



Brookhurst Wood - Open Windrow Compost Facility

Environmental Permit Variation EPR/AB3700LS/V006
Assessment of Best Available Techniques

Biffa Waste Services Ltd

Project reference: EPR/AB3700LS/V006
Project number: 60684371
60684371-ACM-XX-00-RP-OWC-BAT-R04

28 October 2024

Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
R01	27/09/2023	Initial Draft	03/10/2023	A Graham	Project Manager
R02	11/10/2023	Final Draft	11/10/2023	A Graham	Project Manager
R03	13/10/2023	Final Issued	13/10/2023	A Graham	Project Manager
R04	28 /10/2024	Duly Making Updates	31/10/2024	A Graham	Project Manager

Distribution List

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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 (ATRF).

This report has been prepared to support the permit application and summarise the assessment of best available techniques (BAT) for the new facility. 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) treatment operations although a new crushing operation will be added along with some additional waste codes.

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;
- horticulture type waste; and
- organic outputs from the adjacent ATRF treatment process.

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. Definition of Best Available Technique

The Industrial Emissions Directive (2010/75/EU) defines BAT as “the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and where that is not practicable, generally reduce emission and the impact on the environment as a whole”.

The Directive continues to provide further definition as follows:

- a. “available techniques” are those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the United Kingdom, as long as they are reasonably accessible to the Operator.
- b. “best techniques” are the most effective in achieving a high general level of protection of the environment as a whole.
- c. “techniques” are both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

BAT may be demonstrated by either:

- Compliance with the sector-level, indicative BAT performance described guidance such as Sector Guidance Notes provided by the Environment Agency or in the European Commission ‘Reference Documents on BAT’ (BREFs) or BAT conclusions; or
- By conducting an installation-specific, options appraisal of candidate techniques.

The indicative BAT provided in the European BREF/BAT Conclusion documents is based on an analysis of the costs and typical benefits for typical, or representative, plants within that sector. When assessing the applicability of the sectoral, indicative BAT standards at the installation level, departures may be justified on the grounds of the technical characteristics of the installation concerned, its geographical location and the local environment.

3. BAT Assessment for the OWC and Crushing Operations

An assessment of the proposed new OWC Facility and additional crushing operations has been completed against the:

- Environment Agency Guidance “Biological Waste Treatment: Appropriate Measures (BWTAP) for Permitted Facilities (July 2023);
- Best Available Techniques (BAT) Conclusions for Waste Treatment under Directive 2010/75/EU of the European Parliament and of the Council” (Decision 2018/1147); and
- Environment Agency Guidance “Non-hazardous and Inert Waste Appropriate Measures (NHIWAM) for Permitted Facilities (August 2021).

The summary assessment against the relevant BAT requirements is presented in Appendix A.

Appendix A : BAT Assessment

BAT Reference	BAT Description	Response	Application Reference				
BAT 1 NHIWAM 2.1, 2.2 and 2.5 BWTAP 5	In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) ...	<p>Biffa implement an Environmental Management System (EMS) which forms part of a Biffa Group Integrated Management System (IMS) which is designed to comply with the combined requirements of ISO9001, ISO14001 and ISO45001. The system is accredited to BS EN ISO 14001 and a copy of the current certificate of registration in Appendix C of the Management Plan. The system demonstrates the commitment of the Company including senior management to protecting the environment and to achieving continuous improvement of company environmental performance.</p> <p>The EMS structure incorporates a plan, do, check and act cycle which meets the requirements of Section 2 NHIWAM and 5 BWTAP of EA Guidance/ BAT1 criteria (i) to (ix) inclusive along with criteria (xiii) for accident management. The certified EMS will be extended to incorporate the new process operations. Details of the EMS are provided in the Management Plan and a copy of the Biffa Group IMS Manual is included at Appendix E. This index lists the policies, group standards (GS series), management operational guidance (MOG series which support individual GD documents), work instructions and supporting documents that form part of the overall IMS.</p> <p>In relation to BAT1 criteria (xii) for residue management and NHIWAM/BWTAP 9, the arrangements for the new facility are detailed in the Management Plan, Section 3 of the application. It can be seen from the IMS index, that the EMS is an extensive and comprehensive system. Biffa's EMS is augmented by a number of local site specific documents. These implement the requirements of the Biffa Group IMS/EMS on site.</p> <table border="1" data-bbox="716 792 1608 1325"> <thead> <tr> <th data-bbox="716 792 905 824">IMS Section</th> <th data-bbox="905 792 1608 824">BAT Requirement Met</th> </tr> </thead> <tbody> <tr> <td data-bbox="716 824 905 1325">MOG01-01</td> <td data-bbox="905 824 1608 1325"> <ul style="list-style-type: none"> • Commitment of the management including senior management; • Definition of an environmental policy that includes continuous improvement of the environmental performance of the installation; • Planning and establishing the necessary procedures, objectives and targets in conjunction with financial planning and investment; • Implementation of procedures, covering the areas within point IV of the general BAT conclusions for BAT 1. Within these, emergency preparedness and response is further covered by GS17/MOG17. Effective process control is in particular covered in further detail in the Process Operating Manual; • Checking performance and taking corrective action, covering the areas within point V of the general BAT conclusions for BAT1. Corrective and preventative actions are further dealt with by Biffa's compliance strategy which is further covered in GS3/MOG03.); • Review by senior management of the EMS and its continuing suitability, adequacy and effectiveness; • Consideration for the environmental impacts from the eventual decommissioning of the plant at the stage of designing a new plant, and throughout its operating life. This is achieved via the Procurement Department who are tasked under MOG01-01 with ensuring that </td> </tr> </tbody> </table>	IMS Section	BAT Requirement Met	MOG01-01	<ul style="list-style-type: none"> • Commitment of the management including senior management; • Definition of an environmental policy that includes continuous improvement of the environmental performance of the installation; • Planning and establishing the necessary procedures, objectives and targets in conjunction with financial planning and investment; • Implementation of procedures, covering the areas within point IV of the general BAT conclusions for BAT 1. Within these, emergency preparedness and response is further covered by GS17/MOG17. Effective process control is in particular covered in further detail in the Process Operating Manual; • Checking performance and taking corrective action, covering the areas within point V of the general BAT conclusions for BAT1. Corrective and preventative actions are further dealt with by Biffa's compliance strategy which is further covered in GS3/MOG03.); • Review by senior management of the EMS and its continuing suitability, adequacy and effectiveness; • Consideration for the environmental impacts from the eventual decommissioning of the plant at the stage of designing a new plant, and throughout its operating life. This is achieved via the Procurement Department who are tasked under MOG01-01 with ensuring that 	Part 3, Management Plan Part 4, Technical Plan Part 8 Fire Prevention Plan
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		<p>procurement considers the life cycle and environmental impact of the business.</p> <ul style="list-style-type: none"> Following the development of cleaner technologies. This is also achieved via the Procurement Department policies. Sectoral benchmarking. This is accomplished in line with MOG01-01 requirements for environmental and carbon management (See also the Environment and Carbon Management Policy at Appendix D of the Management Plan). In compliance with this, Biffa undertakes an annual data capture exercise for the purposes of reporting scope 1 & 2 Green House Gas emissions, compliance with Pollution Inventory Returns, and Energy Savings Opportunity Scheme (ESOS). The methodology for collating the environmental metrics has been externally audited and classed as 'excellent'. Further, during the last year, Biffa has made the transition from CRC to ESOS. Phase 2 ESOS audits have highlighted areas in the business where Biffa are able to implement projects with short term payback viability. The existing data capture under the Green House Gas reporting mechanism places Biffa well to deliver upon the requirements of SECR from 2020 onward. Environmental data is also captured for a number of voluntary accreditation and reporting schemes which benchmark our performance year on year, and in comparison to our industry peers. These include Carbon Saver Gold. Carbon Saver Gold is a certification scheme for businesses who can demonstrate reductions in carbon emissions intensity. Biffa achieved 12 consecutive years of reduction in carbon emissions in 2019 and are the first company in the UK to remain certified for this length of time. Biffa are an active member of the Logistics Emissions Reduction Scheme run by the Freight Transport Association (FTA) and report on Biffa's logistics emissions to the association annually to demonstrate improvements in the amount of fuel consumed per mile travelled. 	
		<p>MOG03</p> <ul style="list-style-type: none"> Also requires the review of energy consumption trends, action plans and ESOS compliance, as above. 	
		<p>MOG03-01</p> <ul style="list-style-type: none"> Waste stream management. This includes duty of care requirements and also incorporates additional detail in relation to specific waste types. Further detail on waste stream management is also included in relation to the response to BAT2; 	
		<p>MOG17</p> <ul style="list-style-type: none"> Accident management plan. This covers the assessment and planning for all foreseeable emergencies and incidents. This is covered further in site specific document Emergency Plan and the Site Fire Prevention Plan 	

BAT Reference	BAT Description	Response	Application Reference
		<p>With regards to specific criteria identified in BAT2, BAT3, BAT12 and BAT17 these are addressed in the relevant sections below.</p> <p>In respect of staff competence, the facility will be operated by competent personnel trained to defined standards including but not limited to:</p> <ul style="list-style-type: none"> • The facility will be managed by a competent manager who holds a relevant certificate of technical competence (CoTC); • Personnel undertaking the appraisal of a waste in respect of its suitability for acceptance/treatment in the OWC/ATRF will have a minimum of a Higher National Certificate (HNC) in chemistry or an equivalent qualification. • 	
<p>BAT 2</p> <p>NHIWAM 3.1, 3.2, 3.3 & 3.4</p> <p>BWTAP 6.1, 6.3 & 6.9</p>	<p>In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques given below:</p> <ul style="list-style-type: none"> • Waste characterisation and pre-acceptance procedures; • Waste acceptance procedures; • Waste tracking system and inventory; • Output quality management system; • Waste segregation; • Ensuring waste compatibility; • Sort solid incoming waste. 	<p>In relation to each of the BAT points:</p> <ul style="list-style-type: none"> • The site requirements for the waste acceptance will be 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 for the OWC will be developed to comply with the requirements specified in "Biological waste treatment: appropriate measures for permitted facilities" and "PAS 100:2018 Specification for composted materials" and 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. The waste is defined as green waste as defined according to their List of Waste Code. Details of the specific pre-acceptance and acceptance procedures for the new processes are [resented in the Technical Plan. • As part of the pre-acceptance checks the operator will collect information on the type of waste, the specific process from which the waste is derived, the quantity of waste, the form of waste and the hazards associated with the waste. In relation to the composting process, no bespoke wastes, animal by-product wastes, food wastes or waste not detailed in the Compost Quality Protocol will be accepted. • The site has waste acceptance procedures which meet the requirements of NHIWAM section 3.2, BWTAP 6.3 and BAT2 where those measures are relevant and suitable, as detailed in the Management and Technical Plans. • Weighbridge Operators ensure that documentation is correct and that the listed material conforms to acceptable waste types. • Waste should all be non-hazardous. However, should non-conforming waste come on to site, this will be rejected, in accordance with procedure DPL/04. (Load non-conformance report) completed and the load directed off-site. • Biffa utilizes a computerised information management system to track incoming waste which meets the requirements of NHIWAM section 3.4 and BWTAP 6.9. • All inputs into the site are recorded and tracked. The systems put into place comply with Duty of Care requirements and Permit requirements for recording and reporting waste inputs and outputs. • The systems used record all relevant detail, including details of processing. 	<p>Part 3, Management Plan</p> <p>Part 4, Technical Plan</p>

BAT Reference	BAT Description	Response	Application Reference
		<ul style="list-style-type: none"> Biffa operates a quality management system (QMS) for outputs in accordance with relevant Quality Protocols, contract specifications and other standard requirements. The QMS is certified to BS EN ISO 9001 standard. An output quality management system is fully in place. Refer to the Technical Plan, section 3.1. The QMS will control all operation and associated quality management activities necessary to achieve compost that is fit for purpose. Where specific controls are applied they shall be monitored, recorded, and evaluated, both before and after the process validation. Corrective action will be defined. Following visual assessment on arrival at the OWC Facility, waste for composting is taken directly to sorting and any unsuitable or oversized materials will be removed, and the remaining feedstock will be stockpiled and shredded using a mobile shredder. All unsuitable and/or oversized materials that cannot be utilized in the ongoing process will be placed in skips for onward transportation to a suitably licensed recovery or disposal facility. In respect of hot loads a quarantine area will be maintained within the yard area at all times to facilitate the separation of burning material from material which has not ignited. This area will move to facilitate the formation and management of compost windrows however, it will always be sited at least 6m from incoming waste and outgoing product stockpiles. There are no pre-treatment activities associated with the ATRF, crushing or OWC operations. In relation to waste storage, and waste handling, operations are detailed in the Management Plan and Technical Plan. This will include visual inspection of the material and removal of unwanted material. 	
BAT 3 MHIWAM 2.1 BWTAP 11.1	In order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of wastewater and waste gas streams, as part of the environmental management system	<ul style="list-style-type: none"> There are no new point source releases to air or water associated with the new OWC and crushing operations. Surface water runoff from the ATRF Facility is directed to the existing surface water system unless testing indicates it is unsuitable. Surface run-off from waste treatment areas at the ATRF and OWC will be directed to a dedicated drainage system associated with each treatment process. Water collected is reused within each treatment operation as process water. The other emissions are associated with potential fugitive releases from the waste process and storage area; but these are mitigated by a range of techniques as described in the various management plans for odour, duct and noise. <p>All emissions from the OWC Facility are characterised in the Impact Assessment Report and details of the controls and mitigation measures are provided in the risk assessment.</p>	Part 3, Management Plan Part 4, Technical Plan Part 9, Impact Assessment Report
BAT 4 NHIWAM 4 BWTAP 7	In order to reduce the environmental risk associated with the storage of waste. <ul style="list-style-type: none"> Optimized storage location Adequate storage capacity Safe storage operation Separate area for handling packaged hazardous waste. 	<p>Operations in relation to waste storage and waste handling are detailed in section 3.3 and 4 of the Management Plan. This considers, the location of incoming waste streams, potential for quarantining of materials, along with storage arrangements for outgoing products to ensure that:</p> <ul style="list-style-type: none"> Optimised storage locations - The Brookhurst Wood OWC and ATRF Facility are operated in accordance with the Site Management Plan and the relevant Technical Plan. In accordance with the requirements of the Site Management Plan, section 3.3, storage areas will be located on impervious surfaces resistant to the materials being stored, and with sealed construction joints. 	Part 3, Management Plan Part 4, Technical Plan

BAT Reference	BAT Description	Response	Application Reference
		<ul style="list-style-type: none"> • The OWC treatment and storage areas will be constructed from concrete which is impervious to leachate and are designed to facilitate ease of plant maintenance and cleaning. • Areas have been arranged logically and as such the layout enables waste to be transferred easily between subsequent stages of the process with minimal distance. A new access point from the existing access road from Langhurstwood Road will be developed along the southern boundary of the new OWC with new weighbridges and associated office which will allow access to both the OWC and ATRF treatment areas. • Adequate storage capacity – The OWC Technical Plan documents the required storage capacity for operation of the facility at section 3.3.3 and Table 1. This comprises incoming green wastes, composting windrows and outputs from the composting process within the final product bay. • Table 7 of the Site Management Plan details storage times for all waste materials, including incoming waste streams and outputs and residues. The storage capacity, size and location of all storage areas is clearly defined by the size of storage areas and cannot be exceeded. Storage capacity is regularly monitored. • Safe storage operations – Waste is stored on site by category, location and handling procedures. Storage areas will be located on impervious surfaces resistant to the material being stored, and with sealed construction joints. Provision for management and control of fire risk has been developed in line with current statutory requirements. Storage areas will be inspected daily for spillage, odour, dust and litter release from external storage areas and signs of smoke or fire. • Storage Area for Packaged Hazardous Wastes – This is not applicable as the site is not permitted to accept hazardous wastes. However, two cages are provided at the site for any quarantined hazardous waste materials. 	
BAT 5 NHIWAM 4 BWTAP 7	In order to reduce the environmental risk associated with the handling and transfer of waste, BAT is to set up and implement handling and transfer procedures.	<p>Both the existing ATRF and the new OWC facility are operated in accordance with defined operating and maintenance procedures including those aimed at amenity management. An overview of the procedures is provided in the Management and Technical Plan which demonstrate the relevant BAT5 criteria have been considered and incorporated as appropriate. This includes:</p> <ul style="list-style-type: none"> • Handling and transfer of waste are carried out by competent staff <p>The site is following its own IMS Training Plan (see example in Management Plan, Appendix B). The plan outlines 3 key parts of training:</p> <ol style="list-style-type: none"> I. Induction: mandatory training for both Biffa staff and contactors on site II. Role Specific Training: Determined by the Role Specific Training Matrix, all staff are categorised by the job role and plans are created accordingly. III. Task Specific Training: covering routine tasks and documented via Standard Operating Procedures (SOP). <p>Paper copies of training certificates are kept within the personnel training files and an online database on the sites shared drive will indicate expiry dates before they are due to be renewed.</p>	Part 3, Management Plan Part 4, Technical Plan

BAT Reference	BAT Description	Response	Application Reference
		<ul style="list-style-type: none"> • Handling and transfer of waste are duly documented <p>The DPL/O4 Waste Acceptance Procedure shows what waste is acceptable on site and employees are trained in handling this type of waste in accordance with the relevant treatment protocol. Waste Transfer Notes also documented and confirm that only acceptable waste is delivered to site. Refer also to BAT 2 for full details on waste acceptance.</p> <ul style="list-style-type: none"> • Measures are taken to prevent, detect and mitigate spills <p>Planned Preventative maintenance ensures that equipment is safe to use and performs as designed.</p> <p>All processing is carried out on impermeable surfaces with engineered drainage preventing discharge to off-site receptors in the event of accidents or incidents. The fuel storage tank will be located on an impermeable concrete surface with appropriate bund to contain spillages.</p> <p>The Site Management Plan, Section 4 details the arrangements for amenity management while Emergency response is detailed in section 6. There are also spill kits at crucial points on site which are noted on the Emergency Response Plan.</p> <ul style="list-style-type: none"> • Operations and design parameters are taken when mixing or blending wastes. <p>The site only receives waste as per the DPL/O4 and, as such, the ATRF or OWC do not require waste to be mixed or blended to facilitate treatment.</p> <ul style="list-style-type: none"> • Minimise accidents and incidents and their environmental impact <p>All handling and transfer procedures are risk based and the site is designed to minimise the potential for accidents and incidents as well as the potential for impact should any occur. This is in accordance with the Group Integrated Management System.</p>	
BAT 6 NHIWAM 6.4 BWTAP 11.2	For relevant emissions to water as identified by the inventory of wastewater streams (see BAT 3), BAT is to monitor key process parameters (e.g. wastewater flow, pH, temperature, conductivity, BOD) at key locations (e.g. at the inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).	N/A – There is no foul drainage within the OWC installation boundary. Wastewater is reused on site within the ATRF process and for conditioning of the windrows at the OWC. In the event that wastewater cannot be reused then site would implement a testing and monitoring protocol that would be used to assess the wastewater for waste acceptance purposes at the adjacent landfill leachate treatment plant/third party treatment plant or longer term for discharge to sewer under a revised discharge consent.	-

BAT Reference	BAT Description	Response	Application Reference
BAT 7 NHIWAM 7.3 BWTAP 11.2	BAT is to monitor emissions to water with at least the frequency given below, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.		
BAT 8 NHIWAM 7.1 BWTAP 11.2, 11.6	BAT is to monitor channelled emissions to air with at least the frequency given below, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	N/A – there are no point source releases to air from either the ATRF or OWC operations.	
BAT 9 NHIWAM 7.1	BAT is to monitor diffuse emissions of organic compounds to air from the regeneration of spent solvents, the decontamination of equipment containing POPs with solvents, and the physico-chemical treatment of solvents for the recovery of their calorific value, at least once per year using one or a combination of the techniques given below.	N/A – no solvents or similar materials are accepted at the OWC facility.	-
BAT 10 NHIWAM 2.1 and 6.3 BWTAP 11.5	BAT is to periodically monitor odour emissions	The OWC and ATRF operations have a defined Odour Management Plan (OMP) which includes details of the odour monitoring regime at the site. This includes details of site monitoring which includes: a. Daily sniff testing; b. Recording of meteorological conditions; c. Dynamic olfactory monitoring (e.g. EN 13725 or EN 16841-1 or -2) or suitable alternative in the event that substantiated odour complaints area received.	Part 5, Odour Management Plan
BAT 11 NHIWAM 8.1, 8.2, 8.3 & 9 BWTAP 12.1, 12.2, 12.3	BAT is to monitor the annual consumption of water, energy and raw materials as well as the annual generation of residues and wastewater, with a frequency of at least once per year.	Details of the expected annual consumption of water, energy and raw materials and residue management is detailed in the OWC Technical Plan, Section 6. This includes monitoring of the annual consumption and generation rates as appropriate which is a requirement under the corporate EMS.	Part 3, Management Plan Part 4, Technical Plan
BAT 12	In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly	The OWC Facility has a defined Odour Management Plan (OMP) which includes details of: a. controls and mitigations during normal operations, maintenance and abnormal operations;	Part 5, Odour Management Plan

BAT Reference	BAT Description	Response	Application Reference
NHIWAM 2.1 & 6.2 BWTAP 11.5	review an odour management plan, as part of the environmental management system	<p>b. odour monitoring regime at the site; c. response to odour complaints and incidents.</p> <p>Protocols containing actions and timelines such as:</p> <ul style="list-style-type: none"> • First in, first out policy – section 6.6 of the OMP • Protocols for conducting odour monitoring (Section 9 of the OMP) - as per BAT 10 – including daily site inspection using 'sniff tests' to assess odour and daily monitoring of meteorological information and weather forecasts; • Complaints handling procedure – section 9.2.3 of the OMP 	
BAT 13 NHIWAM 2.1 & 6.2 BWTAP 11.5	In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques given:	<p>The OWC Facility has a defined Odour Management Plan (OMP) which includes details of the controls and mitigations to be employed during normal operations, maintenance and abnormal operations.</p> <p>Techniques are considered to continue to meet BAT and comprise the following:</p> <ul style="list-style-type: none"> • Minimising residence times To ensure storage times are not exceeded, the site will operate a 'first in, first out' policy using the waste tracker to log where waste is within the treatment processes. The position of the last load tipped will be recorded at the end of the working day and tipping will resume from this point the next working day. Similarly the location of the last material processed will be recorded and processing will resume from this point the next working day. All waste loads accepted at the facility will be tracked through the Material Tracking Database which includes a graphical display of the storage areas. The database will log the date of receipt, the treatment route and the location of the material on site – this will be updated as the material moves from reception, to storage, to treatment. • Using chemical treatment Use of water misting in the treatment areas and water suppression used on stockpiles and storage areas when required. Deodorising agents may be use with the misting/suppression systems if required. • Optimising aerobic treatment Incoming waste is shredded then transferred to open air windrows for composting and maturation. Residence times are optimised along with the aerobic conditions within the windrows during maturation and stabilization stages with appropriate process monitoring employed. If necessary, employing additional controls such as misting sprays during abnormal operations 	<p>Part 4 Technical Plan Part 5, Odour Management Plan</p>

BAT Reference	BAT Description	Response	Application Reference
<p>BAT 14</p> <p>NHIWAM 2.1 & 6.2</p> <p>BWTAP 11.1, 11.5, 11.8, 11.9</p>	<p>In order to prevent or, where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques given below.</p>	<p>The OWC Facility has a separate Odour Management Plan and Dust Management Plan. These documents detail the controls and mitigation measures to be employed which reinforces the measures detailed in the Management and Technical Plans in relation to wider amenity management.</p> <p>The techniques used at the OWC Facility are considered to continue to meet BAT and comprise the following:</p> <ul style="list-style-type: none"> • Minimising the number of potential diffuse emissions <ul style="list-style-type: none"> a. On-site vehicle movements over concrete and tarmac surfacing will operate to specific speed limits, reducing the potential for dust to become air-borne; b. Lorries transporting the waste materials into and from the site will be enclosed or sheeted to reduce emissions; c. The site will operate with high standards of housekeeping, and the plant will be maintained to high standards to minimise fugitive emissions; d. Incoming waste will be stored in a designated location in the relevant reception areas designated for the individual treatment routes. e. Storage bays for incoming waste to the OWC will be stored in bays constructed with 3 concrete walls to reduce the potential for dust emissions. f. Storage bays for ATRF incoming material will also be constructed with 3 concrete walls and be equipped with a drainage channel to facilitate the drainage of the ATRF road sweeping waste. g. Drop heights will be minimised for all material transfer points in the OWC and ATRF, when forming stockpiles and windrows, and when packing the finished product or loading vehicles for despatch; h. Water suppression to minimise dust emissions in dry weather will be available, including the use of mobile dust suppression such as site bowser or mobile dust suppression unites/cannons. Incoming waste that has been allowed to drain will not be relocated in high winds; i. Products from the treatment processes will be stored in designated bays which can be covered in periods of high winds; j. Storage of all other waste materials will, where necessary, be undertaken in enclosed skips or containers to minimise the potential for fugitive release; and k. 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 • Selection of high integrity equipment <p>At development, each section of the plant is discussed, and the most appropriate plant and best materials chosen for the associated processes, containers, etc.</p>	<p>Part 3, Management Plan</p> <p>Part 4, Technical Plan</p> <p>Part 5, Odour Management Plan</p> <p>Part 6, Dust Management Plan</p> <p>Part 9, Impact Assessment Report</p>

BAT Reference	BAT Description	Response	Application Reference
		<ul style="list-style-type: none"> • Corrosion prevention At development, each section of the plant is discussed, and the most appropriate plant and materials chosen for the associated processes, containers, etc to avoid corrosion. All plant and equipment are subject to a planned preventative maintenance regime. . • Containment, collection and treatment of diffuse emissions <ul style="list-style-type: none"> a. Incoming wastes are stored in designated bays. Enclosed on three sides. b. Crushing of oversize material at the ATRF plant will be undertaken using mobile enclosed mechanical crushing plant equipped with integral suppression system on a campaign basis, or such oversize material will be removed from the facility. . c. Screening and separation activities at the OWC are undertake within the separation building. d. The shredder will be equipped with integral dust suppression system and in the event of extremely dry conditions occur additional suppression can be supplied through use of mobile dust suppression such as site bowser or mobile dust suppressions units/cannons. • Dampening Use of water misting on the ATRF feed hopper and conveyors when required and water suppression is available for use on stockpiles and storage areas when required. • Maintenance The maintenance scheduling will refer to any statutory requirements and manufacturer's recommendations regarding odour control and maintenance of plant. All processing equipment will be subject to routine inspection and a planned preventative maintenance programme. • Cleaning of waste treatment and storage areas Operational areas and wheeled loaders within the facility, external roads and drainage channels will be regularly cleaned to prevent the build-up of odour from old degrading material. The frequency and procedure for the cleaning activity will be implemented in accordance with the Site Inspection and Housekeeping Procedure. 	
BAT 15	BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given below.	N/A - no flare on site	
BAT 16	In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below.	N/A - no flare on site	-

BAT Reference	BAT Description	Response	Application Reference
<p>BAT 17</p> <p>NHIWAM 2.1 & 6.3</p> <p>BWTAP 11.11</p>	<p>In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:</p> <p>I a protocol containing appropriate actions and timelines;</p> <p>II.a protocol for conducting noise and vibration monitoring;</p> <p>III.a protocol for response to identified noise and vibration events, e.g. complaints;</p> <p>IV.a noise and vibration reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures.</p>	<p>Please refer to the Noise Management Plan (application Part 7).The activities of the OWC Facility are not expected to cause high levels of noise or vibration. Site specific environmental noise monitoring has been undertaken at the closest noise sensitive receptors surrounding the site and accompanies the planning application. The predicted noise levels associated with the proposed development are below both existing and derived noise limits at all receptor locations, and therefore no adverse noise effects are predicted as a result of the OWC facility, no specific noise mitigation measures are considered necessary.</p> <p>A Noise and Vibration Management Plan has been prepared and general controls to be used include:</p> <ul style="list-style-type: none"> • 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. <p>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.</p> <p>The complaints procedure for the site will record any complaints associated with the site – should complaints be received; consideration will be given to boundary monitoring as appropriate.</p>	<p>Part 3, Management Plan, Section 4.4</p> <p>Part 4, Technical Plan, Section 3</p> <p>Part 7, Noise and Vibration Management Plan</p>
<p>BAT 18</p> <p>NHIWAM 2.1 & 6.3</p> <p>BWTAP 11.11</p>	<p>In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques given below:</p> <ul style="list-style-type: none"> • Appropriate location of equipment and buildings. • Operational measures • Low-noise equipment • Noise and vibration control equipment • Noise attenuation 	<p>No additional physical noise control measures (e.g. additional noise bunds, acoustic barriers, or enclosures) are currently proposed beyond those already in place. Opportunities for additional physical noise control measures will be reviewed on a regular basis and, where practicable and cost effective, will be implemented.</p> <p>Management noise control measures will include:</p> <ul style="list-style-type: none"> • ATRF Crushing unit will be enclosed and the product conveyor, covered and with minimal drop height to product stockpile; • OWC separation and screening equipment is located within the separation building. • all site staff to be instructed on the importance of noise control and minimising noise emissions from the site during their inductions; • reinforcement of induction information within regular "toolbox talks"; • signage on site, reminding all staff of the need to keep noise to a minimum; • horns on vehicles and mobile plant not to be used, unless absolutely necessary; • engines not to be "revved", unless absolutely necessary; • vehicle and mobile plant engines to be switched off when stationary, unless impracticable; • static plant engines to be switched off when not in use; • all plant and machinery used on site to be fitted with an effective silencer and operate with doors or cowls of engine(s) in the closed position; • vehicle speeds within the site to be restricted; and 	<p>Part 3, Management Plan, Section 4.4</p> <p>Part 4, Technical Plan, Section 3</p> <p>Part 7, Noise and Vibration Management Plan</p>

BAT Reference	BAT Description	Response	Application Reference
<p>BAT 19</p> <p>NHIWAM 8.1, 8.2, 8.3 & 9</p> <p>BWTAP 11.9, 11.12, 11.13</p>	<p>In order to optimise water consumption, to reduce the volume of wastewater generated and to prevent or, where that is not practicable, to reduce emissions to soil and water, BAT is to use an appropriate combination of the techniques given below:</p> <ul style="list-style-type: none"> • Water management • Water recirculation • Impermeable surface • Reduce likelihood/impact of tank/vessel overflow • Roofing of waste storage areas • Segregation of water streams • Adequate drainage infrastructure • Detection and repair of leaks • Appropriate buffer storage. 	<ul style="list-style-type: none"> • all plant and machinery to be regularly maintained (in accordance with the planned maintenance programme), to ensure that no item will produce excessive noise. <p>Water management Rainwater is collected in a water tank adjacent to the OWC building and the surface runoff is collected in the site's sealed drainage systems (separate one for ATRF and OWC). Collected waters are used within the ATRF and composting processes as process water.</p> <p>Water recirculation For the OWC Facility, water supply for maintaining the appropriate moisture content required for the composting process will be provided by collecting runoff from the sites sealed drainage systems and recirculating it through the waste mass (where necessary).</p> <p>For the ATRF, water is recirculated after treatment in the ATRF water treatment process for reuse as process washing water.</p> <p>Impermeable surface The entire site, including processing areas within all buildings, is constructed from impermeable concrete as per design specifications – Q21 In-situ Concrete Roads Pavings Bases.</p> <p>Reduce the Likelihood/Impact of Tank or Vessel Overflow/Failure There is a 10 m³ fuel tank to be located within new OWC area – this will be of proprietary design and will include:</p> <ul style="list-style-type: none"> • Level monitoring and associated alarms • Siting of the tank on an impermeable surface • Provision of secondary containment equating to 110% of the tank volume. <p>Roofing of waste storage and process areas Waste is stored in open fronted storage areas comprising 3-sided concrete bays at both the ATRF and OWC.</p> <p>The ATRF processes are situated externally, however this is a wet washing process.</p> <p>A mobile enclosed crusher will be mobilised on a campaign basis.</p> <p>The screening and separation activities at the OWC are enclosed within the Separation and screening building...</p> <p>Segregation of water streams</p>	<p>Part 4, Technical Plan</p> <p>Part 13, Drawings and Plans</p>

BAT Reference	BAT Description	Response	Application Reference
		<p>ATRF water streams are segregated and fed to appropriate drainage systems. Any foul water is collected and reused in the process.</p> <p>Adequate drainage infrastructure All waste treatment and storage areas are provided with the impermeable surfaces and sealed drainage systems. Roof rainwater at the OWC will be collected and contained in storage tank adjacent to the separation and screening building and water run off collecting within the sealed drainage system will be used as process water. The drainage plans BA0313400 (OWC) and BA234501 (ATRF) are provided in Part 13 of the application</p> <p>Design and maintenance provisions to allow detection and repair of leaks The plant was designed to allow access to all equipment and is regularly maintained as per relevant schedules within the Computerised Maintenance Management System (CMMS). Leaks are monitored by all staff. Any leaks detected are then recorded on the Near Miss Hazard Tracker and repaired according to urgency.</p> <p>Appropriate buffer storage capacity In the event that surplus water is generated, then this will be either pumped via the wider landfill surface water management system to one of the currently permitted outfalls (if testing establishes that the required water quality parameters are met) or it will be removed by suction tanker for onward treatment and disposal at a suitably permitted facility elsewhere.</p>	
BAT 20 NHIWAM 6.4 BWTAP 11.12	In order to reduce emissions to water, BAT is to treat wastewater using an appropriate combination of the techniques given.	N/A – there are no routine emissions to water from the OWC as water is used as process water. In the event that surplus water is generated, then this will be either pumped via the wider landfill surface water management system to one of the currently permitted outfalls (if testing establishes that the required water quality parameters are met) or it will be removed by suction tanker for onward treatment and disposal at a suitably permitted facility elsewhere.	
BAT 21 NHIWAM 2.3, 2.4 & 2.5 BWTAP 5.4, 5.5, 5.9, 5.10	<p>In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given below, as part of the accident management plan (see BAT 1).</p> <ol style="list-style-type: none"> Protection measures Management of incidental/accidental emissions Incident/accident registration and assessment system 	<p>Details of the site accident management arrangements are provided in the Management Plan and Impact Assessment and supplemented with a Fire Prevention Plan (FPP). These arrangements include appropriate:</p> <ul style="list-style-type: none"> Protection measures - The site is provided with suitable site security which reduces risk for malevolent acts to the plant. This includes site security fencing and provision of CCTV. These are dealt with in section 6.3.2 of the Site Management Plan (Appendix 2). The FPP documents all measures for prevention, detection and extinguishing of fires. Site operatives, including fire marshals, are given appropriate training in the event of a fire. Management of incidental/accidental emissions – The FPP details measures to be taken to minimise risk of fire, bring a under control within required timescales to limit overall impact from combustion emissions and to contain firewater. Supporting guidance to the EMS (Emergency Planning and Business Continuity – document MOG17) gives further detail on the management of accidents and emergencies and the Emergency Response Plan deals with measures to be 	<p>Part 3, Management</p> <p>Part 5 Technical Plan</p> <p>Part 8, Fire Prevention Plan</p> <p>Part 9, Impact Assessment Report</p>

BAT Reference	BAT Description	Response	Application Reference
		<p>taken in relation to all incidents and emergencies. See also section 6 of the Site Management Plan</p> <ul style="list-style-type: none"> • Incident/accident registration and assessment system. – All accidents and near misses are logged on site on the internal compliance database, as well as inspection/investigation reports by the companies SHQ team. In accordance with Group Standard GS17, site emergency plans are maintained and reviewed annually, or following significant changes or incidents at the facility. Procedures are in place relating to identifying, responding to and learning from accidents and incidents via the SHQ team and via monthly Site Safety Improvement Team (SIT) meetings. • Staff will be trained in site emergency response procedures (ERP) which are tested through drills to evaluate the effectiveness. • Abnormal operations including those which can give rise to accidental releases and emergency situations have been assessed within the Impact Assessment Report. • Arrangements with respect to residue management are detailed in the Technical Plan, Section 6 	
BAT 22 NHIWAM 9 BWTAP 12.4	In order to use materials efficiently, BAT is to substitute materials with waste.	<p>Although Biffa considers that this requirement is being complied with, it is highlighted that limited scope exists to substitute products with wastes, and therefore only limited cases exist.</p> <p>For the OWC facility, water supply for maintaining moisture content required for the composting process will be provided by captured surface/rainwater.</p> <p>No other waste generated on site is suitable for use in other parts of the operation.</p>	Part 3 Management Plan Part 4 Technical Plan
BAT 23 NHIWAM 8.1 BWTAP 12.1	<p>In order to use energy efficiently, BAT is to use both of the techniques given below.</p> <ol style="list-style-type: none"> Energy efficiency plan Energy balance record 	<p>Details of energy management arrangements at the site are provided in Section 5 of the Management Plan.</p> <p>Energy efficiency plan</p> <p>The ATRF and OWC plants will function within their respective design parameters and, as such, energy usage per tonne of waste processed is relatively consistent. Therefore, no KPIs are specifically set for this point.</p> <ul style="list-style-type: none"> • 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; • Selection of energy efficient equipment (e.g., compressors and variable speed motors where appropriate); 	Part 3 Management Plan Part 4, Technical Plan,

BAT Reference	BAT Description	Response	Application Reference
		<ul style="list-style-type: none"> Real-time monitoring of electricity demand. <p><u>Energy balance record</u></p> <p>The following are undertaken on site:</p> <ol style="list-style-type: none"> Energy consumption is determined from meter readings. Results are recorded on the Meter Readings spreadsheet. 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. Plant Maintenance and Reliability for 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. Operational best practice will be encouraged at the site. 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. <p>There is no specific industry benchmark set within the 'Biological Waste Treatment: Appropriate Measures' Guidance regarding the SEC for biological treatment processes. However, the 'Waste Treatment BREF' document states that "the average energy consumption is around 64 kWh per tonne of waste treated for outdoor aerobic treatment, with a range of 0–330 kWh/t"</p> <p>The specific energy consumption for the OWC site has been calculated to be around 13.59 kWh/Te</p>	
BAT 24 BWTAP 12.4	Reuse of Packaging	N/A -not accepting metal waste	-
BAT 25 NHIWAM 6.2	In order to reduce emissions to air of dust, and of particulate-bound metals, PCDD/F and dioxin-like PCBs, BAT from mechanical treatment is to apply BAT 14d and to use one or a combination of the techniques given.	N/A -not accepting metal waste	-
BAT 26 - 28	These criteria deal with mechanical treatment in shredders of metal waste.	N/A -not accepting metal waste	-
BAT 29 - 30	These criteria deal with mechanical treatment of WEEE containing VFCs and/or VHCs	N/A – not accepting WEEE	-

BAT Reference	BAT Description	Response	Application Reference
BAT 31	These criteria deal with mechanical treatment of waste with a calorific value	N/A – not accepting waste with calorific value as defined	-
BAT 32	These criteria deal with the mechanical treatment of WEEE containing mercury	N/A – not accepting WEEE	-
BAT 33 BWTAP 6.1, 6.5	In order to reduce odour emissions from biological treatment of waste and to improve the overall environmental performance, BAT is to select the waste input.	<p>The OWC Site is designed to receive waste including 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 intention is to produce a PAS 100 compliant compost from the inputs. The site is not designed to accept hazardous or dangerous waste types, nor will it accept animal by-product, food or bespoke wastes.</p> <p>Biffa will employ strict control so as to prevent the acceptance of malodorous wastes including where appropriate placing restrictions on individual contracts in respect of the contamination levels present, the amount of organic matter present and age of the waste.</p> <p>At the weighbridge, the operator will evaluate the incoming waste load in accordance with site procedures. Providing the incoming waste is acceptable, the driver will be provided with the correct discharge code and will be directed to the relevant discharge area for the ATRF or the OWC. In the event that waste does not meet the conditions specified in the Environmental Permit, or is particularly odorous, the load(s) will be rejected in accordance with site procedures.</p> <p>When arriving at site, loads will be visually inspected during off-loading and will be litter picked if necessary to remove contamination.</p>	Part 5, Odour Management Plan
BAT 34	In order to reduce channelled emissions to air of dust, organic compounds and odorous compounds, including H ₂ S and NH ₃ , BAT is to use one or a combination of the techniques.	N/A- There are no channelled or point source emissions to air, land or water from the OWC facility.	-
BAT 35 BWTAP 11.12, 11.13	In order to reduce the generation of wastewater and to reduce water usage, BAT is to use all of the techniques given below: <ul style="list-style-type: none"> a. Segregation of water streams b. Water recirculation c. Minimization of the generation of leachate 	<p>Segregation of Water Streams</p> <p>The ATRF site has been designed to segregate all clean surface water run-off from process effluent or contaminated drainage arising from wastes stored on site. Only clean surface water is discharged to the receiving water. Process/foul water is collected in the drainage system and reused in the process.</p> <p>The Brookhurst Wood OWC Facility is operated in accordance with the Site Management Plan, and the Technical Plan. Drainage plans for the ATRF and OWC areas are provided in Application part 13.</p> <p>The OWC treatment area is constructed on an impermeable surface with a new lined perimeter ditch system to divert water to one of the lined lagoons to prevent discharge to sensitive receptors. All spillages would be localised to the site and the potential for offsite release is very low as such material would be captured in enclosed drainage system and the material removed via tanker.</p>	Part 3, Management Plan Part 4, Technical Plan

BAT Reference	BAT Description	Response	Application Reference
		<p>Water recirculation</p> <p>The OWC area will be constructed with a new concrete pad which will be designed to enable incident rainfall to drain to a new surface water perimeter drainage system – which in turn will drain to one of the lined lagoons. The lagoon will facilitate recirculation of water for use in the composting process.</p> <p>The existing ATRF has a separate drainage system which facilitates collection of surface run off for reuse in the process.</p> <p>Minimising of the generation of leachate</p> <p>Storage areas will be located on impervious surfaces resistant to the material being stored, and with sealed construction joints. The OWC treatment area will be constructed with an impermeable concrete surface which is impervious to leachate and a dedicated area has been identified for the parking of mobile plant - these areas are designed to facilitate ease of plant maintenance and cleaning. Collected water/leachate will be recirculated for reuse in the composting process.</p>	
<p>BAT 36</p> <p>BWTAP 11.2, 11.6, 11.8</p>	<p>In order to reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.</p>	<p>Monitoring and analysis will ensure that the waste does not become highly odorous throughout the composting process. Site monitoring arrangements include:</p> <ul style="list-style-type: none"> • Mixing and Batch Formation - Moisture checks will be carried out and adjusted by adding water or fibrous material, as well as structuring agents, as required. • Maturation and Stabilisation - Monitoring of temperature and moisture content will ensure that aerobic conditions within the open windrows is maintained and that anaerobic conditions do not develop, which will increase the potential for emissions from the facility. The temperature and moisture content of the windrow will be monitored and recorded once a week by use of a probe inserted into a minimum of 1.5m depth into the windrow. • Daily site inspections to assess weather conditions (rain, drizzle, hail, snow, wind direction), odour, noise, fugitive emissions, housekeeping and security; corrective action will be undertaken as necessary; • Odour checks will be undertaken on all waste loads during acceptance checks, if necessary, a waste load will be rejected in the event that a strong odour is detected; • Site specific environmental noise monitoring has been undertaken at the closest noise sensitive receptors surrounding the site and accompanies the planning application. The predicted noise levels associated with the proposed development are below both existing and derived noise limits at all receptor locations, and therefore no adverse noise effects are predicted as a result of the OWC facility, no specific noise mitigation measures are considered necessary; and • The complaint procedure for the site will record any complaints associated with the site - should complaints be received consideration will be given to boundary monitoring as appropriate. • Compost will be sampled and tested at various stages of the composting process including: <ul style="list-style-type: none"> • After any product preparation; • Before any blending of the compost with other materials, composts, products or additives; and • When the batch has completed the composting process (including any maturation applicable to the • The monitoring plan for the site is summarised below: 	<p>Part 4, Technical Plan</p> <p>Part 5, Odour Management Plan</p> <p>Part 6, Dust Management Plan</p>

BAT Reference	BAT Description	Response			Application Reference
		Parameter	Monitoring Frequency	Critical Value	
		Moisture Levels	Weekly	40 – 60% depending on phase – this equates to a 3 – 4 on the grip test.	<ul style="list-style-type: none"> To low add water To high add/mix in fibrous material and/or structuring agents.
		Temperature	Weekly	43 – 80 °C depending on phase	<ul style="list-style-type: none"> Adjust frequency of windrow turning as appropriate
		Particle size	As processed	< 50mm for windrows	<ul style="list-style-type: none"> Material to be reprocessed through shredder, screening and separation processes as required.
		Site Monitoring	Daily	<ul style="list-style-type: none"> As per the trigger values in the DEMP and OMP 	<ul style="list-style-type: none"> Implement the actions in the DEMP and OMP
BAT 37 BWTAP 11.2, 11.3, 11.6, 11.8	<p>In order to reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps, BAT is to use one or both of the techniques given below.</p> <p>a. Use of semi-permeable membrane covers</p> <p>b. Adaption of operations to meteorological conditions</p>	<p>a. The waste reception storage bays will be constructed on an impermeable surface. Incoming waste storage areas will comprise 3-sided bays formed from concrete block walls. Bays will be sited so that bay openings avoid the prevailing wind direction and minimise wind whipping.</p> <p>b. Monitoring of meteorological information and weather forecasts can assist in the management of odour and dust emissions from the site. Some meteorological conditions can exacerbate the risk of odour and dust annoyance at sensitive receptors. Monitoring of meteorological information (temperature, wind speed, wind direction and precipitation) and checking of weather forecasts will be completed daily by the Site Manager or nominated deputy. The information will be used in the following ways:</p> <ul style="list-style-type: none"> To predict when weather conditions are likely to cause poor odour dispersion, to enable site controls to be amended if required; To plan where monitoring of the site boundary should take place during normal operations in order to correctly assess odour impacts; To predict the areas where potential odour impacts may occur during abnormal events; During the investigation of odour complaints to ascertain complainant's observations; To monitor rainfall to indicate whether it will be persistent enough to effectively suppress wind-blow dust emissions and subsequently whether dust control measures need to be applied. <p>c. Controls and mitigations in relation to odour and bioaerosols are detailed in the OMP and the Site Specific Bioaerosol risk Assessment. Consideration has been given to:</p> <ul style="list-style-type: none"> minimizing diffuse sources through reducing material drop heights and limiting vehicle speed on site; monitoring and adapting to changing meteorological conditions; 	<p>Part 4, Technical Plan</p> <p>Part 5, Odour Management Plan</p> <p>Part 6, Dust Management Plan</p> <p>Part 10, Bioaerosol Risk Assessment</p>		

BAT Reference	BAT Description	Response	Application Reference
		<ul style="list-style-type: none"> ensuring both mobile plant and processing equipment have a high integrity and are subject to daily inspection checks and planned preventative maintenance; Using dust suppressions as appropriate; and Maintaining high housekeeping standards. 	
BAT 38	Criteria for anaerobic treatment of waste	N/A – aerobic process.	-
BAT 39	Criteria for mechanical biological treatment (MBT) of waste	N/A – not an MBT facility.	-
BAT 40 NHIWAM 5	Improve overall environmental performance physico-chemical treatment of solid and/or pasty waste by monitoring the waste input as part of the pre-acceptance and acceptance procedures.	N/A – no physio-chemical treatment of waste of solid and/or pasty waste.	-
BAT 41 NHIWAM 6	Reduce emissions of dust, organic compounds and NH ₃ to air using one of a combination of techniques given below: a. Adsorption b. Biofilter c. Fabric filter d. Wet scrubbing	N/A – no physio-chemical treatment of waste of solid and/or pasty waste.	-
BAT 42 - 44	Criteria for re-finishing of waste oil	N/A – not undertaking waste oil re-finishing	-
BAT 45	Criteria for physico-chemical treatment of waste with calorific value	N/A – not physio-chemical treatment of waste.	-
BAT 46 - 47	Criteria for the regeneration of spent solvents	N/A -not undertaking regeneration of spent solvents	-
BAT 48 - 49	Criteria for the thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil	N/A -not undertaking thermal treatment as defined by BAT (e.g. using furnace) of any waste types	-
BAT 50 NHIWAM 6.2	In order to reduce emissions of dust and organic compounds to air from the storage, handling and washing steps, BAT is to apply BAT 14 d and to use one of a combination or Techniques given below. a. Adsorption b. Fabric filter	N/A – not undertaking washing of contaminated excavated soil	-

BAT Reference	BAT Description	Response	Application Reference
	c. Wet scrubbing		
BAT 51	Criteria for decontamination of equipment containing PCBs	N/A -not undertaking decontamination of equipment	-
BAT 52 - 53	Criteria for treatment of water-based liquid waste	N/A -not accepting or treating any water-based liquid waste	-
Section 6.1 NHIWAM 6.1	Techniques for Controlling Channelled emissions to air	N/A -There are no channelled emissions from the ATRF and OWC processes.	-
Section 6.2 NHIWAM 6.2	Techniques for diffuse emissions of organic compounds to air	N/A – not accepting waste which will generate VOCs – the site will however, employ sniff testing methods for odour monitoring as detailed in the Odour Management Plan	Part 5, Odour Management Plan
Section 6.3 NHIWAM 6.4 BWTAP 11.2, 11.12, 11.13	Techniques for controlling emissions to water	<p>Details of the wastewater management arrangements for the OWC site are provided in the Technical Plan. This section confirms that:</p> <ol style="list-style-type: none"> The OWC treatment area will be constructed to enable incident rainfall to drain to a new lined perimeter ditch system which in turn will drain to one of the lined lagoons; The new lined perimeter ditch and impermeable surface ensures that water courses, including those connected directly to groundwater, are protected; The water from the lagoon will be recirculated to be used in the composting process; In the event that surplus water is generated, then this will be either pumped via the wider landfill surface water management system to one of the currently permitted outfalls (if testing establishes that the required water quality parameters are met) or it will be removed by suction tanker for onward treatment and disposal at a suitably permitted facility elsewhere; and Leachate that arises from wastes being offloaded, stored and shredded will drain into the lagoons. 	Part 3, Management and Part 4, Technical Plan
Section 6.4	Sorting Techniques	<p>The new OWC will employ the following sorting techniques within the separation and screening processes:</p> <ul style="list-style-type: none"> A Windsifter (air classifier) will be used to complement the screening processes to facilitate the removal of plastic contamination, Manual separation will be employed through use of a sorting line/cabin to facilitate hand removal of contaminants. A series of screens will be employed to separate the treated waste into relevant size fractions. 	Part 4, Technical Plan
Section 6.5	Techniques identified are: a. Accident management plan	Details of the site accident management arrangements are provided in the Management Plan supplemented with the Fire Prevention Plan. These arrangements include appropriate:	Part 3, Management Plan Part 7, Fire Prevention Plan

BAT Reference	BAT Description	Response	Application Reference
NHIWAM 2.3., 2.4 & 9 BWTAP 5.1, 5.4, 5.10	b. Residues management plan	<p>a. Protection measures such a site security, CCTV, segregation of waste, fire prevention and access to appropriate equipment in the event of an incident;</p> <p>b. Details of the site emergency procedures including contingency arrangements which ensure site storage capacities are not exceeded; and</p> <p>c. Details of the procedures to investigate and record such incidents, accidents and non-conformances.</p> <p>Staff will be trained in site emergency procedures which are tested through drills to evaluate the effectiveness.</p> <p>Abnormal operations associated with the including those which can give rise to accidental releases and emergency situations have been assessed within the Impact Assessment Report.</p> <p>Arrangements with respect to residue management are detailed in the Management and Technical Plan.</p>	Part 9, Impact Assessment Report

