Assessment of Best Available Techniques

Application for a Permit Variation

Berkswell Recycling Limited

Cemex Quarry, Cornets End Lane, Meriden CV7 7LH

Prepared by:

Wardell Armstrong LLP

Sir Henry Doulton House, Forge Lane, Stoke-on-Trent,
Staffordshire, ST1 5BD

SLR Project No.: 439.V21769.00WA1

Client Reference No:

04 December 2025

Revision: 02

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
01	29 July 2025	Alison Cook		
02	04 December 2025	Wayne Westwood		

Basis of Report

This document has been prepared by Wardell Armstrong LLP (SLR) with reasonable skill, care and diligence, and taking account of the timescales and resources devoted to it by agreement with Berkswell Recycling Limited (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.

04 December 2025
SLR Project No.: 439.V21769.00WA1

Table of Contents

Tables in Text

Acronyms and Abbreviations

BAT	Best Available Techniques
EMS	Environmental Management System

1.0 Introduction

Wardell Armstrong LLP (part of SLR) were commissioned by Berkswell Recycling Ltd to prepare a BAT assessment to support an application for a variation to an Environmental Permit. Permit EPR/DB3508MA covers their open windrow composting facility at Cornetts End Lane, Meriden, to the East of Birmingham and the West of Coventry.

As an open windrow composting site, the facility will need to comply with the measures set out in the BAT Conclusions for Waste Treatment published by the European Union and with the Environment Agency's Appropriate Measures for Biological Waste Treatment.

The tables below summarise the measures in place to ensure that the facility is complaint with the required guidance.

2.0 Compliance with BAT Conclusions for Waste Treatment

Table 2.1 sets out how the site will comply with the requirements set out in the 2018 BAT Conclusions for waste treatment. The site complies with the sections that are generally applicable to all waste treatment and the specific requirements for aerobic treatment of biowaste.

Table 2.1:Compliance with BAT Conclusions for Waste Treatment

BAT No.	BAT Requirement	How the Site Complies
1.	Adhere to an Environmental Management System.	Berkswell Recycling Limited have an environmental policy in place and senior managers are committed to ensuring that the environment is provided with a high level of protection and that appropriate infrastructure and procedures are in place to achieve this. An EMS is in place for the site and this has been developed in line with the Environment Agency's guidance to cover all of the relevant areas, including recruitment, training, employee engagement, process control, maintenance of infrastructure and plant and managing emergency situations.

2	Set up and carry out waste pre-acceptance procedures, waste acceptance procedures, waste tracking and quality management.	The EMS includes procedures for pre-acceptance and acceptance of waste. Transfer notes providing all of the pertinent information set out in the guidance accompany waste loads and records of these are kept for a minimum of two years. Pre-acceptance records are kept for three years. Waste will only be accepted where it is suitable for processing and in accordance with permit conditions. Incoming loads will be checked against the transfer note and pre-acceptance information. Storage and treatment areas are clearly defined on site to allow tracking of waste using the system of compost data sheets. The site produces a product that is PAS100 compliant so testing and quality and control procedures are in place in accordance with that. A procedure is in place to reject non-conforming waste. BAT requires waste segregation and checking compatibility prior to mixing of wastes. These issues are not applicable at this site as the incoming waste comprises separate collections of green waste by Local Councils or similar commercial wastes. Incompatible materials should not be present. However, any unsuitable material present in otherwise acceptable loads (e.g., small quantities of plastic or oversize items such as tree trunks) will

BAT No.	BAT Requirement	How the Site Complies
		be picked out and shredded separately (wood) or placed in the rejects container (plastic etc) as appropriate.
3	Maintain an inventory of wastewater and waste gas streams.	There are no point source emissions from the site. Any rainwater run-off is held in a large lagoon pending reuse on site for damping down of dust or maintaining the moisture content of the windrows. Excess water will be removed by tanker. Waste treatment takes place in the open air and there are no waste gas streams.

4	Ensure optimised storage locations, adequate storage capacity, safe storage and separate storage for packaged hazardous waste.	The site is in a former quarry and is not close to sensitive receptors. Waste on site will be monitored and no further waste will be accepted unless there is adequate space to store and process the material. Safe storage is provided and waste is shredded and formed into windrows in a timely manner. Maximum times for waste processing is generally four to six weeks, varying depending on the weather conditions. No hazardous wastes are received at the site.
5	Handling and transfer procedures in place.	Procedures are in place to ensure the safe unloading and handling of material and loading of product or outgoing waste.
6	Monitor key parameters in emissions to water at key points.	There is no treatment of water on site. There are no emissions to water from the site.
7	Frequency of monitoring for emissions to water.	No monitoring is required as there are no emissions to water.
8	Monitor channelled emissions to air.	There are no channelled emissions to air.
9	Relates to regeneration of spent solvents.	Not applicable
10	Periodically monitor odour emissions, applicable where odour at sensitive receptors is expected or has been substantiated.	No quantitative monitoring of odour is required as the site is not close to sensitive receptors. There will be a daily inspection at the site boundary to ensure that no odour issues are occurring.
11	Monitor the annual consumption of energy, water and raw materials.	The site uses very little in the way of raw materials. Harvested water from the sites concrete pad working area surface run-off is received by a 1.5 million litre holding lagoon. Any additional harvested water from the workshop building is gutter fed into the wash plant holding tank. The percentage of water used from the lagoon is monitored daily by recording the water level. Energy consumption is monitored by recording diesel usage and other materials for site plant.
12	Set up implement and review an odour management plan.	An odour management plan is in place for the site.

BAT No.	BAT Requirement	How the Site Complies
13	Reduce or prevent odour by using one or a combination of the following techniques: • Minimise residence time; • Use chemical treatment; • Optimise aerobic treatment.	Waste is generally shredded and placed in windrows on the same day. It will not be stored for more than 72 hours prior to treatment. Chemical treatment is not appropriate at this site. The windrows will be monitored and will be turned as necessary to ensure an adequate oxygen supply and prevent anaerobic conditions developing.
14	Sets out measures to prevent diffuse emissions of dust, odour and VOCs.	Most of these measures relate to buildings, gas extraction systems and large-scale equipment. Most of these measures are not applicable to an open windrow composting site. However, the following measures will be in place: • Drop heights will be minimised when unloading or moving waste; • A speed limit of 10mph will be in place on site; • A bowser will be available to damp down as necessary; • Site roads and storage areas will be swept as required to prevent a buildup of residues and will be damped down as required to suppress dust.
15	BAT is to use flaring only for safety reasons or non-routine operations.	Not applicable. There is no flare on site.
16	Relates to flares	Not applicable. There is no flare on site.
17	Have a noise and vibration management plan in place. Applicable only where noise nuisance is expected or substantiated.	Due to the location of the site noise nuisance is not expected. The nearest receptor is a farm 280m away. Other residential receptors are 400m or more from the site.

18	Sets out measures to control noise.	A number of measures relate to buildings and there is no building on site. The following measures will apply: • Plant will be fitted with appropriate silencers. • There is a 4m bund around the site to provide some screening for noise.
19	Sets out measures to minimise use of water	The site has impermeable surfacing throughout. Water run-off from waste storage and treatment areas is contained for reuse on site and recirculated.

BAT No.	BAT Requirement	How the Site Complies
20	Provides measures for treatment of water to prevent emissions.	Treatment is not required as there are no emissions to water. Water does not need to be fully clean for reuse.
21	To limit accidents and incidents BAT is to: • Protect plant against malevolent acts; • Have fire protection in place; • Have procedures in place for spillages or firefighting; • Register and assess incidents.	Site security is in place with fencing and lockable gates. Plant is fitted with fire extinguishers. A Fire Prevention Plan is in place. Records will be kept of incidents to allow lessons to be learned and improvements to be made.
22	BAT is to substitute materials with waste.	This is a measure to reduce raw material use. Virgin raw materials are not used in the process. PAS 100 compliant compost is produced from the incoming green waste.
23	An energy efficiency plan should be in place with an energy balance record.	Diesel usage will be monitored and reviewed to ensure it is used as efficiently as possible. Plant will be properly maintained.
24	BAT is to maximise the reuse of packaging.	Not applicable. Packaging is not used on site. Waste is delivered by walking floor articulated vehicles, roll on roll off containers or small transit caged vehicles.

25, 26, 27,28, 29, 30, 31 and 32	Measures for mechanical treatment of waste not linked to biological treatment.	Not applicable
33	Select waste input to reduce emissions of odour.	Waste pre-acceptance and acceptance procedures are in place so that only suitable waste is processed. Excessively odorous material is rejected.
34	Relates to channelled emissions to air.	Not applicable as there are no channelled emissions to air on site.
35	Reduce wastewater and water usage by: • Segregating clean and dirty water as far as possible within the constraints of the site layout; • Reuse water; • Minimise leachate by optimising moisture content.	Drainage from the composting pad is drained to a large lagoon and reused on site to optimise the water content of windrows and for dust suppression. The moisture content of the windrows is monitored daily during sanitation (i.e. the first two weeks of treatment) and weekly during the stabilisation phase, in accordance with the compost certification scheme rules. Where necessary the windrows are turned or have moisture added to maintain them within the optimal levels.

36	Monitor key process parameters: • waste input characteristics (e.g. C to N ratio, particle size); • temperature and moisture content at different points in the windrow; • aeration of the windrow (e.g. via the windrow turning frequency, O2 and/or CO2 concentration in the windrow, temperature of air streams in the case of forced aeration); • windrow porosity, height and width.	Waste inputs are monitored and the particle size is managed by use of the shredder to provide a standardised input. The introduction of oversize material to freshly shredded green waste, where appropriate, will be carried out at a typical blending ratio to achieve a target carbon to nitrogen ratio of 15-25 Temperature and moisture content is monitored along the windrow daily during the first two weeks and then weekly during stabilisation phase. A Compost Manager probe will be used for this purpose and this will also record oxygen and carbon dioxide levels. Probes are of adequate length to allow monitoring of the core of the windrow. The results are recorded. Aeration is managed by turning the windrows as needed The height and width of windrows is managed to maintain good aeration. Windrows are kept within 4m high and 7m wide.
37	BAT is to cover the windrows with semi permeable membranes or adapt operations to the meteorological conditions.	Meteorological conditions are monitored so shredding, screening and turning can be avoided when the wind is towards the nearest residential receptors and there is potential for impact. There is an earth bund around the site providing some protection from the wind.
38 to 53	Relate to other types of waste treatment.	Not applicable.

3.0 Appropriate Measures

The appropriate measures for biological treatment of waste are based on the BAT Conclusions and compliance with the criteria set out in Table 2.1, above, largely demonstrates that the site will also comply with the Appropriate Measures for Biological Treatment of Waste.

For clarity Table 3.1, below, sets out the additional requirements, where greater detail or different detail is required under the Environment Agency's Appropriate Measures and shows how the site complies with these requirements.

Table 3.1: Compliance with the Environment Agency's Appropriate Measures

Appropriate Measure (additional to Table 2.1 BAT)	How the Site Complies
During pre-acceptance you must consider how you will manage and control the nutrient balance of the waste feedstock, the moisture content and any toxic compounds which may inhibit biological activity	The permitted waste types exclude those that may contain toxic compounds which might inhibit biological activity. Green waste and more woody waste will be blended to manage the nutrient balance of the feedstock (see BAT 36).
Classify waste in accordance with WM3	Waste is only accepted where the correct List of Wastes code has been applied. Wastes accepted on site are all absolute non-hazardous wastes and sampling and testing is not required, in line with WM3 requirements.
You must verify the pre-acceptance information by contacting or visiting the producer. Dealing with staff directly involved in waste production can help to fully characterise a waste.	Berkswell Recycling Limited has good relationships with their customers and deal directly with local councils or other customers to resolve any issues with incoming waste.
Before you accept waste, you must consider its potential odour and emissions impact	This forms part of the pre-acceptance checks. Waste that is highly odorous will not be accepted.
You must keep separate the roles and responsibilities of sales staff and technical staff. If sales staff are involved in waste enquiries, then technical staff must carry out a final assessment before approval.	Technical staff will check all potential new waste streams to ensure that they are suitable for processing.
When you agree that you will accept waste from a customer, you must decide and record what parameters you will check at the acceptance stage. The checks could be visual (for example colour, phase, fuming), physical (for example pumpability, temperature, form) and chemical (for example pH, metals content) parameters	All waste is subject to visual assessment on arrival at the site and during unloading. Given the waste types and process no further parameters are needed to check compliance.
You must identify the effects of any seasonal variance on the waste's composition	Turning of the windrows will take into account any seasonal variation in the waste. A supply of oversize woody material will be available to mix into green wastes where needed (e.g. loads comprising mainly grass cuttings).
You must have written procedures for recording, reporting and tracking nonconforming and rejected wastes.	Where waste is rejected, the customer will be contacted with an explanation so measures can be put in place to prevent recurrence. A record of the rejection, reason for it and fate of the waste (i.e. whether it was returned to the customer or sent to another permitted site) will be made and stored on site. Rejected waste will be stored in the quarantine area until arrangements are made to remove it from site.

You must not offload wastes if you do not have enough space and capacity to treat the waste at that time.	Waste will only be accepted where there is adequate storage available on site.
For outside reception areas, you must have impermeable surfacing and a contained drainage system.	Impermeable concrete surfacing is provided throughout the site. The site has a kerb around the edge and falls to ensure that all run-off that may have been in contact with waste is directed to sealed drainage system and lagoon. The

Appropriate Measure (additional to Table 2.1 BAT)	How the Site Complies
	surfacing and drainage channels are inspected monthly and repaired where needed.
You must minimise the time you store putrescible waste in reception before treatment and hold it for no longer than 5 working days.	Waste is incorporated into windrows on the day of receipt wherever possible. Waste is never stored for more than 72 hours before being incorporated into the composting process.
you must store all waste within the security protected area of your facility to prevent unauthorised access and vandalism.	The site is provided with fencing and lockable gates to minimise unauthorised access.
Your management system and odour management plan must clearly state the maximum storage capacity of the site and the designated storage areas.	Maximum storage capacities are stated and are communicated to staff. Waste is tracked through the site to ensure that the storage capacities are complied with.
You must design your storage facilities and procedures to make sure there is no cross-contamination between inputs and outputs of the process, and during the treatment cycle	Areas for waste reception, sanitation, stabilisation and storage of product are clearly defined to ensure there is no cross contamination between the different stages.
Lagoons must have a freeboard of at least 750mm at all times.	The quantity of water in the lagoon is monitored to ensure that a 750mm freeboard is maintained. Where the lagoon is approaching being full arrangements will be made to tanker excess water off site for disposal at a permitted site.

For all stages of the process, you must manage the waste to make sure the process is stable and to minimise the risk of: • over-heating; • re-heating; • foaming; • uncontrolled biological activity; • leachate breakout.	The windrows are monitored daily in the first phases of treatment and weekly in the maturation phase to ensure correct management. Where necessary water will be added or the windrows will be turned to ensure adequate oxygen and water content and reduce the potential for overheating. Records will be kept detailing turning and any water added to the windrows.
Waste treatment must have a clear and defined benefit and result in a fully recovered material.	Compost is produced in accordance with the PAS 100 standard and has reached end of waste when it is transported off site.
You must remove all non-compostable plastic and other contaminants in the feedstock or reduce them to levels that are as low as reasonably practicable.	Waste inputs are controlled by good communication with customers so that as far as possible only suitable wastes are received on site. Where necessary obvious non-conforming waste will be picked out prior to process and a container will be available on site to store this until it can be removed to a permitted facility. The product will also be screened to remove oversize material and plastics before it stockpiled ready for sale.

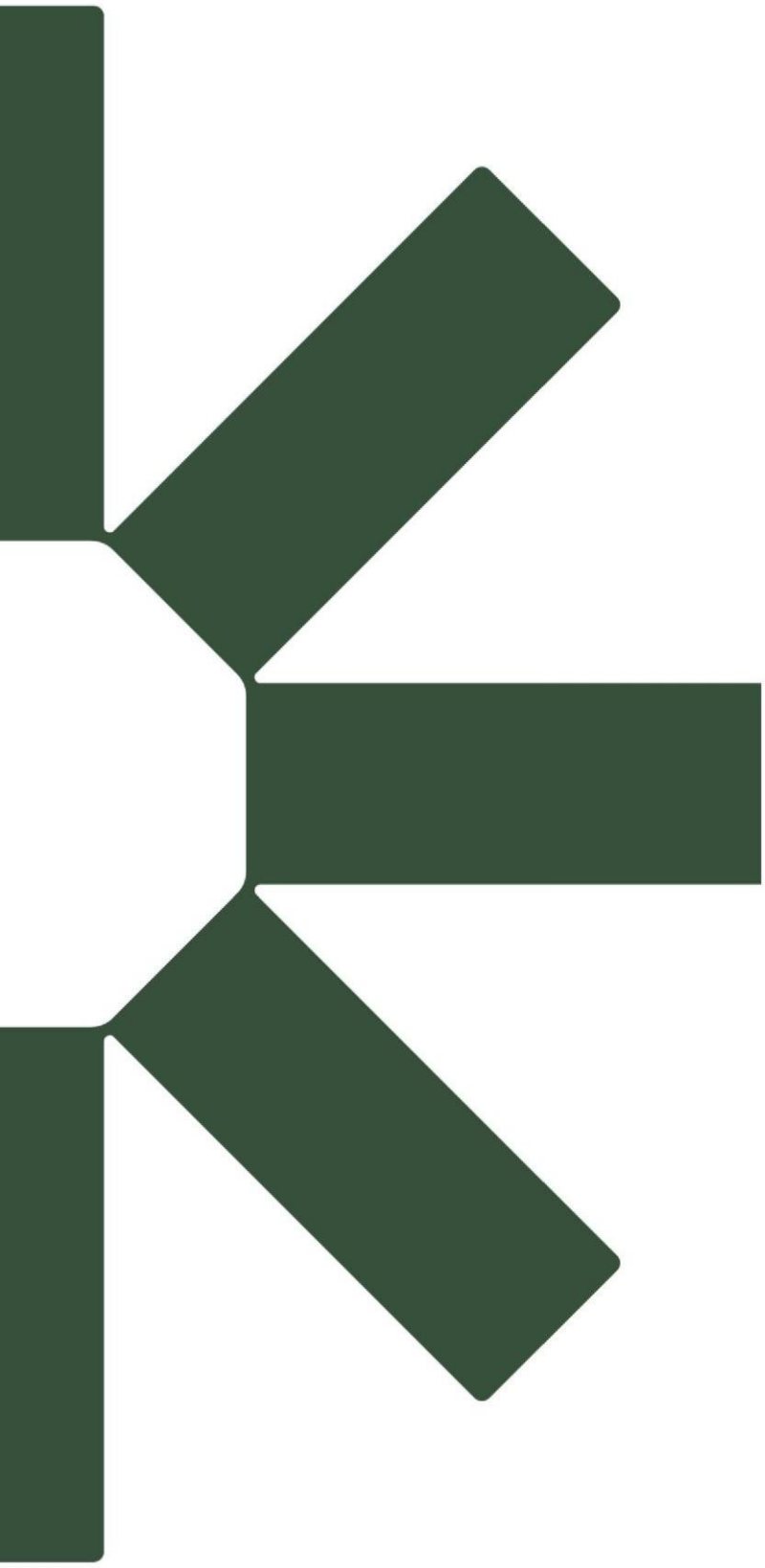
Appropriate Measure (additional to Table 2.1 BAT)	How the Site Complies
You must segregate and condition the waste inputs before biological treatment.	Only waste suitable for treatment is accepted, where needed any contaminants will be handpicked prior to treatment. Waste is shredded to provide a homogenised feed to the process.

You must control moisture using visual control and one of the following methods, a: • squeeze or fist test (when carried out by an experienced operator); • moisture monitoring device with read-out or connectivity to a data capture system; • an accurate oven-drying method.	A squeeze (fist) test is used to assess the moisture content of the material in the windrows. The compost manager probe also allows monitoring of oxygen, moisture, temperature and carbon dioxide.
You must minimise oxygen deficiency and avoid anaerobic conditions occurring during the composting process.	Anaerobic conditions are avoided by limiting the windrow size to 4m high and 7m wide and by regular turning.
You should take measures against excessive moisture in the waste by: • adding input materials with high carbon to nitrogen ratio; • balancing the mix of materials and maximising porosity; • making sure windrows are appropriately structured and the construction allows for passive drainage and temperature convection; • placing oversized material at the base of the windrow.	Materials are added to the windrow with the aim of ensuring the correct carbon to nitrogen balance. A stockpile of oversize woody material is kept on site and this can be added to improve drainage/aeration where needed.
You must keep records of recovered and certified 'non-waste' materials leaving the site, including the: • type of material; • batch number; • date of export off-site; • tonnage exported off-site; • area dispatched to.	Records are kept regarding materials sent off site. This includes the type of material, batch number, date, tonnage and destination.
Appropriate Measure (additional to Table 2.1 BAT)	**How the Site Complies**

You must document potential bioaerosol emission sources and identify measures to minimise their release	The EMS describes how emissions of bio-aerosols are minimised damping down and avoiding turning and shredding in unfavourable meteorological conditions. Bioaerosols are monitored twice a year in line with the permit conditions.

Wardell Armstrong LLP

Alison Cook
Technical Director



Making Sustainability Happen