on the gaseous and liquid lines for plant instrumentation, ensures that the operating pressure drop and load on fans and pumps is minimised – this in turn assists in improving energy efficiency.

5.2.6.4 Specific Equipment Considerations

Electrical Motors

Variable speed motors or soft starters will be provided on motor drivers to limit the start-up current where possible. The preventative maintenance programme conducted on site will ensure that the motor and drive systems remain in good condition and are properly adjusted. These systems will also be lubricated in order to avoid high-friction energy loss. Vibration monitoring will also be employed.

5.2.6.5 Building Services

Heating and Hot Water Systems

Administration, offices, meeting rooms, mess, kitchen, and shower areas for the site as a whole has suitable local heating and ventilation systems controlled by zone, time and temperature.

Hot water systems for sanitary and domestic purposes will be heated by electricity which is controlled by thermostats.

Lighting

In general, fluorescent lighting will be used and on occasion light emitting diode (LED) lighting. In all cases the type and disposition of fittings will be selected to give a good uniformity. Certain lighting areas shall adopt automatic light level / PIR activated switches.

Water

The Facility has been designed to reuse the water within the washing and composting processes, so as to minimise overall water consumption.

Vehicle Operation

All vehicles operated by the Operator will be regularly maintained to ensure high levels of availability and optimum fuel consumption.

6. Accident and Emergency Management

6.1 Risk Assessment

Risk assessments have been completed for the activities undertaken at the waste treatment facility and the findings evaluated to assess site control and mitigation measures that will be put in place. The assessment details are provided in the Impact Assessment Report (Ref 60684371-ACM-XX-00-RP-OWC-IAR-R01 in Application Section 9). The risk assessments have considered potential abnormal and emergency situations as detailed in the latest EA Guidance including:

- waste types
- vessels overflowing
- failure of plant and equipment (for example over-pressure of vessels and pipework, blocked drains)
- failure of containment (for example, bund failure, or drainage sumps overflowing)
- failure to contain firefighting water.
- making the wrong connections in drains or other systems
- preventing incompatible substances coming into contact with each other
- unwanted reactions and runaway reactions
- checking the composition of an effluent before emission
- vandalism and arson
- extreme weather conditions, such as flooding or very high winds; and
- risk of fire due to arson, vandalism, self-combustion, equipment failure, electrical faults, hot works, naked flames, smoking, reactions between incompatible materials, neighbouring site activities and hot loads.

The risk assessments will provide an operational input into the development of a site emergency procedure which covers:

- Potential accident/incident issues which could occur;
- The mechanism for reporting and raising the alarm in the event of an emergency;
- The specific mitigation measures to be employed in the event of an accident/incident; and
- The requirements for recording and investigating the accident/incident.

The emergency arrangements will be detailed within IMS, standards, procedures, work instructions and management guidance (MOGs) such as:

- GS17 Emergency Procedures and Business Continuity
- MOG17-01 Emergency Planning and Business Continuity Plans
- GS 09 Management of Fire and DSEAR
- MOG09-01 Fire Prevention and MOG09-02 DESAR
- GS15 Learning from Incidents
- .

Implementation of the standards and procedures at a site level will result in the development of 'On-site Emergency Plan (GF17-01)' and completion of 'Incident Investigation forms (GF15-01)'. The procedures will be available for dealing with all reasonably foreseeable incidents:

- Fire;
- Flood;
- Explosion;
- Material spillage; and
- Personal injury.

Adequate stocks of emergency provisions will be available at all times.

All emergency incidents involving fire, explosion or material release (fume/spillage) shall be reported to the Environment Agency as soon as practicably possible in line with environmental permit notification

requirements. A written report detailing the nature of the incident, causes and remedial action will be sent the Environment Agency within two weeks of such an incident.

The effectiveness of the site controls will be reviewed at least annually during the audit process. However, these will be also verified during any accident/incident investigation in order to ensure that the site system remains effective.

In addition, all details of the above will be recorded within the site diary.

6.2 Risk Reduction and Management

The main mechanisms for risk reduction and management in respect of emergency preparedness and response are detailed in Table 9 below.

Table 9 Accident Risk Reduction and Management Techniques

Area	System Measure	Specific Control Measure
Process Design Considerations	Plant redundancy	<ul style="list-style-type: none"> Provision of spare storage capacity in event of outage Access to critical spares
Business Management System	IMS	<ul style="list-style-type: none"> Develop/implement an ISO14001 certified system
	Roles & Responsibilities	<ul style="list-style-type: none"> Environmental responsibility is defined throughout the organisation
	Operating Procedures	<p>Maintain series of operational, maintenance and emergency procedures which cover:</p> <ul style="list-style-type: none"> Waste acceptance, treatment, and final effluent testing to ensure compatibility between materials. Accident, incident, and non-conformance procedures Maintenance procedures and schedules on all main items and areas of plant including defect reporting. Safe shutdown procedures Spill control procedures and response kits
	Emergency response plan	<ul style="list-style-type: none"> Emergency response plan that will be reviewed to ensure ongoing effectiveness
Physical control measures	Material storage	<ul style="list-style-type: none"> Defined site plan showing storage locations, volumes and materials. Use of clear labelling on all storage areas
	Physical Protection Measures	<ul style="list-style-type: none"> Physical 'bump' barriers in use at tanks Provision of adequate containment that meets regulatory standards. Tanks/storage vessels provided with levels indicators and alarms
Operational control measures	Control system	<ul style="list-style-type: none"> Automated process control system Process alarms and controls Areas of the site will be evaluated in accordance with the Dangerous Substances Explosive Atmosphere (DSEAR) Regulations. Where an explosive risk exists, the relevant area will be zoned in accordance with the regulations and controls such as intrinsically safe equipment will be implemented where required.

6.3 Emergency Management Plan

6.3.1 General Principles

The site accident management plan will, reflect the broad principles of the COMAH guidelines, in that:

- Major accident hazards have been identified;

- The measures necessary to prevent major accidents and to limit their consequences for people and the environment have been taken;
- Adequate safety and reliability have been incorporated into the design, construction, operation and maintenance of the plant; and
- An on-site emergency plan will be developed.

6.3.2 Operations

An accident management plan has been developed, describing the techniques which will be implemented to minimise the risks posed to the environment. Activities affecting the health and safety of operatives, contractors and visitors will be separately managed in compliance with H&S regulation and the Contractor's H&S policy.

Environmental accident prevention will be managed within the overall site health, safety, quality and environmental management programme. Management and procedures relating to emergency preparedness and response will be documented within an Emergency Procedures Manual contained within the IMS.

6.3.2.1 Emergency Procedures

The emergency procedures will be maintained within the site Operations Manual and adequate stocks of suitable equipment retained at the Facility. Procedures will be present for managing all reasonably foreseeable incidents, including:

- Fire;
- Material spillage;
- Fume release;
- Personal injury; and
- Unintended reactions.

In the event of an accident or incident taking place, plant personnel will implement the actions detailed in the site emergency procedures, which will detail:

- Reporting the incident/raising the alarm;
- Contacting relevant Biffa personnel and management;
- Contacting relevant external emergency services/regulatory bodies when required;
- Taking appropriate corrective or mitigating action;
- Site evacuation; and
- Recording the details of the incident and action taken.

Typical scenarios that may need to be addressed include:

- Fire – specific details for raising the alarm and action to be taken in the event of a fire are detailed in the emergency control procedure. Physical measures for control on site for fire include fire alarms, fire extinguishers, emergency lighting and fire hydrants. In the event of a fire, all fire waters can be contained on site in static storage vessels or mobile vacuum plant and subsequently directed back through the process;
- Spillage control – this includes minor and major (i.e., >205 litre) spillages both on and off the site. The procedure details the specific actions required for spillage containment and removal. It is supported by a number of physical measures such as absorbent materials, booms, drain protection, and temporary sealants. The majority of all spilt materials can be contained and treated through the site processes following testing of the material's composition. In the event of an off-site spillage, failure of a tanker on-site or in the event the material cannot be treated through the process, then liaison with relevant external parties including the Environment Agency, HSE or other waste/water treatment facilities;
- Power cut - these are generally due to faults external to the facility and can occur without notice. If a power cut occurs, power supply is lost and plant including the abatement equipment stops. Plant would be restarted, and emissions controlled through normal restart procedures; and
- Vandalism – the site has a secure boundary and access will be prevented by lockable gates, as required. In addition, the site is monitored by the CCTV used to provide supervision during

loading/off-loading activities and can also guard against unauthorised access. Any unauthorised persons found on the site will be challenged and removed - if necessary, the police will be informed.

6.3.2.2 Incident Investigation and Reporting

A near miss/incident reporting system will be put in place which will encourage the reporting of all accidents and incidents with health and safety or environmental implications. The system will also be used to report any unusual occurrences. Examples of what may be recorded include:

- Office or site accidents minor or otherwise;
- Near misses;
- Unsafe loads delivered to site – poor loading, damaged vehicle hoses, damaged packages;
- Spillages;
- Problems with contractors, drivers and visitors; and
- Offsite complaints.

Reports will be reviewed by the site manager or senior management, as appropriate, and corrective or other action taken recorded. All reports will be reviewed on a monthly basis by senior management and 'lessons learnt' will be communicated to site personnel via the internal briefing and a Toolbox Talk (TBT) system.

All emergency incidents involving fire or material release (fume/spillage) will be reported to the Environment Agency in line with the environmental permit notification requirements. A written report of the nature of the incident, its causes and any remedial action taken will be presented to the Agency within two weeks of any such incident being closed-out.

A COTC holder will be contactable on a 24 hour per day basis and will be within two hours of site.

6.3.2.3 Ongoing Validity of Plan

The integrated IMS will include procedures for checking the continued validity of the emergency plan and associated contingency arrangements.

The effectiveness of the site controls is reviewed at least annually, during the audit process, but are also verified during the accident/incident investigation to ensure that the site system remains effective.

Periodic testing of the plan will take place using emergency drills and exercises as appropriate.

6.4 Contingency Management

The site contingency arrangements include:

- Having clear waste acceptance procedures which ensures that waste is only accepted if it meets the waste acceptance criteria, there is sufficient capacity to accept waste without exceeding the storage limits and a clear treatment route for recovery or disposal is available;
- Identifying alternative appropriately licenced waste management facilities where waste can be directed in the event of a fire or similar emergency which requires the site to cease accepting waste;
- Ensuring customers are advised during pre-acceptance of the circumstances and criteria that would result in non-acceptance of waste;
- Ensuring treatment and storage plant is covered by appropriate preventative maintenance regime and that critical spares have been identified and are retained or can be obtained at short notice; and
- Ensuring there is sufficient storage capacity for treatment outputs – both residues and materials which meet end-of waste status.

6.5 Reporting and Review

The effectiveness of the site controls will be reviewed at least annually during the audit process. However, these will be also verified during any accident/incident investigation in order to ensure that the site system remains effective.

7. Management of Non-Compliance

7.1 General

Any incidents of non-compliance with the site permit will be managed through the formal environmental management system in line with the requirements defined by the Environment Agency. The main elements of this management system will include:

- Reporting the incident/accident;
- The mitigation measures to be taken while dealing with the incident/accident;
- The recording of the incident/accident and subsequent investigation requirements;
- Identification, implementation and recording of relevant corrective action required to prevent a recurrence; and
- Reports will be reviewed by site management or senior management as appropriate and corrective or other action recorded. All reports will be reviewed on monthly basis by senior management.

7.2 Complaints Management

7.2.1.1 Complaints Procedure

The site will maintain a procedure within the IMS which details the requirements for recording complaints (e.g., odour, noise, and other environmental/operational issues) and the actions to be taken to:

- Investigate the issues;
- Record details of any corrective action required; and
- Provide feedback to the individual making the complaint.

Biffa's complaints procedure will ensure that complaints are handled correctly and systematically and acted upon.

7.2.1.2 Complaint Management and Registration

Details of all complaints, results of investigation and any corrective action taken will be recorded in the compliance database. The Site Manager and other senior management will have access to the database and the complaints register will be reviewed regularly for trend analysis.

7.2.1.3 Complaint Investigation

Initial screening of the complaint will be undertaken in order to establish if an incident has actually taken place, which will consider:

- Knowledge of potential sources at the facility;
- Knowledge of operational issues or plant defects that could contribute to cause of the complaint;
- Consideration of potential external sources;
- Location and distance of complainant from the site; and
- Results of any site monitoring already taking place.

If no such incident can be confirmed, then further investigation will not be required. However, if an incident is confirmed as valid, a more detailed investigation will occur.

7.2.1.4 Communication with Complainant

The Site Manager or nominated Deputy will provide feedback to complainants including details of any corrective action taken as soon as reasonably practicable.

7.3 Notification to the Environment Agency

Notifications to the Environment Agency will be made in accordance with Section 4.3 Notifications of the site Environmental Permit.

8. Performance Management

8.1 Key Performance Indicators

In order to track performance of the facility, key performance indicators (KPI) will be set each year and will be managed through the IMS and the relevant Balance Business Plan (BBP). Performance against the KPIs will be monitored to identify adverse trends.

Typical KPIs include:

- Tonnage of waste received and removed;
- Tonnage of waste treated;
- Cubic metres of mains water consumed;
- Cubic metres of recycled process water; and
- MWh energy consumed per tonne of waste received.

Reporting to the Environment Agency will be completed in accordance with the environmental permit reporting requirements.

8.2 Emissions Monitoring

Emissions monitoring data will be monitored and reported to the EA in accordance with the environmental permit requirements.

9. Document Control

9.1 Security and Availability of Records

Records pertaining to the site's operation will be maintained in either electronic or hard copy form:

- Electronic records will be saved to the internal computer network; and
- Paper records where necessary will be retained in the main office.

Records will be available on request and will be retained for in line with the Environment Agency guidelines.

9.2 Records Management

9.2.1 Records of Waste Accepted at the Site

A record of the types and quantities of wastes accepted and dispatched from the site will be maintained. A summary of the types and quantities of wastes deposited at the site will be provided to the Environment Agency at an agreed frequency and format.

9.2.2 Management of System Records

The records demonstrating compliance to a management system will be maintained at the site in hard copy or electronic format.

9.2.3 Records of Significant Events

Records will be held regarding:

- All incidents, accidents and non-conformances;
- Actions taken for all of the above instances; and
- Changes to operating procedures following adverse findings resulting from the above events.

The following significant events will be recorded when applicable:

- Commencement and completion of any construction/engineering work undertaken on site;
- Plant breakdowns and maintenance;
- Emergencies;
- Problems with waste received and rejected loads;
- Sampling exercises;
- Site inspections;
- Dispatch of records;
- Weather conditions;
- Complaints; and
- Pest or vermin incidence.

The technically competent person, as previously referred to, or other nominated person, will maintain a record of the above information as required. Records will be retained in the site office at all times and will be available for inspection at all reasonable times by an authorised officer of the Environment Agency.

9.2.4 Retention period

Waste transfer documentation will be retained in line with Duty of Care requirements. Site operational records will be retained in line with the requirements of the Environmental Permit

9.3 Reporting and Notification

9.3.1 Reporting

Within one month of each quarter, the Site Supervisor will submit to the Environment Agency a form specifying the waste accepted and removed from the site during the previous quarter.

9.3.2 Notifications

In the event of any breach of the Environmental Permit, the Environment Agency will be notified of details in writing within two weeks and informed of migration measures.

9.4 Document Control

9.4.1 Site Documents

This Site Management Plan, associated drawings and records will be maintained by the Site Supervisor in accordance with the requirements of the environmental permit.

All modifications to the site management plan will be controlled and tracked in line with Biffa document control procedures which require the Plan to be identified with a revision number and date.

9.4.2 Environmental Permit

A copy of the current version of the environmental permit will be retained at the site.

10. Decommissioning and Closure

10.1 Introduction

Closure and decommissioning considerations will need to be reviewed in the event of site closure/plant removal to reflect statutory and best practice techniques in place at the time. Consideration will be given to:

- removal of structures and the concrete slab,
- dealing with any potentially contaminative material which has arisen from the treatment process or has been disposed of/stored on or under the company's landholding, and
- ensuring land on the site meets appropriate surrender conditions specified at the time of closure.

Considerations for decommissioning and closure at each phase are outlined in the sections below.

10.2 Design and Build

The ATRF and OWC operations have been designed and are/will be built to:

- Avoid the use of underground tanks and pipes where possible;
- Comprise structures which can be readily accessed for planned preventative maintenance and can be renewed/replaced to ensure ongoing effective plant operation over time;
- Facilitate draining/cleaning of vessels, pipes and drains;
- Ensure potentially polluting activities are undertaken on impermeable surfaces;
- Include operational treatment and storage areas within the existing site security arrangements.

10.3 Plant Operations

As outlined throughout the application documents, procedures and practices will be implemented which aim to protect the site from environmental deterioration. Such operational considerations include:

- Process control mechanisms such as alarms, level indicators, etc coupled with operational control procedures that enable effective monitoring of the process and minimise the risk of environmental incident occurring.
- Planned preventative maintenance strategies to ensure all plant especially that which can have a significant environmental impact is maintained to a level which minimise the risk of accidental release through plant failure/breakdown.
- Accident management practices and procedures to minimise the risk of an accident occurring coupled with appropriate mitigation controls to minimise the environmental impact should an accident occur.
- Selection of plant and equipment to replace plant at the end of its useful life will include consideration of energy and water utilisation to ensure ongoing operation continues to be efficient and climate impacts are minimised.

10.4 Closure Management Plan

The Closure Management Plan for the site is developed using current general best practice arrangements to define actions to be taken in the event of closure. It should be noted however, that the arrangements that are to be implemented will only be finalised at the time of decommissioning and closure taking into consideration relevant regulatory and other requirements applicable at that time.

It is believed that the Site can readily be decommissioned, cleared and restored as necessary to its pre-licensed condition without any pollution risk and with no impact on any European Site.

However, to provide more up-to-date information at the time of closure the current documented system and records will be used to identify, assess and minimise the environmental risks and hazards of accidents and their consequences. This review will cover potential impacts on air, land and water, as

well as assessing risks associated with noise, vibration and odour. All contracted third parties will be required to complete an evaluation of risks before undertaking any work.

10.4.1 Management Arrangements

10.4.1.1 Personnel

The closure process will be managed and operated by sufficient persons who are suitably qualified, experienced, trained and supervised in respect of closure operations. These persons may be employed directly by the operator or specialist contracted third parties.

10.4.1.2 Documentation

During the closure process the Operator will ensure that:

- Appropriate written instructions are provided for all closure activities. These will be a combination of the operator's own procedures or specific method statements prepared by contracted third parties to complete a specific item of work;
- Relevant records will be readily available including operating records, maintenance records, service and calibration records, analysis/measurement records and Training records; and
- Site plans and drawings showing the site status at time of closure along with historical drawings and maps of earlier plant/structures that may have an impact on the site post-closure are available to support permit surrender.

10.4.1.3 Equipment

The Operator will ensure that all plant, equipment and technical means used during decommissioning and closure will be maintained in good operating order to prevent fugitive releases, leaks and spillage. Maintenance, inspection and cleaning procedures will be retained for all closure activities to minimise the risk of pollution.

10.4.1.4 Waste Management

Waste streams generated during decommissioning and closure will be identified where possible, before decommissioning and closure operations commence based on historical and operational information available to the Operator. The existing written procedure for the storage, handling and disposal of all wastes will be reviewed in light of this information and will detail:

- Storage and control of waste materials on-site including appropriate mechanisms for identification and segregation of the individual waste streams. This includes provision of appropriate containers, bays, tanks and skips where necessary.
- Management of waste disposal routes to ensure compliance with Duty of care. This includes identification/use of appropriately licensed waste carriers and disposal Sites.
- Completion and maintenance of relevant waste management documentation including transfer and consignment notes.
- Storage and control of waste materials off-site including use of appropriate transport control to prevent loss of material during transit.

Where possible, waste generated will be recycled or reused, in a manner that best represents BAT.

10.4.1.5 Incident Management

All incidents (i.e., to air, land or water) will be investigated and addressed without delay to minimise any potential onward release.

The Site will maintain the accident management plan in accordance with the Site permit and will ensure provision and maintenance of appropriate spills control/response equipment.

A record of all incidents will be retained at the Site including details of any corrective action taken.

10.4.1.6 Communications

It is important that ongoing good relations with the neighbouring residences and properties are maintained. In line with the permit, the site will retain the procedures governing:

- Logging, investigation and corrective action for any complaint or concern raised by a member of the public or other interested parties. Copies of all such correspondence and communication should be retained in line with permit conditions.
- Management and control of work within designated working hours only.
- Monitoring, control and maintenance of plant and equipment (including vehicles) to minimise the impact from noise and vibration within the local amenity.

10.4.2 Plant Decommissioning and Clearance

Throughout decommissioning, best practice techniques as outlined in the EPR guidance documents will be employed where possible, to minimise the risk of fugitive releases to air, land and water and to control any nuisance issues associated with noise, vibration and odour. Specific controls considerations include where possible:

- Cleaning to be undertaken in a manner that minimises fugitive releases including utilisation of fine water mists to dampen any dusty materials.
- All pipes, valves, and pumps to be drained in-situ and sealed/locked to prevent further use.
- All vehicles in use will be parked on designated hard-surfacing areas and will be maintained so as to minimise the potential for leaks.
- All loading/unloading of vehicles will be undertaken under the supervision of suitably qualified Site staff.
- All loads leaving the Site will be sheeted to prevent fugitive release.
- All vehicles will be fuelled in designated areas only.
- Sub-surface structures associated with the site drainage system will be inspected for build-up of material/debris which if identified will be sampled and tested prior to removal to a suitable offsite treatment facility.
- Any subsurface sumps and associated pipe work and drains will be flushed with water jets to remove any residual deposits/fluid into the system following cessation of site operations.
- All removed solid and liquid waste will be sent to an appropriately licensed facility for disposal. A nominated contracted third party in accordance with current maintenance procedures will undertake the work.
- All surfaces will be cleaned to remove any spillage or build-up of dust, and the Site shall be kept free of mud and debris to prevent transfer to the public highway. In the event of material being transferred to the highway, the operator will immediately arrange for the highway to be swept.
- All services will be disconnected and locked off once work in an area has been completed. This will be recorded, and details retained for the site clearance phase.
- All material from the demolition of the buildings and structures associated with the facility will be segregated into different material types stored in temporary stockpiles.
- All concrete rubble will be used as far as possible on the Site as infill material to fill voids, underground tanks and generally bring the area to one level. Any material remaining will be recycled where possible or sent for disposal.
- Any metal generated from the demolition process will be sent for recycling. All other materials will be segregated and sent for recycling where possible.
- All mobile plant will be removed for use at another facility in the Group or sold on to a third party for reuse where possible. Any vehicles at the end of their useful life will be dealt with in line with the current regulations governing their disposal.

- It is proposed that the underground sumps will be filled with a suitable in-fill material. If there is obvious contamination of the surrounding ground at the time of closure, then action to remediate the issue will be undertaken.
- It is proposed that the Site is left with a level concrete base until such times as redevelopment occurs.

10.5 Proposed Post-Closure Monitoring

Post-closure monitoring during plant decommissioning and clearance phases will comprise a daily site inspection to check:

- a. the condition of perimeter fencing, to determine if there is any evidence of illegal tipping or vandalism and to verify the general condition of the area.
- b. Ensure there is no generation of fugitive releases of dust or particulates to air;
- c. Ensure there are no spillages of wastes or polluting substances.

Subsequent to plant clearance, monitoring will cease unless contamination issues are identified during clearance operations that require long term monitoring.

10.6 Record Management and Reporting

10.6.1 Records

Relevant records will be made readily available during closure including operating records, maintenance records, service and calibration records, analysis/measurement records, incident reports, communication logs and Training records:

- Records will be held detailing the disposal quantities and routes of all waste disposed, reused or recycled.
- All records will be retained for in accordance with regulatory requirements.

10.6.2 Reporting

Reporting of monitoring and operational data will be undertaken in accordance with permit conditions and in a manner that will allow final permit surrender.

Appendix A Certificate of Technical Competence

Appendix B Skills Matrix

Appendix C EMS Accreditation Certificates

Appendix D Corporate Policy Statements

Appendix E IMS Index of Documents

