Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Biffa Waste Services Limited

Poplars Landfill Site and Anaerobic Digestion Facility
Lichfield Road
Cannock
Staffordshire
WS11 8NQ

Variation application number

EPR/BW0584IL/V012

Consolidated Permit number

EPR/BW0584IL

Poplars Landfill Site and Anaerobic Digestion Facility Permit number EPR/BW0584IL

Introductory note

This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Changes introduced by this variation notice/statutory review

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for biowaste treatment.

The Industrial Emissions Directive (IED) came into force on 7 January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. Article 21(3) of the IED requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. The BAT Conclusions for Waste Treatment (the BREF) was published on 17 August 2018 following a European Union wide review of BAT, implementing decision (EU) 2018/1147 of 10 August 2018.

The scope of the permit review covers the assessment of the Anaerobic Digestion Facility with regard to :

- bioaerosols monitoring and compliance with M9 bioaerosols monitoring requirements;
- design and construction of secondary containment and storage lagoons;
- available storage facilities and measures to reduce ammonia emissions from storage; and
- information on existing medium combustion plant and/or specified generators on site.

It has also captured the applicants request to vary the Anaerobic Digestion part of permit and introduce a :

- Sixth anaerobic digester tank
- Gas Upgrade System
- Dewatering of digester grit activity
- New larger Gas holder (1,200m^3)
- Change to Compliance emissions Monitoring Point

Biffa Waste Services Limited possess a permit which incorporates an operational non-hazardous landfill, a Pulverised Fuel Ash (PFA) landfill and an Anaerobic Digestion Facility (AD). The AD shares the site access, weighbridge, wheel-wash facilities and site management with the rest of the Poplars Landfill Site. The AD facility has a :

5.4 A(1)(b)(i),Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes pe day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment.

The site is located at a former opencast colliery site located off Lichfield Road, Cannock, Staffordshire, NGR SJ 99415 09340. The site is within 10km of two Special Areas of Conservation (SAC). It is also within 2km of 13 local wildlife sites. We consider that the variation will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.

This variation has introduced a new digester tank. It will be placed in the existing bund with the other 5 digesters. There is a new emission point from the pressure release valve on the new digester but there is no increase in throughput. The site can accept up to 120,000 tonnes of food waste for processing within the 6 digester tanks to produce biogas.

Some of the biogas produced will pass to a new Gas Upgrade System (GUS) which will remove CO_2 enabling export to the National Grid or removal by road tanker once compressed. The remaining biogas will continue to provide electricity to the AD facility and the Sainsbury superstore adjoining the site utilising the four CHP engines. The amount of biogas used by the generators and associated emissions to air will drop given that some of the biogas has passed to the GUS.

The digester tanks are subject to maintenance and tank inspection. This variation enables the dewatering of grit/water mixture that has been removed from the tank as part of the tank cleaning. This takes place in a reception hall that operates under negative pressure and has an existing Odour Management Plan and Control System comprising of wet scrubber, biofilters and a carbon filter system. The building also has fast acting roller shutter doors.

Status log of permit A: EPR/BW0584IL		
Description	**Date**	**Comments**
Application EPR/BW0584IL/A001	Received 21/11/2003	
Permit determined EPR/BW0584IL	16/04/2009	Issued to Biffa Waste Services Limited
Variation application EPR/BW0584IL/V002	Received 07/09/2009	Duly made 18/10/2009.
Variation EPR/BW0584IL/V002 determined	17/05/2010	Permit varied to incorporate AD Facility into Permit.
Variation EPR/BW0584IL/V003 determined	16/04/2009	Increase the capacity of the Anaerobic Digestion facility from 80,000 tonnes to 120,000 tonnes per annum.
Agency variation determined EPR/BW0584IL/V004	30/12/2013	Agency variation to implement the changes introduced by IED for the landfill facility.
Application EPR/BW0584IL/V005 (variation)	Duly made 25/02/2014	Application to vary the permit to include an additional 0.5MWe SI gas engine and to reposition gas flare and odour control equipment on the AD facility.
Variation determined EPR/BW0584IL	12/03/2014	Varied permit issued.
Application EPR/BW0584IL/V006 (variation and consolidation)	Duly made 29/09/2014	Application to vary and consolidate the permit and implement the changes introduced by IED for the AD facility.
Variation determined EPR/BW0584IL	10/02/2016	Varied and consolidated permit issued.
Environment Agency Landfill Sector Review Permit reviewed Variation determined EPR/BW0584IL/V007 Permit EPR/BW0584IL (PAS Billing Ref: FP3133DP)	11/07/2016	Varied and consolidated permit issued in modern condition format.
Application EPR/BW0584IL/V008 (variation)	Duly made 19/07/2016	Application to vary the permit to include the addition of EWC waste code 19 13 02 to Table S2.1.
Variation determined EPR/BW0584IL/V008 (PAS Billing Ref: HP3434DH)	20/09/2016	Varied permit issued.
Application Variation EPR/BW0584IL/V009	Duly made 02/11/2016	Application to vary the permit to include the addition of EWC waste code 16 10 02 to Table S2.3.
Variation determined EPR/BW0584IL/V009	04/01/2017	Varied permit issued.
Application EPR/BW0584IL/V010 (variation and consolidation)	Duly made 28/06/2017	Application to vary the permit following a review of the site's hydrogeological risk assessment (HRA), including an increase to the permitted leachate heads. The permit has also been amended to reflect the completion of Improvement Conditions IC3a,IC5, IC7, IC9, IC10, IC11and IC12.
Application EPR/BW0584IL/V010	Received 03/07/2018	Response to Schedule 5 notice dated 20/03/18, including: Leachate Management Plan (dated June

Status log of permit A: EPR/BW0584IL		
Description	**Date**	**Comments**
Response to Schedule 5 notice dated 20/03/18		2018), and Hydrogeological Risk Assessment – Increased Leachate Compliance Levels Report: BF4922/HRA (v1.1), Dated June 2018.
Application EPR/BW0584IL/V010 Additional information received	Received 22/10/2018	Stability Risk Assessment Review for Leachate Level Permit Variation Poplars Landfill Site: BF4928/01, Rev 2, dated October 2018.
Variation determined EPR/BW0584IL/V010	19/12/2018	Varied permit issued.
Application EPR/BW0584IL/C011* (variation and consolidation with EPR/BP3436VS)	Duly made 21/12/2021	Variation to site layout and consolidation of Poplars PFA Landfill Site EPR/BP3436VS, variation reference EPR/BP3436VS/V003. *(Permit suffix relogged as 'C011' due to consolidation of the 2 permits. Application was submitted as 'V011')
Variation determined EPR/BW0584IL/C011	14/02/2024	Consolidated permit issued to Biffa Waste Services Limited.
Application EPR/BW0584IL/V012 (variation)	31/05/2023	Application to vary the permit to include 6th digester tank, Gas upgrade System and Dewatering of Digestate grit. This also includes a Statutory review of permit occasioned by Waste Treatment BAT Conclusions published on 17 August 2018.
Information received in response to Request for Further Information dated 24th October 2024	13/12/2024	Information received by email containing responses to Q1 -Q6, and documents: • Permit Variation Application BW0584IL V012 Poplars Bioaerosols Risk Assessment Report UK0039199.6030 V2 • Permit Variation Application BW0584IL V012 Drawing – Air Emission Points • Permit Variation Application BW0584IL V012 Poplars AD Odour Management Plan • Permit Variation Application BW0584IL V012 OMP Appendix 1 – Training Matrix V1 • Permit Variation Application BW0584IL V012 Raw Materials Poplars AD Facility
Information received in response to Request for Further Information dated 07/03/2025	20/03/2025	Information received by email containing : "PAS110_2014 final" document
Variation determined EPR/BW0584IL	04/04/2025	Varied and consolidated permit issued in modern format

Other Part A installation permits relating to installation A: EPR/BW0584IL		
Operator	**Permit number**	**Date of issue**
Infinis (Re-Gen) Limited (Poplars Landfill Gas Utilisation Plant)	EPR/UP3730LU	30/06/2006

Status log of permit B: EPR/BP3436VS		
Description	**Date**	**Comments**
Application EPR/BP3436VS/A001	Duly made 06/06/2014	Application for a permit for part of a landfill installation to dispose of PFA waste
Permit determined EPR/BP3436VS	02/10/2014	Permit issued to Biffa Waste Services Limited
Variation application EPR/BP3436VS/V002	Duly made 18/11/2014	Application to add two waste codes
Variation determined EPR/BP3436VS/V002	30/12/2014	Varied and consolidated permit issued
Application EPR/BP3436VS/V003 (variation and consolidation with EPR/BW0584IL)	Duly made 21/12/2021	Application to vary and consolidate with EPR/BW0584IL, variation reference EPR/BW0584IL/C011
Variation determined and consolidation issued. EPR/BW0584IL	14/02/2024	Consolidated permit issued to Biffa Waste Services Limited

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulations 18 and 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies and consolidates environmental permits

Permit numbers

EPR/BW0584IL

Issued to

Biffa Waste Services Limited ("the operator")

whose registered office is

Coronation Road
Cressex
High Wycombe
Buckinghamshire
HP12 3TZ

company registration number 00946107

to operate a regulated facility at

Poplars Landfill Site and Anaerobic Digestion Facility
Lichfield Road
Cannock
Staffordshire
WS11 8NQ

to the extent set out in the schedules.

The notice shall take effect from 04/04/2025.

The number of the consolidated permit is EPR/BW0584IL.

Name	Date
Peter Maksymiw	**04/04/2025**

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of the application made by the operator, and an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/BW0584IL

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BW0584IL/V012 authorising,

Biffa Waste Services Limited ("the operator"),

whose registered office is

Coronation Road
Cressex
High Wycombe
Buckinghamshire
HP12 3TZ

company registration number 00946107

to operate an installation at

Poplars Landfill Site and Anaerobic Digestion Facility
Lichfield Road
Cannock
Staffordshire
WS11 8NQ

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Peter Maksymiw	**04/04/2025**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

(a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Finance

1.2.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and the Environment Agency dated 14/02/2024 shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by the Environment Agency.

1.2.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:

(a) the costs of setting up and operating the landfill;

(b) the costs of the financial provision required by condition 1.2.1; and

(c) the estimated costs for the closure and aftercare of the landfill.

1.3 Energy efficiency

1.3.1 The operator shall:

(a) take appropriate measures to ensure that energy is used efficiently in the activities;

(b) Review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(c) Implement any appropriate measures identified by a review.

1.4 Multiple operator installations

1.4.1 Where the operator notifies the Environment Agency under condition 4.3.1(a) or 4.3.1(c), the operator shall also notify without delay the other operator(s) of the installation of the same information.

1.5 Efficient use of raw materials

1.5.1 The operator shall:

(a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any further appropriate measures identified by a review.

1.6 Avoidance, recovery and disposal of wastes produced by the activities

1.6.1 The operator shall:

(a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;

(b) review and record at least every four years whether changes to those measures should be made; and

(c) take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1, table S1.1 (the "activities").

2.1.2 For the following activities referenced in schedule 1, table S1.1 (AR4) the activities shall be undertaken in accordance with best available techniques.

2.1.3 All process plant and equipment shall be commissioned, operated and maintained and shall be fully documented and recorded in accordance with the manufacturer's recommendations.

2.1.4 For the following activities referenced in schedule 1, table S1.1 (AR4) waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the landfill site plan at schedule 7 to this permit of the installation covered by this permit and that of the other operator of the installation.

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or

other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan , and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.3.3 For the following activities referenced in schedule 1, table S1.1 (AR4), any raw materials or fuels listed in schedule 2 table S2.4 shall conform to the specifications set out in that table.

2.3.4 For the following activities referenced in schedule 1, table S1.1 (AR4), the operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

(a) the nature of the process producing the waste;

(b) the composition of the waste;

(c) the handling requirements of the waste;

(d) the hazardous property associated with the waste, if applicable; and

(e) the waste code of the waste.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.3.6 For the following activities referenced in schedule 1, table S1.1 (AR4), the operator shall ensure that where waste produced by the Anaerobic Digestion facility is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.3.7 For the following activities referenced in schedule 1, table S1.1 (AR4):

(a) each MCP must be operated in accordance with the manufacturer’s instructions and records must be made and retained to demonstrate this.

(b) the operator must keep periods of start-up and shut-down of each MCP as short as possible.

(c) there must be no persistent emission of ‘dark smoke’ as defined in section 3(1) of the Clean Air Act 1993.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1, table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.5 Pre-operational conditions

2.5.1 The operations specified in schedule 1, table S1.4 shall not commence until the measures specified in that table have been completed.

2.6 Landfill Engineering

2.6.1 No construction of any new cell of the landfill shall commence until the operator has submitted construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.

2.6.2 Where the operator proposes to construct any new cell other than the first cell, but proposes no change from the design of the most recently approved cell which could have any impact on the performance of any element of the design, no construction of the new cell shall commence until the

operator has submitted a cell layout drawing and the Environment Agency has confirmed that it is satisfied with the cell layout drawing.

2.6.3 The construction of a new cell shall take place only in accordance with the approved construction proposals unless:

(a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or

(b) a change has otherwise been agreed in writing by the Environment Agency.

2.6.4 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Environment Agency has confirmed that it is satisfied with the CQA Validation Report.

2.6.5 No construction of landfill infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.

2.6.6 The construction of the landfill infrastructure shall take place only in accordance with the approved construction proposals unless:

(a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or

(b) a change has otherwise been agreed in writing by the Environment Agency.

2.6.7 The operator shall submit a CQA Validation Report within four weeks of the completion of the construction of the relevant landfill infrastructure, or other time period agreed in writing with the Environment Agency.

2.6.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.6.5 and 2.6.6 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to the Environment Agency as soon as practicable.

2.6.9 For the purposes of conditions 2.6.1, 2.6.2, 2.6.4 and 2.6.5, the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:

(a) confirmed whether or not it is satisfied; or

(b) informed the operator that it requires further information.

2.6.10 Where the Environment Agency has required further information under condition 2.6.9(b), the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the further information, either:

(a) confirmed whether or not it is satisfied; or

(b) informed the operator that it requires further information.

2.7 Waste acceptance

2.7.1 For the following activities referenced in schedule 1, table S1.1 (AR1) wastes shall only be accepted for disposal if:

(a) they are listed in schedule 2, table S2.2; and

(b) they are non- hazardous waste; and

(c) they are not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm); and

(d) they are not shredded used tyres; and

(e) they are not liquid waste (including waste waters but excluding sludge (and excluding liquid waste accepted at a permitted leachate treatment activity); and

(f) they are not chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown; and

(g) all the relevant waste acceptance procedures have been completed; and

(h) they fulfil the relevant waste acceptance criteria; and

(i) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria; and

(j) they are wastes which have been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment, [or liquid waste accepted for treatment at a permitted leachate treatment activity]; and

(k) they are wastes with a code beginning with 07 05 and 16 03, they shall exclude waste medicinal products and pharmaceutically active waste materials arising from their manufacture.

(l) they are not waste paper, metal, plastic or glass if that waste has been separately collected for the purpose of preparing for re-use or recycling

2.7.2 For the following activities referenced in schedule 1, table S1.1 (AR2) wastes shall only be accepted for disposal if:

(a) they are listed in schedule 2, table S2.3, and

(b) they are non- hazardous waste or gypsum waste, and

(c) they are not liquid waste (including waste waters but excluding sludge and carrier waters, and

(d) all the relevant waste acceptance procedures have been completed, and

(e) they fulfil the relevant waste acceptance criteria, and

(f) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and

(g) they are wastes which have been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment.

2.7.3 For the following activities referenced in schedule 1, table S1.1 (AR3) waste shall only be accepted for treatment if:

(a) it is of a type and quantity listed in schedule 2, table S2.4; and

(b) it conforms to the description in the documentation supplied by the producer and holder.

2.7.4 For the following activities referenced in schedule 1, table S1.1 (AR4), waste shall only be accepted at the Anaerobic Digestion facility if:

(a) it is of a type and quantity listed in schedule 2 table S2.5; and

(b) it conforms to the description in the documentation supplied by the producer and holder.

(c) the facility has sufficient free capacity to store and treat the waste.

2.7.5 Wastes shall only be accepted for restoration where:

(a) they are listed in schedule 2, table S2.6 and

(b) they are accepted in accordance with a restoration plan approved in writing by the Environment Agency.

2.7.6 For the following activities referenced in schedule 1, table S1.1 (AR1) The operator shall:

(a) visually inspect without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill and waste at the point of deposit; and

(b) be satisfied that the waste conforms to the requirements of condition 2.7.1.

2.7.7 For the following activities referenced in schedule 1, table S1.1 (AR2) The operator shall:

(c) visually inspect without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill and waste at the point of deposit; and

(d) be satisfied that the waste conforms to the requirements of condition 2.7.2.

2.7.8 Where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.

2.7.9 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.

2.7.10 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing BF5036/09/02 revision 1, dated 20/07/2023.

2.7.11 The quantity of waste that is disposed of or recovered at the regulated facility in any year shall not exceed the limits in schedule 1, table S1.5.

2.7.12 The operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, date of delivery and, where practicable, origin of any waste that is received for disposal or recovery and of the identity of the producer, or in the case of municipal waste and multiple collection vehicles, of the collector of such waste. Any information regarded by the operator as commercially confidential shall be clearly identified in the record.

2.8 Leachate levels

2.8.1 For the following activities referenced in schedule 1, table S1.1 (AR1) the limits for the level of leachate listed in schedule 3, table S3.1 shall not be exceeded.

2.9 Closure and aftercare

2.9.1 The operator shall maintain a closure and aftercare management plan.

2.10 Landfill gas management

2.10.1 For the following activities referenced in schedule 1, table S1.1 (AR1) the operator shall take appropriate measures, including, but not limited to, those specified in any approved landfill gas management plan, to:

(a) collect landfill gas; and

(b) control the migration of landfill gas.

2.10.2 The operator shall use the collected landfill gas to produce energy. If the collected landfill gas cannot be used to produce energy, the operator shall use appropriate measures to flare or treat the gas in accordance with an approved landfill gas management plan.

2.10.3 The operator shall:

(a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a revised landfill gas management plan;

(b) implement the revised landfill gas management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 The limits in schedule 3 shall not be exceeded.

3.1.2 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3, tables S3.2, S3.3 , S3.4 and S3.6.

3.1.3 For the following activities referenced in schedule 1, table S1.1 (AR4) the limits given in schedule 3, table S3.2 shall not be exceeded, save that compliance with the emission limits in that table shall include incorporation of the uncertainty allowance stated in guidance LFTGN 05 and LFTGN 08.

3.1.4 The operator shall prevent the input of any hazardous substances from the activities into groundwater.

3.1.5 The operator shall submit to the Environment Agency a review of the Hydrogeological Risk Assessment:

(a) between nine and six months prior to the fourth anniversary of the granting of the permit; and

(b) between nine and six months prior to every subsequent six years after the fourth anniversary of the granting of the permit.

3.1.6 For the following activities referenced in schedule 1, table S1.1 (AR3 and AR4), periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.2.4 The operator shall implement a leak detection and repair (LDAR) programme to detect and mitigate the release of volatile organic compounds, including methane from diffuse sources.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring and any other actions specified in the following tables in schedule 3 to this permit:

(a) Leachate specified in tables S3.1 and S3.10;

(b) Point source emissions specified in tables S3.2, S3.3 and S3.6;

(c) Groundwater specified in tables S3.4 and S3.8;

(d) Landfill gas specified in tables S3.5, S3.7 and S3.9;

(e) Surface water specified in table S3.11;

(f) Noise monitoring specified in table S3.12;

(g) Anaerobic Digestion process monitoring specified in table S3.13;

(h) bioaerosols monitoring specified in table S3.15; and

(i) Odour abatement monitoring specified in table S3.14.

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 For the following activities referenced in schedule 1, table S1.1 (AR3 and AR4), monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 A topographical survey of the site referenced to ordnance datum shall be carried out and shall be used to produce a plan of a scale adequate to show the surveyed features of the site:

(a) Annually; and

(b) prior to the disposal of waste in any new cell or new development area of the landfill; and

(c) following closure of the landfill or part of the landfill.

3.5.5 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.2, S3.3, S3.4 and S3.6 unless otherwise agreed in writing by the Environment Agency.

3.5.6 In the case of new medium combustion plant, the first monitoring measurements shall be carried out within four months of the issue date of the permit or the date when the MCP is first put into operation, whichever is later.

3.5.7 Monitoring shall not take place during periods of start-up or shut-down.

3.6 Bioaerosols

3.6.1 The operator shall take all appropriate measures, to prevent or where that is not practicable to minimise the release of bioaerosols. Emissions of bioaerosols from the operational activities should not exceed the emission action levels specified in table S3.15.

3.6.2 The operator shall where the emission action levels are exceeded:

(a) notify the Environment Agency and investigate and take remedial action;

submit to the Environment Agency for approval within the period specified, a bioaerosols management plan which identifies and minimises the risks of pollution from bioaerosols; and

implement the bioaerosols management plan from the date of approval and revise the plan periodically, unless otherwise agreed in writing by the Environment Agency.

3.7 Pests

3.7.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

3.7.2 The operator shall:

(a) only use approved products for pest control;

(b) treat pest infestations promptly;

(c) reject pest-infected incoming waste;

(d) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution hazard or annoyance from pests;

(e) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.8 Fire prevention

3.8.1 For the following activities referenced in schedule 1, table S1.1 (AR4) the operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.8.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;

(b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.8.3 The operator shall undertake a DSEAR assessment and maintain an accident management plan.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:

(i) the results of groundwater monitoring;

(ii) sub-surface landfill gas monitoring;

(iii) leachate levels, quality and quantities;

(iv) landfill gas generation and collection;

(v) waste types and quantities; and

(vi) the specification and as built drawings of the basal, sidewall and capping engineering systems.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year ('the annual report') shall be submitted to the Environment Agency by 31st January each year or such other date as may be agreed in writing by the Agency, with the exception of 4.2.2(c) that must be provided by the end of February each year. The report(s) shall include as a minimum:

(a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted in relation to this installation and any agreed amendments thereto. The review will include written descriptions of the improvements made to operational performance during the year, action plans developed and planned improvements for the coming year;

(b) the energy consumed at the site, reported in the format set out in schedule 4 table S4.3

(c) the annual production/treatment set out in schedule 4, table S4.2;

(d) the topographical surveys required by condition 3.5.3 other than those submitted as part of a CQA validation report;

(e) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;

(f) an assessment of the settlement behaviour of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;

(g) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;

(h) a plan(s) ('the monitoring and extraction point plan – MEPP') showing the locations of existing and any new leachate and landfill gas extraction and monitoring points.

(i) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

(a) in respect of the parameters and emission points specified in schedule 4, table S4.1;

(b) using the forms specified in schedule 4, table S4.4 or other reporting format as agreed in writing with the Environment Agency; and

(c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 Within one month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.2.5 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.6 The operator shall keep records of non-waste materials leaving the site, including the type of material, the batch number, the date of export off-site and the tonnage exported on that date. These records shall be maintained for at least 2 years.

4.2.7 The operator shall submit an annual report detailing the efficiency of removal of non-compostable and non-digestible materials from feedstock prior to processing and the level of contamination in the final recovered digestate and/or compost.

4.3 Notifications

4.3.1 In the event:

(a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

(i) inform the Environment Agency;

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident; and

(iii) take the measures necessary to prevent further possible incidents or accidents.

(b) of a breach of any permit condition the operator must immediately—

(i) inform the Environment Agency; and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time.

(c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Following the detection of an issue listed in condition 4.3.1, the operator shall review and revise the management system and implement any changes as necessary to minimise the risk of reoccurrence of the issue.

4.3.4 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.5 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

(a) any change in the operator's trading name, registered name or registered office address; and

(b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

(a) any change in the operator's name or address; and

(b) any steps taken with a view to the dissolution of the operator.

In any other case:

(a) the death of any of the named operators (where the operator consists of more than one named individual);

(b) any change in the operator's name(s) or address(es); and

(c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.6 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

4.3.7 The Environment Agency shall be given at least 14 days' notice before implementation of any part of the site closure plan.

4.3.8 The operator shall notify the Environment Agency as soon as is practicable, in writing of any change of the medium combustion plant.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities				
Activity reference	**WFD Annex I and II operations (where applicable)**	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR1	D5 –Specially engineered landfill	Section 5.2 Part A(1)(a), The disposal of waste in a landfill.	Landfill for non-hazardous waste	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.7. (2.7.1), as an integral part of landfilling. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR2	D5 –Specially engineered landfill	Section 5.2 Part A(1)(a), The disposal of waste in a landfill.	Landfill for non-hazardous waste (PFA)	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.7.(2.7.2), as an integral part of landfilling. Waste types suitable for acceptance are limited to those specified in Table S2.3.
AR3	D8 – Biological treatment of waste	Section 5.4, Part A(1)(a)(i), Biological treatment of non-hazardous waste	Treatment of leachate in a facility with a capacity of >50 tonnes/ day	Leachate, process effluent and surface water arising from the site. Landfill leachate and process effluent arising from off-site sources as agreed in writing by the Agency Waste types suitable for acceptance are limited to those specified in Table S2.4.
AR4	R3: Recycling/ reclamation of organic substances which are not used as solvents	Section 5.4 A(1)(b)(i), Recovery or a mix of recovery and disposal of non hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment.	Anaerobic digestion of waste and recovery of by-products (digestate).	From receipt of waste through to digestion and recovery of by-products (digestate). Anaerobic digestion of waste in 6 tanks followed by burning of biogas produced from the process. Waste types suitable for acceptance are limited to those specified in Table S2.5. The treatment capacity of any plant shall not exceed 10 tonnes per day of animal waste.

Table S1.1 activities				
Activity reference	**WFD Annex I and II operations (where applicable)**	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
Directly Associated Activities				
AR5	R5:Recycling/reclamation of other inorganic material	-	Recovery of waste for restoration	The use of wastes in table S2.6 only to provide restoration material for the permitted landfill (AR1 and AR2).
AR6	R10: Land treatment resulting in benefit to agriculture or ecological improvement.	-	Recovery of waste for restoration	The use of wastes in table S2.6 only to provide restoration material for the permitted landfill (AR1 and AR2).
AR7	N/A	-	Temporary storage of waste (leachate), recirculation of leachate within the landfill	Leachate arising from the landfill AR1. Recirculation of leachate only in cells that are compliant with leachate head limits in Table S3.1 (Limit from 1 November 2011).
AR8	D6 – release to water body except seas/ oceans	-	Discharges of clean, uncontaminated site drainage from the landfill and anaerobic digestion facility.	From surface water management system to point of entry to controlled waters.(AR1 and AR4) Surface waters from the PFA Landfill (AR2) managed within a designated settlement lagoon located to the northwest of the containment cell area.
AR9	N/A	-	Storage of fuel for operation of plant and equipment.	Fuel storage tank.
AR10	R1:Use principally as a fuel to generate energy	-	Electrical power supply	From the receipt of biogas produced at the on-site anaerobic digestion process (AR4) to combustion with the release of combustion gases. Combustion of biogas in 4 spark ignition engines with a maximum aggregate volumetric flow rate of 24,480 Nm^3/hr , (Approx. 16MWth, 6.5MWe).

Table S1.1 activities				
Activity reference	**WFD Annex I and II operations (where applicable)**	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR11	R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced) D15: Storage pending any of the operations number D01 to D14 (excluding temporary storage pending collection on the site where it is produced).	-	Storage of waste pending recovery or disposal	From the receipt of waste to despatch for anaerobic digestion (AR4) or despatch off site for recovery and/or disposal. Storage of waste in an enclosed building, and in a buffer or intermediate storage tank, fitted with appropriate odour abatement on an impermeable surface with sealed drainage. Waste types suitable for acceptance are limited to those specified in Table S2.5.

Table S1.1 activities				
Activity reference	**WFD Annex I and II operations (where applicable)**	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR12	R3: Recycling/reclamation of organic substances which are not used as solvents	-	Physical treatment for the purpose of recycling	From the receipt of waste to despatch for anaerobic digestion (AR4) or despatch off site for recovery. Pre-treatment of waste in enclosed building and on impermeable surface with sealed drainage system including shredding, sorting, screening, compaction, baling, mixing and maceration. Post-treatment of digestate in an enclosed building and on an impermeable surface with sealed drainage system, including screening to remove contraries, centrifuge or pressing and addition of thickening agents (polymers) or drying. Heat treatment (pasteurisation) of waste in 3 tanks for the purpose of recovery. Gas cleaning by biological or chemical scrubbing. Waste types suitable for acceptance are limited to those specified in Table S2.5.
AR13	D10: Flaring of biogas for disposal in an appliance	-	Emergency flare operation	From the receipt of biogas produced at the on-site anaerobic digestion process (AR4) to incineration with the release of combustion gases. Use of an auxiliary flare required only during periods of breakdown or maintenance of the gas engines.
AR14	Storage of raw materials.	-	Raw material storage	From the receipt of raw materials to despatch for use within the facility (AR4).

Table S1.1 activities				
Activity reference	**WFD Annex I and II operations (where applicable)**	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR15	Storage of biogas produced from on-site anaerobic digestion of permitted waste in a gas holder or roof space of digesters.	R13	Gas storage	From the receipt of biogas produced at the on-site anaerobic digestion process (AR4) to despatch for use within the facility.
AR16	Storage of solid digestate in an enclosed building.	R13	Digestate storage	From the receipt of digestate produced from the on-site anaerobic digestion process (AR4) to despatch for use off-site.
AR17	Collection and storage of process water and centrate in a storage tank and intermediate storage tank.	-	Process water collection and storage	From the collection of process water (AR4) and centrate to re-use within the facility or off-site disposal.
AR18	Dewatering of Digester Grit removed from digester	-	Separation of Digester grit into liquid and solid fractions.	From removal of grit from digester to offsite disposal of solid waste and reuse of liquid in AD pre-treatment process.
AR19	Gas upgrading System	-	Upgrading of biogas to biomethane (including the removal of moisture and other substances such as carbon dioxide, hydrogen sulphide and Volatile organic compounds) for injection into the National Grid or removal by tanker.	From the receipt of biogas produced at the on-site anaerobic digestion process to injection into the National Grid. This includes return of off-specification biogas for combustion to the on-site CHP engine(s), auxiliary boiler(s) and/or emergency flare.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Permit application (AR1 & AR3)	The response to questions 2.1, 2.2, 2.3, 2.4 and 2.5 of the Application excluding the answers to the following questions; 2.2.2, 2.2.4, 2.2.5 and 2.2.6; 2.3.17, 2.3.20, 2.3.21 and 2.3.22; 2.3.32, 2.3.33	21/11/2003
Schedule 4 response dated 22 March 2005 (AR1 & AR3)	All except the answer to questions; 32 and 33.	22/03/2005
Response to request for Further Information (AR1 & AR3)	Information dated 25 July 2005 letter dated 30 August 2005 and Landfill Gas Management Plan (August 2005)	30/08/2005
Schedule 4 response dated 24 January 2007 (AR1 & AR3)	All	26/01/2007
Response to request for Further Information (AR1 & AR3)	Information dated 11 July 2008 letter dated 22 July 2008 and enclosures	28/07/2008
Response to request for Further Information (AR1 & AR3)	Information dated 04 August 2008 e-mail received 08 September 2008 including permeability results and attachments.	08/09/2008
Variation application EPR/BW0584IL/V002 (AR4)	Part II and Part III, sections C2 to C6 of the application document in response to section 2 - Operating techniques, Part C of the application with the following exclusions: - the proposed alternative bund construction, which shall be of reinforced concrete; - the proposed sulphur dioxide emission limit value of 350 mg/Nm^3 for the biogas engines, which shall be 200 mg/Nm^3; - the proposed >800^oC combustion temperature of the biogas flare, which shall be ≥ 1000^oC specification and have a residence time of ≥ 0.3 seconds; and the proposal that the flare should not have any emission limit values imposed insofar as demonstration with emission limit values is only required if the annual use of the flare is greater than 10% of the time	07/09/2009
Variation application EPR/BW0584IL/V003 (AR4)	The responses to questions in Part C2 and Part C3 of the application form.	16/09/2010
Variation application EPR/BW0584IL/V005 (AR4)	Responses to the questions in Section 3, Part C3 of application form and supporting documentation in Section II and III.	11/02/2014
Application reference EPR/BP3436VS/A001 (AR2)	Response to question 3a (technical standards) in the Part B3 application form. Section C Conceptual Model, Environmental Setting and Installation Design Report – excluding section 2.2.2, Section D Management Plan and Section G Nuisance and Health Risk Assessment of the application.	30/04/2014
Additional information (AR2)	Parts 1, 2 and 3 of the letter from Stratus Environmental reference BF4862/DIT/02rev1.	06/06/2014

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Response to Schedule 5 notice dated 03/07/2014 (AR2)	Letter from Stratus Environmental reference BF4862/DIT/03.	16/07/2014
Response to request for further information (AR2)	Information regarding the geological barrier. Email dated 18/07/14	23/07/2014
Variation application EPR/BP3436VS/V002 (AR2)	Supporting statement section 2.3.2 and 2.4 (installation of a 750mm geological barrier over the colliery backfill)	18/11/2014
Restoration Plan (AR1)	Poplars Landfill Site Restoration Plan, dated September 2016	01/09/2016
Variation application EPR/BW0584IL/V010 (AR1)	Part C2 and C3 of the application form and supporting information	Duly made 28/06/2017
Variation application EPR/BW0584IL/V010 Response to Schedule 5 notice dated 20/03/18 (AR1)	All parts, including: Poplars Landfill Site Leachate Management Plan, Updated June 2018 Hydrogeological Risk Assessment – Increased Leachate Compliance Levels Report: BF4922/HRA (v1.1), Dated June 2018	03/07/2018
Variation application EPR/BW0584IL/V010 (AR1)	Stability Risk Assessment Review for Leachate Level Permit Variation Poplars Landfill Site: BF4928/01, Rev 2, dated October 2018	22/10/2018
Application EPR/BW0584IL/C011 (AR1)	Part C2 and C3 of the application form and supporting information	21/12/2021
Application EPR/BP3436VS/V003 (AR2)	Part C2 and C3 of the application form and supporting information	21/12/2021
Response to Schedule 5 Notice dated 06/07/2023 (AR1 & AR2)V EPR/BW0584IL/C011	Response to question 1 to 13 and supporting information.	17/08/2023
Further Information EPR/BW0584IL/C011	Monitoring Plan Revision 20 dated 12/02/2022	01/11/2023
Application EPR/BW0584IL/V0012	Email dated 09/09/20 titled *"Poplars AD-Air Emission Data*" (Local Monitoring Agreement)	09/09/2020
Response to Schedule 5 Notice dated 24/10/2024	Information received by email containing responses to Q1 -Q6, and documents	13/12/2024

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
EPR/BW0584IL/V012	• Permit Variation Application BW0584IL V012 Poplars Bioaerosols Risk Assessment Report UK0039199.6030 V2 • Permit Variation Application BW0584IL V012 Drawing – Air Emission Points • Permit Variation Application BW0584IL V012 Poplars AD Odour Management Plan	
Response to Schedule 5 Notice dated 07/03/2024	Information received by email containing : “PAS110_2014 final” document	20/03/2025

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC14	The operator shall: • Install the proposed additional groundwater monitoring boreholes as shown on the drawing BF5036/09/05 dated 30/06/2021. • Install the boreholes in accordance with the Landfill Engineering Condition 2.6. • Commence routine monitoring of the groundwater boreholes as proposed in the Revised Hydrogeological Risk Assessment. • Establish groundwater levels within the various strata underlying and surrounding the site and the hydraulic continuity between them. • Use the monitoring point around the periphery of the site groundwater quality and compliance monitoring. • Propose groundwater compliance limits and action levels where required. • Submit a written report to the Environment Agency for approval. The report shall include updated site monitoring plan showing the location of the new groundwater monitoring boreholes clearly labelled.	01/06/2024
IC15	The operator shall submit written plan to Environment Agency for approval. The plan must contain proposal for further investigation with the aim to fully refine the Conceptual Site Model and establish accurate understanding of groundwater levels across the eastern development area. The plan must contain dates for the implementation of individual measures. The notification requirements of condition 2.4.2 will be deemed to have been complied with on submission of the plan. You must implement the plan as approved, and from the date stipulated by the Environment Agency	01/06/2024
IC 16a	The operator shall: • Install the proposed 9 additional perimeter gas monitoring boreholes as shown on the drawing BF5036/09/07 dated 04/08/2023. • Install the borehole in accordance with the Landfill Engineering Condition 2.6. • Commence routine monitoring of the perimeter gas boreholes as proposed.	01/10/2024
IC16b	Following completion of IC16a the operator shall: • If possible, establish baseline gas condition following collection of statistically significant data set. • Propose compliance limits for methane and action levels for methane and carbon dioxide. • Submit a written report to the Environment Agency for approval. The report shall include updated site monitoring plan showing the location of the new gas monitoring boreholes with identification numbers clearly shown.	15 months following completion of IC16a

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC17	The operator shall submit a written 'primary containment plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of an inspection and program of works undertaken by a qualified engineer, and shall assess the extent design specification and condition of primary containment systems where polluting liquids and solids are being stored, treated, and/or handled. The plan shall include: • an assessment of the physical condition of all primary containment systems (storage and treatment vessels) using a Written Scheme of Examination and their suitability for providing primary containment when subjected to the dynamic and static loads caused by catastrophic tank failure; • a program of works with timescales for the implementation of individual improvement measures necessary to demonstrate that the primary containment is fit for purpose or alternative appropriate measures to ensure all polluting materials will be contained on site; and • a preventative maintenance and inspection regime The plan shall be implemented in accordance with the Environment Agency's written approval.	09/04/2026 or other date as agreed in writing with the Environment Agency
IC18	The operator shall submit a written 'secondary and tertiary containment plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of an inspection and program of works undertaken by a competent structural engineer, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance, of the condition and extent of secondary and tertiary containment systems where all polluting liquids and solids are being stored, treated, and/or handled. The inspection shall consider, but not be limited to, the storage vessels, bunds, loading and unloading areas, transfer pipework/pumps, temporary storage areas, and liners underlying the site. The plan shall include: • an assessment of the physical condition of all secondary and/or tertiary containment systems, using a Written Scheme of Examination and their suitability for providing containment when subjected to the dynamic and static loads caused by catastrophic tank failure; • a program of works with timescales for the implementation of individual improvement measures necessary for the secondary and/or tertiary containment systems to comply with CIRIA C736 (2014) guidance, or equivalent. • a preventative maintenance and inspection regime The plan shall be implemented in accordance with the Environment Agency's written approval.	09/04/2026 or other date as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC19	The operator shall provide a written “operational contingency storage plan” and shall obtain the Environment Agency’s written approval to it. The plan shall contain the results of a review of the current storage of digestate produced from site operations. The review shall examine site contingency arrangements in the event of closed landspreading periods, extreme weather conditions, site closure, disease outbreak etc. The contingency storage plan shall include: • Additional storage capacity on-site (at least 2 months storage) and/or storage capacity off-site; • Identification of alternative outlets for digestate – identify companies /permitted waste facilities that would be able to manage the digestate output, taking into account their permits and capacity constraints. The plan shall be implemented in accordance with the Environment Agency’s written approval.	09/04/2026 or other date as agreed in writing with the Environment Agency
IC20	The operator shall carry out a review of the abatement plant on site, in order to determine whether the measures have been effective and adequate to prevent and where not possible minimise emissions released to air including but not limited to odour and ammonia. The operator shall submit a written report to the Environment Agency following this review for assessment and approval. The report shall include but not limited to the following aspects: • Full investigation and characterisation of the waste gas streams. • Abatement stack monitoring results (not limited to odour and ammonia) • Abatement process monitoring results (not limited to odour and ammonia) • Details of air quality quantitative impact assessment including modelling and a proposal for site-specific “action levels” (not limited to odour concentration, hydrogen sulphide and ammonia). • Odour monitoring results at the site boundary • Records of odour complaints and odour related incidents • Recommendations for improvement including the replacement or upgrading the abatement plant • Timescales for implementation of improvements to the abatement plant The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.	09/04/2026 or other date as agreed in writing with the Environment Agency
IC21	The operator shall establish the methane emissions in the exhaust gas from engines burning biogas and compare these to the manufacturer’s specification agreed in writing with the Environment Agency. The operator shall, as part of the methane leak detection and repair (LDAR) programme, develop proposals to assess the potential for methane slip and take corrective actions	09/04/2026 or other date as agreed in writing

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	where emissions above the manufacturer's specification are identified. The operator shall have regard to BS EN 17628 when designing the LDAR programme, and consider the use of optical gas imaging cameras in addition to the mandatory application of 'sniffer' techniques according to BS EN 15446.	with the Environment Agency
IC22	The operator shall establish a site-specific leak detection and repair (LDAR) programme to detect and mitigate the release of volatile organic compounds, including methane from diffuse sources. The plan shall include but not be limited to a diffuse emissions source inventory and associated monitoring arrangements. The plan shall be submitted to the Environment Agency for approval. The operator shall have regard to BS EN 17628 when designing the LDAR programme, and consider the use of optical gas imaging cameras in addition to the mandatory application of 'sniffer' techniques according to BS EN 15446.	09/04/2026 or other date as agreed in writing with the Environment Agency

Table S1.4 Pre-operational measures for future development		
Reference	**Operation**	**Pre-operational Measures**
PO1	Prior to the development of phases G, J, C2.	Any borehole which lies beneath the footprint of the proposed development shall be decommissioned in accordance with the CQA Plan 'Proposals for the decommissioning and sealing of boreholes within the future development footprint' dated September 2013 Rep ref BF4825/01 Rev 0.
PO5	Recirculation of Leachate	Prior to the Operator undertaking measures to re-circulate leachate, a revised leachate management plan shall be submitted to the Agency. The Operator shall provide the Agency within the revised leachate management plan the following details: • The associated impact of leachate abstraction/re-circulation upon landfill gas quality, quantity and rate of production. • Detection, location and monitoring of Oxygen ingress into the contained extraction system via the leachate recirculation system and setting of allied intervention trigger levels. • An assessment of spatial separation distances between each system in order to minimise any 'zone of influence/synergistic effects.' The content of this management, monitoring and action plan shall also be based upon the Environment Agency's guidance (or any amendments thereto) published in September 2004 entitled: LFTGN 03 "Guidance on the management of landfill gas. Leachate re-circulation shall not be implemented without the prior written approval of the Agency.
PO6	Prior to the capping works.	Undertake further interface shear strength testing on the actual materials to be used within the capping works to validate the interface strength parameters used in the Stability Risk Assessment.

Table S1.4 Pre-operational measures for future development		
Reference	**Operation**	**Pre-operational Measures**
		Where the result of the testing falls outside the assumptions made in the Stability Risk Assessment updated assessment should be provided.
PO7	Prior to development of Phase C2	The operator shall: • Review the baseline groundwater data across the site. • Propose groundwater compliance limits and action levels, at the groundwater monitoring point 1360, for key contaminants of concern listed in Table S3.4. • Submit a written report on the proposed groundwater compliance limits and action levels to the Environment Agency for approval.

Table S1.5 Annual waste input limits	
Category	**Limit tonnes/year**
Non-hazardous waste (AR1)	700,000
Non-hazardous waste (AR2)	236,500
Inert waste (AR1)	550,000
Leachate from offsite accepted at the onsite Leachate Treatment Plant (AR3)	36,500
Wastes for treatment by Anaerobic Digestion Plant (AR4)	120,000
Waste for restoration (AR5)	550,000
Total	**2,193,000**

Schedule 2 – List of permitted wastes

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
-	-

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
01	**Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals**
01 01	**wastes from mineral excavation**
01 01 01	wastes from mineral metalliferous excavation
01 01 02	wastes from mineral non-metalliferous excavation
01 03	**wastes from physical and chemical processing of metalliferous minerals**
01 03 06	tailings other than those mentioned in 01 03 04 and 01 03 05
01 03 08	dusty and powdery wastes other than those mentioned in 01 03 07
01 03 09	red mud from alumina production other than the wastes mentioned in 01 03 10
01 04	**wastes from physical and chemical processing of non-metalliferous minerals**
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
01 04 10	dusty and powdery wastes other than those mentioned in 01 04 07
01 04 11	wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11
01 04 13	wastes from stone cutting and sawing other than those mentioned in 01 04 07
01 05	**drilling muds and other drilling wastes**
01 05 04	freshwater drilling muds and wastes
01 05 07	barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 08	chloride-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
02	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing**
02 01	**wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing**
02 01 01	sludges from washing and cleaning
02 01 02	animal-tissue waste
02 01 03	plant-tissue waste
02 01 04	waste plastics (except packaging)

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
02 01 06	animal faeces, urine and manure (including spoiled straw), effluent, collected separately and treated off-site
02 01 07	wastes from forestry
02 01 09	agrochemical waste other than those mentioned in 02 01 08
02 01 10	waste metal
02 02	**wastes from the preparation and processing of meat, fish and other foods of animal origin**
02 02 01	sludges from washing and cleaning
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
02 03	**wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation**
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation
02 03 02	wastes from preserving agents
02 03 03	wastes from solvent extraction
02 03 04	materials unsuitable for consumption or processing
02 03 05	sludges from on-site effluent treatment
02 04	**wastes from sugar processing**
02 04 01	soil from cleaning and washing beet
02 04 02	off-specification calcium carbonate
02 04 03	sludges from on-site effluent treatment
02 05	**wastes from the dairy products industry**
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
02 06	**wastes from the baking and confectionery industry**
02 06 01	materials unsuitable for consumption or processing
02 06 02	wastes from preserving agents
02 06 03	sludges from on-site effluent treatment
02 07	**wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)**
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	wastes from spirits distillation
02 07 03	wastes from chemical treatment
02 07 04	materials unsuitable for consumption or processing
02 07 05	sludges from on-site effluent treatment
03	**Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard**
03 01	**wastes from wood processing and the production of panels and furniture**
03 01 01	waste bark and cork

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03	**wastes from pulp, paper and cardboard production and processing**
03 03 01	waste bark and wood
03 03 02	green liquor sludge (from recovery of cooking liquor)
03 03 05	de-inking sludges from paper recycling
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08	wastes from sorting of paper and cardboard destined for recycling
03 03 09	lime mud waste
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
03 03 11	sludges from on-site effluent treatment other than those mentioned in 03 03 10
04	**Wastes from the leather, fur and textile industries**
04 01	**wastes from the leather and fur industry**
04 01 01	fleshings and lime split wastes
04 01 02	liming waste
04 01 06	sludges, in particular from on-site effluent treatment containing chromium
04 01 07	sludges, in particular from on-site effluent treatment free of chromium
04 01 08	waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium
04 01 09	wastes from dressing and finishing
04 02	**wastes from the textile industry**
04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 10	organic matter from natural products (for example grease, wax)
04 02 17	dyestuffs and pigments other than those mentioned in 04 02 16
04 02 20	sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
05	**Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal**
05 01	**wastes from petroleum refining**
05 01 10	sludges from on-site effluent treatment other than those mentioned in 05 01 09
05 01 13	boiler feedwater sludges
05 01 14	wastes from cooling columns
05 01 16	sulphur-containing wastes from petroleum desulphurisation
05 01 17	bitumen
05 06	**wastes from the pyrolytic treatment of coal**
05 06 04	waste from cooling columns
05 07	**wastes from natural gas purification and transportation**
05 07 02	wastes containing sulphur

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
06	**Wastes from inorganic chemical processes**
06 03	**wastes from the MFSU of salts and their solutions and metallic oxides**
06 03 14	solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
06 03 16	metallic oxides other than those mentioned in 06 03 15
06 05	**sludges from on-site effluent treatment**
06 05 03	sludges from on-site effluent treatment other than those mentioned in 06 05 02
06 09	**wastes from the MSFU of phosphorous chemicals and phosphorous chemical processes**
06 09 02	phosphorous slag
06 09 04	calcium-based reaction wastes other than those mentioned in 06 09 03
06 11	**wastes from the manufacture of inorganic pigments and opacificiers**
06 11 01	calcium-based reaction wastes from titanium dioxide production
06 13	**wastes from inorganic chemical processes not otherwise specified**
06 13 03	carbon black
07	**Wastes from organic chemical processes**
07 01	**wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals**
07 01 12	sludges from on-site effluent treatment other than those mentioned in 07 01 11
07 02	**wastes from the MFSU of plastics, synthetic rubber and man-made fibres**
07 02 12	sludges from on-site effluent treatment other than those mentioned in 07 02 11
07 02 13	waste plastic
07 02 15	wastes from additives other than those mentioned in 07 02 14
07 02 17	waste containing silicones other than those mentioned in 07 02 16
07 03	**wastes from the MFSU of organic dyes and pigments (except 06 11)**
07 03 12	sludges from on-site effluent treatment other than those mentioned in 07 03 11
07 04	**wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides**
07 04 12	sludges from on-site effluent treatment other than those mentioned in 07 04 11
07 05	**wastes from the MFSU of pharmaceuticals**
07 05 12	sludges from on-site effluent treatment other than those mentioned in 07 05 11
07 05 14	solid wastes other than those mentioned in 07 05 13
07 06	**wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics**
07 06 12	sludges from on-site effluent treatment other than those mentioned in 07 06 11
07 07	**wastes from the MFSU of fine chemicals and chemical products not otherwise specified**
07 07 12	sludges from on-site effluent treatment other than those mentioned in 07 07 11
08	**Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks**
08 01	**wastes from MFSU and removal of paint and varnish**

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
08 01 12	waste paint and varnish other than those mentioned in 08 01 11
08 01 14	sludges from paint or varnish other than those mentioned in 08 01 13
08 01 16	aqueous sludges containing paint or varnish other than those mentioned in 08 01 15
08 01 18	wastes from paint or varnish removal other than those mentioned in 08 01 17
08 02	**wastes from MFSU of other coatings (including ceramic materials)**
08 02 01	waste coating powders
08 02 02	aqueous sludges containing ceramic materials
08 03	**wastes from MFSU of printing inks**
08 03 07	aqueous sludges containing ink
08 03 13	waste ink other than those mentioned in 08 03 12
08 03 15	ink sludges other than those mentioned in 08 03 14
08 03 18	waste printing toner other than those mentioned in 08 03 17
08 04	**wastes from MFSU of adhesives and sealants (including water proofing products)**
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09
08 04 12	adhesive and sealant sludges other than those mentioned in 08 04 11
08 04 14	aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13
09	**Wastes from the photographic industry**
09 01	**wastes from the photographic industry**
09 01 07	photographic film and paper containing silver or silver compounds
09 01 08	photographic film and paper free of silver or silver compounds
09 01 10	single-use cameras without batteries
09 01 12	single-use cameras containing batteries other than those mentioned in 09 01 11
10	**Wastes from thermal processes**
10 01	**wastes from power stations and other combustion plants (except 19)**
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 02	coal fly ash
10 01 03	fly ash from peat and untreated wood
10 01 05	calcium-based reaction wastes from flue-gas desulphurisation in solid form
10 01 15	bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14
10 01 17	fly ash from co-incineration other than those mentioned in 10 01 16
10 01 19	wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 and 10 01 18
10 01 21	sludges from on-site effluent treatment other than those mentioned in 10 01 20
10 01 23	aqueous sludges from boiler cleansing other than those mentioned in 10 01 22
10 01 24	sands from fluidised beds
10 01 25	wastes from fuel storage and preparation of coal-fired power plants
10 01 26	wastes from cooling-water treatment

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
10 02	**wastes from the iron and steel industry**
10 02 01	wastes from the processing of slag
10 02 02	unprocessed slag
10 02 08	solid wastes from gas treatment other than those mentioned in 10 02 07
10 02 10	mill scales
10 02 14	sludges and filter cakes from gas treatment other than those mentioned in 10 02 13
10 02 15	other sludges and filter cakes
10 03	**wastes from aluminium thermal metallurgy**
10 03 02	anode scraps
10 03 05	waste alumina
10 03 16	skimmings other than those mentioned in 10 03 15
10 03 18	carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17
10 03 20	flue-gas dust other than those mentioned in 10 03 19
10 03 22	other particulates and dust (including ball-mill dust) other than those mentioned in 10 03 21
10 03 24	solid wastes from gas treatment other than those mentioned in 10 03 23
10 03 26	sludges and filter cakes from gas treatment other than those mentioned in 10 03 25
10 03 28	wastes from cooling-water treatment other than those mentioned in 10 03 27
10 03 30	wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29
10 04	**wastes from lead thermal metallurgy**
10 04 10	wastes from cooling-water treatment other than those mentioned in 10 04 09
10 05	**wastes from zinc thermal metallurgy**
10 05 01	slags from primary and secondary production
10 05 04	other particulates and dust
10 05 11	dross and skimmings other than those mentioned in 10 05 10
10 06	**wastes from copper thermal metallurgy**
10 06 01	slags from primary and secondary production
10 06 02	dross and skimmings from primary and secondary production
10 06 04	other particulates and dust
10 06 10	wastes from cooling-water treatment other than those mentioned in 10 06 09
10 07	**wastes from silver, gold and platinum thermal metallurgy**
10 07 01	slags from primary and secondary production
10 07 02	dross and skimmings from primary and secondary production
10 07 03	solid wastes from gas treatment
10 07 04	other particulates and dust
10 07 05	sludges and filter cakes from gas treatment
10 07 08	wastes from cooling-water treatment other than those mentioned in 10 07 07

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
10 08	**wastes from other non-ferrous thermal metallurgy**
10 08 04	particulates and dust
10 08 09	other slags
10 08 11	dross and skimmings other than those mentioned in 10 08 10
10 08 13	carbon-containing wastes from anode manufacture other than those mentioned in 10 08 12
10 08 14	anode scrap
10 08 16	flue-gas dust other than those mentioned in 10 08 15
10 08 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17
10 08 20	wastes from cooling-water treatment other than those mentioned in 10 08 19
10 09	**wastes from casting of ferrous pieces**
10 09 03	furnace slag
10 09 06	casting cores and moulds which have not undergone pouring other than those mentioned in 10 09 05
10 09 08	casting cores and moulds which have undergone pouring other than those mentioned in 10 09 07
10 09 10	flue-gas dust other than those mentioned in 10 09 09
10 09 12	other particulates other than those mentioned in 10 09 11
10 09 14	waste binders other than those mentioned in 10 09 13
10 10	**wastes from casting of non-ferrous pieces**
10 10 03	furnace slag
10 10 06	casting cores and moulds which have not undergone pouring, other than those mentioned in 10 10 05
10 10 08	casting cores and moulds which have undergone pouring, other than those mentioned in 10 10 07
10 10 10	flue-gas dust other than those mentioned in 10 10 09
10 10 12	other particulates other than those mentioned in 10 10 11
10 10 14	waste binders other than those mentioned in 10 10 13
10 11	**wastes from manufacture of glass and glass products**
10 11 03	waste glass-based fibrous materials
10 11 05	particulates and dust
10 11 10	waste preparation mixture before thermal processing, other than those mentioned in 10 11 09
10 11 12	waste glass other than those mentioned in 10 11 11
10 11 14	glass-polishing and -grinding sludge other than those mentioned in 10 11 13
10 11 16	solid wastes from flue-gas treatment other than those mentioned in 10 11 15
10 11 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 11 20	solid wastes from on-site effluent treatment other than those mentioned in 10 11 19
10 12	**wastes from manufacture of ceramic goods, bricks, tiles and construction products**

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
10 12 01	waste preparation mixture before thermal processing
10 12 03	particulates and dust
10 12 05	sludges and filter cakes from gas treatment
10 12 06	discarded moulds
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 12 10	solid wastes from gas treatment other than those mentioned in 10 12 09
10 12 12	wastes from glazing other than those mentioned in 10 12 11
10 12 13	sludge from on-site effluent treatment
10 13	**wastes from manufacture of cement, lime and plaster and articles and products made from them**
10 13 01	waste preparation mixture before thermal processing
10 13 04	wastes from calcination and hydration of lime
10 13 06	particulates and dust (except 10 13 12 and 10 13 13)
10 13 07	sludges and filter cakes from gas treatment
10 13 10	wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
10 13 11	wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10
10 13 13	solid wastes from gas treatment other than those mentioned in 10 13 12
10 13 14	waste concrete and concrete sludge
11	**Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy**
11 01	**wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)**
11 01 10	sludges and filter cakes other than those mentioned in 11 01 09
11 01 14	degreasing wastes other than those mentioned in 11 01 13
11 02	**wastes from non-ferrous hydrometallurgical processes**
11 02 03	wastes from the production of anodes for aqueous electrolytical processes
11 02 06	wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
11 05	**wastes from hot galvanising processes**
11 05 01	hard zinc
11 05 02	zinc ash
12	**Wastes from shaping and physical and mechanical surface treatment of metals and plastics**
12 01	**wastes from shaping and physical and mechanical surface treatment of metals and plastics**
12 01 01	ferrous metal filings and turnings
12 01 02	ferrous metal dust and particles
12 01 03	non-ferrous metal filings and turnings
12 01 04	non-ferrous metal dust and particles

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
12 01 05	plastics shavings and turnings
12 01 13	welding wastes
12 01 15	machining sludges other than those mentioned in 12 01 14
15	**Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified**
15 01	**packaging (including separately collected municipal packaging waste)**
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
15 02	**absorbents, filter materials, wiping cloths and protective clothing**
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	**Wastes not otherwise specified in the list**
16 01	**end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)**
16 01 12	brake pads other than those mentioned in 16 01 11
16 01 17	ferrous metal
16 01 18	non-ferrous metal
16 01 19	plastic
16 01 20	glass
16 02	**wastes from electrical and electronic equipment**
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15
16 03	**off-specification batches and unused products**
16 03 04	inorganic wastes other than those mentioned in 16 03 03
16 03 06	organic wastes other than those mentioned in 16 03 05
16 08	**spent catalysts**
16 08 01	spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
16 08 03	spent catalysts containing transition metals or transition metal compounds not otherwise specified
16 11	**waste linings and refractories**
16 11 02	carbon-based linings and refractories from metallurgical processes others than those mentioned in 16 11 01

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
16 11 04	other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
16 11 06	linings and refractories from non-metallurgical processes others than those mentioned in 16 11 05
17	**Construction and demolition wastes (including excavated soil from contaminated sites)**
17 01	**concrete, bricks, tiles and ceramics**
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	**wood, glass and plastic**
17 02 01	wood
17 02 02	glass
17 02 03	plastic
17 03	**bituminous mixtures, coal tar and tarred products**
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 04	**metals (including their alloys)**
17 04 01	copper, bronze, brass
17 04 02	aluminium
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals
17 04 11	cables other than those mentioned in 17 04 10
17 05	**soil (including excavated soil from contaminated sites), stones and dredging spoil**
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	**insulation materials and asbestos-containing construction materials**
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 09	**other construction and demolition wastes**
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
18	**Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)**
18 01	**wastes from natal care, diagnosis, treatment or prevention of disease in humans**

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
18 02	**wastes from research, diagnosis, treatment or prevention of disease involving animals**
18 02 03	wastes whose collection and disposal is not subject to special requirements in order to prevent infection
18 02 06	chemicals other than those mentioned in 18 02 05
19	**Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use**
19 01	**wastes from incineration or pyrolysis of waste**
19 01 02	ferrous materials removed from bottom ash
19 01 12	bottom ash and slag other than those mentioned in 19 01 11
19 01 14	fly ash other than those mentioned in 19 01 13
19 01 16	boiler dust other than those mentioned in 19 01 15
19 01 18	pyrolysis wastes other than those mentioned in 19 01 17
19 01 19	sands from fluidised beds
19 02	**wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)**
19 02 03	premixed wastes composed only of non-hazardous wastes
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 03	**stabilised/solidified wastes**
19 03 05	stabilised wastes other than those mentioned in 19 03 04
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 04	**vitrified waste and wastes from vitrification**
19 04 01	vitrified waste
19 05	**wastes from aerobic treatment of solid wastes**
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste
19 05 03	off-specification compost
19 06	**wastes from anaerobic treatment of waste**
19 06 04	digestate from anaerobic treatment of municipal waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste
19 08	**wastes from waste water treatment plants not otherwise specified**
19 08 01	screenings
19 08 02	waste from desanding
19 08 05	sludges from treatment of urban waste water
19 08 09	grease and oil mixture from oil/water separation containing only edible oil and fats

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
19 08 12	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 09	**wastes from the preparation of water intended for human consumption or water for industrial use**
19 09 01	solid waste from primary filtration and screenings
19 09 02	sludges from water clarification
19 09 03	sludges from decarbonation
19 09 04	spent activated carbon
19 09 05	saturated or spent ion exchange resins
19 09 06	solutions and sludges from regeneration of ion exchangers
19 10	**wastes from shredding of metal-containing wastes**
19 10 01	iron and steel waste
19 10 02	non-ferrous waste
19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
19 10 06	other fractions other than those mentioned in 19 10 05
19 11	**wastes from oil regeneration**
19 11 06	sludges from on-site effluent treatment other than those mentioned in 19 11 05
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 01	paper and cardboard
19 12 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 05	glass
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 09	minerals (for example sand, stones)
19 12 10	combustible waste (refuse derived fuel)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
19 13	**wastes from soil and groundwater remediation**
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 01	**separately collected fractions (except 15 01)**
20 01 01	paper and cardboard
20 01 02	glass
20 01 08	biodegradable kitchen and canteen waste

Table S2.2 Permitted waste types for disposal at a landfill for non-hazardous waste (AR1)	
Waste code	**Description**
20 01 10	clothes
20 01 11	textiles
20 01 25	edible oil and fat
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 30	detergents other than those mentioned in 20 01 29
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 40	metals
20 01 41	wastes from chimney sweeping
20 01 99	Other fractions not otherwise specified (comprising only of non-clinical human and animal offensive/hygiene waste (not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease) which is not subject to special requirements in order to prevent infection
20 02	**garden and park wastes (including cemetery waste)**
20 02 01	biodegradable waste
20 02 02	soil and stones
20 02 03	other non-biodegradable wastes
20 03	**other municipal wastes**
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 04	septic tank sludge
20 03 06	waste from sewage cleaning
20 03 07	bulky waste

Table S2.3 Permitted waste types for disposal at a landfill for non-hazardous waste (AR2)	
Waste code	Description
02	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing**
02 04	**wastes from sugar processing**
02 04 01	soil from cleaning and washing beet
10	**Wastes from thermal processes**
10 01	**wastes from power stations and other combustion plants (except 19)**
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 02	coal fly ash
10 01 03	fly ash from peat and untreated wood
17	**Construction and demolition wastes (including excavated soil from contaminated sites)**

Table S2.3 Permitted waste types for disposal at a landfill for non-hazardous waste (AR2)	
Waste code	Description
17 05	**soil (including excavated soil from contaminated sites), stones and dredging spoil**
17 05 04	soil and stones other than those mentioned in 17 05 03
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 02	**garden and park wastes (including cemetery waste)**
20 02 02	soil and stones

Table S2.4 Permitted waste types accepted for treatment in leachate treatment plant (AR3)	
Maximum Quantity	**36,500 tonnes per annum**
Waste code	**Description**
16	**Wastes not otherwise specified in the list**
16 10	**aqueous liquid wastes destined for off-site treatment**
16 10 02	aqueous liquid wastes other than those mentioned in 16 10 01 (including municipal wastes comprising effluent from washing of domestic wheelie bins only)
19	**Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use**
19 07	**landfill leachate**
19 07 03	landfill leachate other than those mentioned in 19 07 02

Table S2.5 Permitted waste types and quantities for treatment by anaerobic digestion (AR4)	
Maximum quantity	**The total quantity of waste accepted shall not exceed 120,000 tonnes per annum The maximum throughput of animal waste shall be <10 tonnes per day**
Exclusions	Wastes having any of the following characteristics shall not be accepted: • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 5% w/w and shall be as low as reasonably practicable by 31 December 2025. • wastes containing wood-preserving agents or other biocides and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013. • pest infested wastes
Waste Code	**Description**
02	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing**

Table S2.5 Permitted waste types and quantities for treatment by anaerobic digestion (AR4)	
Maximum quantity	**The total quantity of waste accepted shall not exceed 120,000 tonnes per annum** **The maximum throughput of animal waste shall be <10 tonnes per day**
Exclusions	Wastes having any of the following characteristics shall not be accepted: • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 5% w/w and shall be as low as reasonably practicable by 31 December 2025. • wastes containing wood-preserving agents or other biocides and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013. • pest infested wastes
Waste Code	**Description**
02 01	**primary production wastes**
02 01 01	sludges from washing and cleaning – vegetables, fruit and other crops
02 01 02	animal tissue waste
02 01 03	plant tissue waste
02 01 06	animal faeces, urine and manure (including spoiled fully biodegradable animal bedding)
02 01 07	wastes from forestry
02 01 99	wastes not otherwise specified – spent mushroom compost from commercial mushroom growing only
02 02	**wastes from the preparation and processing of meat, fish and other foods of animal origin**
02 02 01	sludges from washing and cleaning, peeling, centrifuging and separation including wash waters and sludges from secondary food processing or the cook chill sector
02 02 02	animal tissue waste
02 02 03	materials unsuitable for consumption or processing including animal gut contents
02 03	**wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation**
02 03 01	sludges from washing, cleaning peeling, centrifuging and separation (including sludge from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only)
02 03 02	wastes from preserving agents
02 03 04	materials unsuitable for consumption or processing (including waste from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only)
02 03 05	sludges from on-site effluent treatment (including sludge from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only)
02 04	**wastes from sugar processing**
02 04 03	sludges from on-site effluent treatment – sludges from the processing of sugar

Table S2.5 Permitted waste types and quantities for treatment by anaerobic digestion (AR4)	
Maximum quantity	**The total quantity of waste accepted shall not exceed 120,000 tonnes per annum** **The maximum throughput of animal waste shall be <10 tonnes per day**
Exclusions	Wastes having any of the following characteristics shall not be accepted: • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 5% w/w and shall be as low as reasonably practicable by 31 December 2025. • wastes containing wood-preserving agents or other biocides and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013. • pest infested wastes
Waste Code	**Description**
02 05	**wastes from the dairy products industry**
02 05 01	materials unsuitable for consumption or processing – biodegradable wastes derived from the processing of dairy products only
02 05 02	sludges from on-site effluent treatment
02 06	**wastes from the baking and confectionery industry**
02 06 01	materials unsuitable for consumption or processing – biodegradable wastes from the processing of materials used in bakery and confectionery
02 06 02	wastes from preserving agents
02 06 03	sludges from on-site effluent treatment – sludges from the processing of materials used in baking and confectionery
02 07	**wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)**
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials – biodegradable wastes from the processing of the raw materials used in the production of such beverages only (wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 02	wastes from spirits distillation – spent grains, hops and whisky filter sheets and cloths, yeast and yeast like residues, sludge from production process, or malt husks, malt sprouts, yeasts and yeast-like residues only
02 07 04	materials unsuitable for consumption or processing – biodegradable wastes from the processing of the raw materials used in the production of such beverages only (wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
03	**Wastes from wood processing and the production of panels and furniture, pulp, paper and carboard**
03 03	**wastes from pulp, paper and cardboard production and processing**
03 03 02	green liquor sludge − paper sludge, green liquor
03 03 08	wastes from sorting of paper and cardboard destined for recycling − cardboard, newspaper, tissues, paper
03 03 10	fibre rejects and sludges − paper pulp (de-inked only), paper fibre

Table S2.5 Permitted waste types and quantities for treatment by anaerobic digestion (AR4)	
Maximum quantity	**The total quantity of waste accepted shall not exceed 120,000 tonnes per annum The maximum throughput of animal waste shall be <10 tonnes per day**
Exclusions	Wastes having any of the following characteristics shall not be accepted: • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 5% w/w and shall be as low as reasonably practicable by 31 December 2025. • wastes containing wood-preserving agents or other biocides and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013. • pest infested wastes
Waste Code	**Description**
04	**Wastes from the leather, fur and textile industries Wastes from the leather, fur and textile industries**
04 01	**Wastes from the leather and fur industry**
04 01 01	fleshings and lime split wastes
04 01 05	tanning liquor free of chromium
04 01 07	sludges not containing chromium
04 02	**waste from the textile industry**
04 02 10	organic matter from natural products, e.g. grease, wax
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
15	**Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified**
15 01	**waste packaging, absorbents, filter materials, wiping cloths and protective clothing**
15 01 01	paper and cardboard packaging (excluding veneers, plastic coatings or laminates) certified to EN 13432 or equivalent certified compostable standard
15 01 03	wooden packaging – virgin timber only
15 01 05	composite packaging meeting EN 13432 or equivalent certified compostable or digestible standard
19	**Waste from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use**
19 02	**wastes from physiochemical treatments of waste**
19 02 10	glycerol not designated as hazardous i.e. excludes EWC code 19 02 08
19 05	wastes from the aerobic treatment of solid wastes
19 05 01	non composted fraction of municipal and similar wastes
19 05 02	non composted fraction of animal and vegetable wastes

Table S2.5 Permitted waste types and quantities for treatment by anaerobic digestion (AR4)	
Maximum quantity	**The total quantity of waste accepted shall not exceed 120,000 tonnes per annum The maximum throughput of animal waste shall be <10 tonnes per day**
Exclusions	Wastes having any of the following characteristics shall not be accepted: • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 5% w/w and shall be as low as reasonably practicable by 31 December 2025. • wastes containing wood-preserving agents or other biocides and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013. • pest infested wastes
Waste Code	**Description**
19 05 03	off-specification compost from source segregated biodegradable waste
19 06	waste from anaerobic treatment of waste
19 06 03	liquor from anaerobic treatment of municipal waste (from a process that accepts wastes which are listed in this table only) and made up of previously pasteurised and stabilised batches only
19 06 04	digestate from anaerobic treatment of source segregated biodegradable waste (from a process that accepts wastes which are listed in this table only) and made up of previously pasteurised and stabilised batches
19 06 05	liquor from anaerobic treatment of animal and vegetable waste (from a process that accepts wastes which are listed in this table only) and made up of previously pasteurised and stabilised batches only
19 06 06	digestate from anaerobic treatment of animal and vegetable waste
19 08	wastes from wastewater treatment works
19 08 05	sludges from treatment of urban waste water
19 08 09	grease and oil mixture containing only edible oils and fats
19 08 12	sludges from biological treatment of industrial waste water (from a process that treats wastes which are listed in this table only).
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 12	waste types listed in this table, Table S2.2, that have been subjected to mechanical treatment only (from a process that treats wastes which are listed in this table only).
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 01	**municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 01 01	paper and cardboard (excluding veneers, plastic coatings or laminates) meeting EN 13432 or equivalent certified compostable or digestible packaging only paper and cardboard
20 01 08	biodegradable kitchen and canteen waste containing compostable plastics meeting EN 13432 or equivalent certified compostable or digestible packaging (Category 3 ABPR waste only)

Table S2.5 Permitted waste types and quantities for treatment by anaerobic digestion (AR4)	
Maximum quantity	**The total quantity of waste accepted shall not exceed 120,000 tonnes per annum The maximum throughput of animal waste shall be <10 tonnes per day**
Exclusions	Wastes having any of the following characteristics shall not be accepted: • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 5% w/w and shall be as low as reasonably practicable by 31 December 2025. • wastes containing wood-preserving agents or other biocides and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013. • pest infested wastes
Waste Code	**Description**
20 01 25	edible oil and fat
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
20 03	other municipal wastes
20 03 01	mixed municipal waste − separately collected biowastes
20 03 02	wastes from markets - markets − allowed only if source segregated biodegradable fractions. e.g. plant material, fruit and vegetables.
The total quantity of waste accepted shall not exceed 120,000 tonnes per annum The maximum throughput of animal waste shall be <10 tonnes per day	

Table S2.6 Permitted waste types for restoration (AR5)	
Waste code	**Description**
01	**Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals**
01 01	**wastes from mineral excavation**
01 01 01	wastes from mineral metalliferous excavation
01 01 02	wastes from mineral non-metalliferous excavation
01 04	**wastes from physical and chemical processing of non-metalliferous minerals**
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
17	**Construction and demolition wastes (including excavated soil from contaminated sites)**
17 01	**concrete, bricks, tiles and ceramics**
17 01 01	concrete
17 01 02	bricks

Table S2.6 Permitted waste types for restoration (AR5)	
Waste code	**Description**
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 05	**soil (including excavated soil from contaminated sites), stones and dredging spoil**
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 09	**other construction and demolition wastes**
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19	**Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use**
19 05	**wastes from aerobic treatment of solid wastes**
19 05 03	off-specification compost
19 08	**wastes from waste water treatment plants not otherwise specified**
19 08 05	sludges from treatment of urban waste water
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 09	minerals (for example sand, stones)
19 12 12	soil substitutes other than that containing dangerous substances only
19 13	**wastes from soil and groundwater remediation**
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 02	**garden and park wastes (including cemetery waste)**
20 02 02	soil and stones

Schedule 3 – Emissions and monitoring

Table S3.1 Leachate level limits and monitoring requirements			
Monitoring point reference/ Description Monitoring Plan Rev. 20 dated 12/02/2022	**Limit**	**Monitoring frequency**	**Monitoring method**
Phase 1 - LRD01 (88703201)	130.5 mAOD	Monthly	In accordance with Environment Agency document LFTGN02 ((February 2003), 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Phase 1 - LRD02 (88703202)	131.77 mAOD		
Phase 2 - LRD03 (88703203)	135.43 mAOD		
Phase 2 - LRD04 (88703204)	135.06 mAOD		
Phase 3A - LRD05 (88703205)	138.46 mAOD		
Phase 3A - LRD06 (88703206)	140.71 mAOD		
Phase 3B - LW08 (88703108)	141.5 mAOD		
Phase 3B - LW43 (88703143)	141.6 mAOD		
Phase 4 - LRD07 (88703207)	139.27 mAOD		
Phase 4 - LRD08 (88703208)	137.95 mAOD		
Phase 4 - LRD09 (88703209)	139.05 mAOD		
Phase 5 - LRD10 (88703210)	142.14 mAOD		
Phase 5 - LRD11 (88703211)	141.99 mAOD		
Phase 6 - LRD12 (88703212)	135.77 mAOD		
Phase 6 - LRD13 (88703213)	138.09 mAOD		
Phase 9A - Redrill LRD20 (88703220)	138.24 mAOD		
Phase 9A - LRD21 (88703221)	138.4 mAOD		
Phase 9B - LW50 (88703050)	136.18 mAOD		
Phase 9B - LW51 (88703051)	136.18 mAOD		

Table S3.1 Leachate level limits and monitoring requirements			
Monitoring point reference/ Description Monitoring Plan Rev. 20 dated 12/02/2022	**Limit**	**Monitoring frequency**	**Monitoring method**
Phase 9B - LRD22 (88703222)	138.04 mAOD		
Phase 9C1 - Redrill LRD18 (88703218)	137.64 mAOD		
Phase 9C1 - LRD23 (88703223)	137.59 mAOD		
Phase 9C1 - LRD24 (88703224)	136.27 mAOD		
Phase 9C2 – LRD29 (88703229)	139.4 mAOD		
Phase 9C2 – LRD30 (88703230)	139.4 mAOD		
Phase 10A - LRD17 (88703217)	136.81 mAOD		
Phase 10A - LRD25 (88703225)	135.38 mAOD		
Phase 10B - LRD19 (88703219)	135.19 mAOD		
Phase 10B - LRD28 (88703228)	134.07 mAOD		
Phase 11 - LRD14 (88703214)	139.96 mAOD		
Phase 11 - LRD15 (88703215)	143.65 mAOD		
Phase 11 - LRD16 (88703216)	145.69 mAOD		
Phase I1 - LW58 (88703058)	141.5 mAOD		
Phase I1 - LW59 (88703059)	141.12 mAOD		
Phase I1 - LW60 (88703060)	141.12 mAOD		
Phase H1 - LW61 (88703061)	142.18 mAOD		
Phase H1 - LW62 (88703062)	142.18 mAOD		
Phase H2 - LW63 (88703063)	140.01 mAOD		
Phase H2 - LW64 (88703064)	140.01 mAOD		
Phase G1 – LW65 (88703065)	139.54 mAOD		
Phase G1 – LW66 (88703066)	139.54 mAOD		
Phase G2 – LW67 (88703067)	136.3 mAOD		

Table S3.1 Leachate level limits and monitoring requirements			
Monitoring point reference/ Description Monitoring Plan Rev. 20 dated 12/02/2022	**Limit**	**Monitoring frequency**	**Monitoring method**
Phase G2 – LW68 (88703068)	136.3 mAOD		
Future Cells/Phases Phases G3 and G4	For Future Cells/Phases the leachate compliance levels will be 2m above the lowest point of the cell, unless otherwise agreed in writing by the Environment Agency		

Table S3.2 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
Existing medium combustion plant which are engines fuelled on biogas (1 MW to 5 MW)						
A1 on site plan referenced Permit Variation Application BW0584IL V012 – Drawing – Air Emission Points.	CHP engine 1 stack [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/m^3	Average over sample period --	Annual --	BS EN 14792
		Sulphur dioxide	350 mg/m^3 [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m^3 [note 3]			
		Carbon monoxide	1400 mg/m^3			BS EN 15058
		Total VOCs	No limit set			BS EN 12619
		Oxides of Nitrogen	500 mg/m^3			BS EN 14792

Table S3.2 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
	CHP engine 2 stack [note 1]	(NO and NO_2 expressed as NO_2)				
		Sulphur dioxide	350 mg/m^3 [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m^3 [note 3]			
		Carbon monoxide	1400 mg/m^3			BS EN 15058
		Total VOCs	No limit set			BS EN 12619
	CHP engine 3 stack [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	500 mg/m^3			BS EN 14792
		Sulphur dioxide	350 mg/m^3 [note 2]			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Sulphur dioxide	162 mg/m^3 [note 3]			
		Carbon monoxide	1400 mg/m^3			BS EN 15058
		Total VOCs	No limit set			BS EN 12619
	CHP engine 4 (under 1MW)	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	No limit set			BS EN 14792

Table S3.2 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
		Sulphur dioxide	No limit set			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur
		Carbon monoxide	No limit set			BS EN 15058
		Total VOCs	No limit set			BS EN 12619
A4 - Waste Gas Burner biogas flare with a combustion temperature of at least 1,000°C and a residence time of at least 0.3 seconds	Emergency flare stack [note 1]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	150 mg/m^3	Average over sample period	[note 5]	BS EN 14792
		Carbon monoxide	50 mg/m^3			BS EN 15058
		Total VOCs	10 mg/m^3			BS EN 12619
A5 - Emission from 2000 kW_{Th} standby boiler	Products from combustion of propane gas	None set	None set	-	None set	-
A2 and A3 on site plan referenced Permit Variation Application BW0584IL V012 – Drawing – Air Emission Points.	Air extracted from the process building exhausted to atmosphere via a wet scrubber, biofilter and then carbon packs	Hydrogen sulphide	No limit set	Average over sample period	Once every 6 months	CEN TS 13649 for sampling NIOSH 6013 for analysis
		Ammonia	20 mg/m^3	Average over sample period	Once every 6 months	EN ISO 21877
		Odour concentration	No limit set	–	Once every 6 months	BS EN 13725
A1 referenced on site plan “Permit Variation	Biogas upgrading plant stack	VOCs including methane	No limit set	Average over sample period	Annual	BS EN 12619 or

Table S3.2 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
Application BW0584IL V012 – Drawing – Air Emission Points".						EN ISO 13199
		Vent gas flow rate	No limit set	Average over sample period	Annual	By measurement or calculation. Method to be agreed in writing with the Environment Agency.
A6-A19 - Pressure release valves (PRVs) as referenced on site plan "Permit Variation Application BW0584IL V012 – Drawing – Air Emission Points".	Digesters/Digestate storage tank(s)	Biogas release and operational events	No limit set	Recorded duration and frequency	Daily inspection	--
Vents from tank(s)	Oil/Fuel Storage tank(s)	No parameter set	No limit set	--	--	--
Note 1 – These emission limits are based on normal operating conditions and load - temperature 0°C (273 K); pressure 101.3 kPa and oxygen 5% (for gas engines burning biogas) and oxygen 3% (for medium combustion plants other than engines and gas turbines burning biogas). Note 2 – This emission limit applies until 31 December 2029, unless the gas engine is replaced. Note 3 – This emission limit applies from 1 January 2030, unless otherwise advised by the Environment Agency. Note 5 – Following commissioning, monitoring to be undertaken in the event the emergency flare has been operational for more than 10 per cent of a year (876 hours). Record of operating hours to be submitted annually to the Environment Agency.						

Table S3.3 Point source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point Ref. & Location	**Parameter**	**Source**	**Limit (incl unit)**	**Reference Period**	**Monitoring Frequency**	**Monitoring Standard or Method**
Monitoring point 2005 on Drawing ESID6A dated 11/11/03 revision 1 dated 18/01/07 which is taken to be representative of the emission to Bentley Brook, tributary of Saredon Brook Monitoring Plan Rev. 20 dated 12/02/2022	Ammoniacal Nitrogen	Surface water drainage system	2 mg/l	Spot Sample	Monthly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency
	Chloride		250 mg/l	Spot Sample		
	Oil and Grease		No visible oil or grease	Instantaneous		
	Suspended Solids		50 mg/l	Spot Sample		
	pH		>5 and <9 pH units	Instantaneous		
	BOD		15 mg/l	Spot sample		

Table S3.4 Groundwater – emission limits and monitoring requirements					
Monitoring point reference Monitoring Plan Rev. 20 dated 12/02/2022	**Parameter**	**Limit (including unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
1010	Ammoniacal Nitrogen	30 mg/l	Spot sample	Quarterly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency
	Chloride	1000 mg/l			
	Cadmium	0.004 mg/l			
1090	Ammoniacal Nitrogen	30 mg/l			
	Chloride	1000 mg/l			
	Cadmium	0.001 mg/l			
1140	Ammoniacal Nitrogen	30 mg/l			
	Chloride	1000 mg/l			
	Cadmium	0.0025 mg/			
1190	Ammoniacal Nitrogen	30 mg/l			
	Chloride	1000 mg/l			
	Cadmium	0.0025 mg/l			
1260	Ammoniacal Nitrogen	30 mg/l			
	Chloride	1000 mg/l			
	Cadmium	0.01 mg/l			
1320	Ammoniacal Nitrogen	30 mg/l			
	Arsenic	0.007 mg/l			
	Chloride	1000 mg/l			
	Cadmium	0.003 mg/l			
	Chromium (total dissolved)	0.05 mg/l			

Table S3.4 Groundwater – emission limits and monitoring requirements					
Monitoring point reference Monitoring Plan Rev. 20 dated 12/02/2022	**Parameter**	**Limit (including unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
	Hexavalent Chromium	0.001 mg/l			
	Sulphate	250 mg/l			
1460	Ammoniacal Nitrogen	0.96 mg/l			
	Arsenic	0.005 mg/l			
	Chloride	250 mg/l			
	Cadmium	0.0015 mg/l			
	Chromium (total dissolved)	0.03 mg/l			
	Hexavalent Chromium	0.001 mg/l			
	Sulphate	391 mg/l			

Table S3.5 Landfill gas in external monitoring boreholes – limits and monitoring requirements				
Monitoring point Ref. /description Monitoring Plan Rev. 20 dated 12/02/2022	**Parameter**	**Limit (including units)**	**Monitoring frequency**	**Monitoring standard or method**
1260 on Monitoring Plan Rev. 20 dated 12/02/2022.	Methane	10%v/v	Weekly	As per LFTGN03 (September 2004) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Record whether the ground is: waterlogged frozen snow covered
	Carbon Dioxide	no limit		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential pressure	no limit		
1040, 1050, 1060, 1070, 1080, 1090, 1280, 1290, 1300, 1310, 1320, 1360, 9813, 9818, 9819, 9820, 9821 on Monitoring Plan Rev. 20 dated 12/02/2022.	Methane	1%v/v	Monthly	
	Carbon Dioxide	no limit		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential pressure	no limit		
1380, 1390, 1400, 1410, 1420, 1430, 1440, 1450 on Monitoring Plan Rev. 20 dated 12/02/2022.	Methane	1%v/v	Weekly	
	Carbon Dioxide	no limit		
	Oxygen	no limit		
	Atmospheric pressure	no limit		

Table S3.5 Landfill gas in external monitoring boreholes – limits and monitoring requirements				
Monitoring point Ref. /description Monitoring Plan Rev. 20 dated 12/02/2022	**Parameter**	**Limit (including units)**	**Monitoring frequency**	**Monitoring standard or method**
	Differential pressure	no limit		
1100, 1110, 1220, 1270 on Monitoring Plan Rev. 20 dated 12/02/2022.	Methane	Breach after 3 consecutive readings >1% v/v CH4	Monthly	
	Carbon Dioxide	no limit		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential pressure	no limit		
1230, 1240, 1250 on Monitoring Plan Rev. 20 dated 12/02/2022.	Methane	Breach after 3 consecutive readings >1% v/v CH4	Weekly	
	Carbon Dioxide	no limit		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential pressure	no limit		
1010, 1020, 1030, 1120, 1210, 1330, 1340, 1370, 9801, 9802, 9803, 9804, 9805, 9806, 9811, 9812, 9814, 9815, 9816, 9817 on Monitoring Plan Rev. 20 dated 12/02/2022.	Methane	no limit	Monthly	
	Carbon Dioxide	no limit		
	Oxygen	no limit		

Table S3.5 Landfill gas in external monitoring boreholes – limits and monitoring requirements				
Monitoring point Ref. /description Monitoring Plan Rev. 20 dated 12/02/2022	**Parameter**	**Limit (including units)**	**Monitoring frequency**	**Monitoring standard or method**
	Atmospheric pressure	no limit		
	Differential pressure	no limit		
1130, 1140, 1150, 1160, 1170, 1180, 1190, 1200, 9807, 9808, 9809, 9810 on Monitoring Plan Rev. 20 dated 12/02/2022.	Methane	no limit	Weekly	
	Carbon Dioxide	no limit		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential pressure	no limit		

Table S3.6 Point source emissions to sewer, effluent treatment plant or by tankering or other transfer off-site – emission limits and monitoring requirements						
Emission point Ref. & Location	**Parameter**	**Source**	**Limit (including unit)**	**Reference Period**	**Monitoring Frequency**	**Monitoring Standard or Method**
S1 (Manhole 0501) as shown on Monitoring Plan Rev. 20 dated 12/02/2022	None specified	Discharge from leachate treatment plant: • Landfill leachate, contaminated surface water and anaerobic digestion process effluent from on-site sources. • Leachate and process effluent arising from off-site sources as agreed in writing by the Agency	None set	--	--	--

Table S3.7 Landfill gas emissions from capped surfaces for cells that have accepted non hazardous biodegradable waste – monitoring requirements			
Monitoring point Ref. /description	**Parameter**	**Monitoring frequency**	**Monitoring Standard or method**
Permanently capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Temporarily capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Whole site	Total Methane emission	As agreed with the Environment Agency	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Uncapped areas	Methane concentration	Every 12 months	As agreed with the Environment Agency based on the wording of revised LFTGN 07 or landfill sector guidance or such other subsequent guidance as may be agreed in writing with the Environment Agency.

Table S3.8 Groundwater – other monitoring requirements			
Monitoring Point Ref. /Description* Monitoring Plan Rev. 20 dated 12/02/2022	**Monitoring frequency**	**Parameter**	**Monitoring standard or method**
1010, 1090, 1140, 1190, 1260, 1320, 1330, 1340, 1351, 1352, 1360, 1460, 1470, 1480, 1490	Annual	Borehole Base	
Superficial Deposits			
1010, 1090, 1140, 1190, 1260, 1330, 1340, 1351, 1352 & 1360.	Quarterly	Groundwater Level, Ammoniacal Nitrogen, Arsenic, Cadmium, Chloride, Electrical Conductivity & pH.	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency
1320		Groundwater Level, Ammoniacal Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Dissolved Oxygen, Electrical Conductivity, Hexavalent Chromium, pH, Sulphate & Temperature.	
1010, 1090, 1140, 1190, 1260, 1330, 1340, 1351, 1352 & 1360.	Annual	COD, TOC, Total Sulphates, Alkalinity, Nitrate (for TON), Nitrite (for TON), Sodium, Potassium, Calcium, Magnesium, Iron, Manganese, Copper, Chromium, Lead, Nickel & Zinc.	
1320		Barium, Boron, COD, TOC, Alkalinity, Nitrate (for TON), Nitrite (for TON), Sodium, Potassium, Calcium, Fluoride, Magnesium, Iron, Manganese, Copper, Lead, Nickel, Phosphorous, Selenium, Vanadium & Zinc.	
1090, 1140, 1190 & 1260.	Every two years for down-gradient wells.	Hazardous substances identified in leachate.	After the initial 6 year monitoring period for hazardous substances, if the results of quarterly or annual monitoring suggest an increase in contamination, the operator shall also undertake a full leachate hazardous substances screen.
Etruria Marl/Middle Coal Measures			
1460, 1470, 1480, 1490 and replacement monitoring boreholes	Quarterly.	Groundwater Level, Ammoniacal Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Dissolved Oxygen, Electrical Conductivity, Hexavalent Chromium, pH, Sulphate & Temperature	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency
	Annually.	Borehole Base, Barium, Boron, COD, TOC, Alkalinity, Nitrate (for TON), Nitrite (for TON), Sodium, Potassium, Calcium, Fluoride, Magnesium, Iron, Manganese, Copper, Lead, Nickel, Phosphorous, Selenium, Vanadium & Zinc.	

Table S3.8 Groundwater – other monitoring requirements			
Monitoring Point Ref. /Description* Monitoring Plan Rev. 20 dated 12/02/2022	**Monitoring frequency**	**Parameter**	**Monitoring standard or method**
Future new monitoring installations			
Future new monitoring installations	Monthly for the first year, then quarterly.	Groundwater Level, Ammoniacal Nitrogen, Arsenic, Cadmium, Chloride, Chromium, Dissolved Oxygen, Electrical Conductivity, Hexavalent Chromium, pH, Sulphate & Temperature.	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency
	Six-monthly for first two years, then annually.	Borehole Base, Barium, Boron, COD, TOC, Alkalinity, Nitrate (for TON), Nitrite (for TON), Sodium, Potassium, Calcium, Fluoride, Magnesium, Iron, Manganese, Copper, Lead, Nickel, Phosphorous, Selenium, Vanadium & Zinc.	
	Annually for the first six years of operation, then every two years (for down and cross gradient boreholes only)	Hazardous substances identified in leachate.	After the initial 6 year monitoring period for hazardous substances, if the results of quarterly or annual monitoring suggest an increase in contamination, the operator shall also undertake a full leachate hazardous substances screen.
	Annual	Borehole Base.	
**Up gradient: Superficial/Backfill Deposit boreholes 1010,1330, 1340, 1351,1352,1360. Etruria Marl/Middle Coal Measures borehole 1470, 1480, 1490.* **Down or cross gradient: Superficial/Backfill Deposit boreholes 1320, 1090, 1140, 1190, 1260. Etruria Marl/Middle Coal Measure boreholes 1460.*			

Table S3.9 Landfill gas – other monitoring requirements				
Monitoring Point Ref. /Description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
In waste gas monitoring boreholes or sealed leachate wells or sacrificial gas extraction system	Methane Carbon Dioxide Oxygen Carbon Monoxide Differential pressure Atmospheric pressure	Monthly until gas extraction commences	Calibrated handheld monitoring instrument	For cells or phases which have no active gas extraction. Gas extraction system shall be installed and extraction commenced once monitoring shows onset of methane production in waste at a rate that can be sustainably extracted. Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring.
	Hydrogen sulphide	Quarterly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 (v3 2010) or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	For cells or phases which have no active gas extraction. Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring. Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans
Gas collection system at well control valve, manifolds (if applicable) and strategic points on gas system	Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Gas flow rate or suction % Balance Gas (calculated as the difference	Monthly or at such other frequency as may be agreed in writing with the Environment Agency.	Calibrated handheld monitoring instrument	Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken. Where the concentration of carbon monoxide exceeds 100ppm then further investigation shall be undertake Record the ambient air temperature and whether the ground is: waterlogged frozen

Table S3.9 Landfill gas – other monitoring requirements				
Monitoring Point Ref. /Description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
	between the sum of measured gases and 100%)			snow covered
Gas collection system at well control valve	Hydrogen sulphide	Six monthly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 (v3 2010) or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans
Output to flare or LFG Utilisation Compound	Trace gas	Annually	Trace gas analysis in accordance with LFTGN04 (v3 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.	The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.
Output to flare or LFG Utilisation Compound	Methane Carbon Dioxide Oxygen Gas flow rate Suction % Balance Gas (calculated as the difference between the sum of measured gases and 100%)	Weekly		Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken.

Table S3.10 Leachate – other monitoring requirements				
Monitoring point reference or description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Operational Cells or Phases **(Any cell or phases that do not have a final engineered cap agreed in accordance with condition 2.6)**				
MEPP	Ammoniacal Nitrogen, Arsenic, BOD, Cadmium, Calcium, Chloride, Chromium, COD, Copper, Electrical Conductivity, Iron, Lead, Magnesium, Manganese, Nickel, pH, Potassium, Sodium, Total Alkalinity, Total Sulphates, Zinc	Quarterly	At leachate extraction points as listed in table S3.1 unless otherwise agreed in writing through an MEPP. As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk), or such other subsequent guidance as may be agreed in writing with the Environment Agency	None
MEPP	Hazardous substances	Annually		
MEPP	Depth to base (mAOD)	Annually		
Non Operational Cells or Phases **(Any cell or phases that have a final engineered cap agreed in accordance with condition 2.6**				
MEPP	Ammoniacal Nitrogen, Arsenic, BOD, Cadmium, Calcium, Chloride, Chromium, COD, Copper, Electrical Conductivity, Iron, Lead, Magnesium, Manganese, Nickel, pH, Potassium, Sodium, Total Alkalinity, Total Sulphates, Zinc	Annually	At leachate extraction points as listed in table S3.1 unless otherwise agreed in writing through an MEPP. . As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk), or such other subsequent guidance as may be agreed in writing with the Environment Agency	None
MEPP	Hazardous substances	Once every four years		
MEPP	Depth to base (mAOD)	Annually		

Table S3.11 Surface water – other monitoring requirements				
Monitoring Point Ref. /Description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
MEPP	Ammoniacal Nitrogen Chloride Electrical conductivity pH Suspended solids Visual Oil and Grease	Monthly	Spot sample	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency.

Table S3.12 Noise monitoring requirements				
Location or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
As specified in the Noise Management Plan submitted in compliance with IC7.	Noise	Annually. The first annual survey to be undertaken within one month of commissioning all plant and equipment.	As agreed in writing with the Environment Agency	

Table S3.13 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Digester feed (digestion process)	pH	As described in site operating techniques	As described in site operating techniques	Process monitoring to be recorded using a SCADA system where relevant.
	Alkalinity			
	Temperature			
	Hydraulic loading rate			
	Organic loading rate			
	Volatile fatty acids concentration			
	Ammonia			
	Liquid /foam level			
Biogas in digester	Flow	Continuous	In accordance with EU weights and measures Regulations	Process monitoring to be recorded using a SCADA system where relevant. Gas monitors to be calibrated every 6 months or in accordance with the manufacturer's recommendations
	Methane	Continuous	None specified	
	CO_2	Continuous	None specified	
	O_2	Continuous	None specified	
	Hydrogen sulphide	Daily	None specified	
	Pressure	Continuous	None specified	

Table S3.13 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Digestate batch	Volatile fatty acids concentration	As per “PAS110” timescales	As described in site operating techniques	--
	Ammonia			
Digester(s) and storage tank(s)	Integrity checks	Weekly	Visual assessment	In accordance with design specification and tank integrity checks.
Digester(s)	Agitation /mixing	Continuous	Systems controls	Records maintained in daily operational records.
	Tank capacity and sediment assessment	Once every 5 years from date of commission	Non-destructive pressure testing integrity assessment every 5 years or as specified by manufacturers technical specification.	In accordance with design specification and tank integrity checks.
Waste reception building or area; Digester(s) and storage tank(s)	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.
Diffuse emissions from all sources identified in the Leak Detection and Repair (LDAR) programme	VOCs including methane	Every 6 months or otherwise agreed in accordance with the LDAR programme	‘Sniffing’ and/or Optical Gas Imaging techniques in accordance with BS EN 15446 & BS EN 17628	Monitoring points as specified in a DSEAR risk assessment and LDAR programme. Limit as agreed with the Environment Agency as a percentage of the overall gas production.

Table S3.13 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
CHP engine stack(s)	VOCs including methane	Annually	BS EN 12619	Total annual VOCs emissions from the CHP engine(s) to be calculated and submitted to the Environment Agency.
	Exhaust gas temperature		Traceable to National Standards	
	Exhaust gas pressure		Traceable to National Standards	
	Exhaust gas water vapour content		BS EN 14790-1	Unless gas is dried before analysis of emissions.
	Exhaust gas oxygen		BS EN 14789	
	Exhaust gas flow		BS EN 16911-1	
Meteorological conditions	Wind speed, air temperature, wind direction	Continuous	Method as specified in management system	Conditions to be recorded in operational diary and records. Equipment shall be calibrated on a 4 monthly basis, in accordance with manufacturer's recommendations or as agreed in writing by the Environment Agency.

Table S3.13 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Emergency flare	Operating hours	Continuous	Recorded duration and frequency. Recording using a SCADA system or similar system	Date, time and duration of use of auxiliary flare shall be recorded.
	Quantity of gas sent to emergency flare			Quantity can be estimated from gas flow composition, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions.
Pressure relief valves and vacuum systems	Gas pressure	Continuous	Recording using a SCADA system	Continuous gas pressure shall be monitored.
	Re-seating	Weekly inspection	Visual	Operator must ensure that valves are re-seated after release in accordance with the manufacturer's design.
	Inspection, maintenance, calibration, repair and validation	Following foaming or overtopping or at 3 yearly intervals whichever is sooner	Written scheme of examination in accordance with condition 1.1.1	After a foaming event or sticking, build-up of debris, obstructions or damage, operator must ensure that pressure relief valve function remains within designed gas pressure in accordance with the manufacturer's design by suitably trained and qualified personnel.

Table S3.13 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
	Inspection, calibration and validation report	In accordance with design and construction specifications or after over topping or foaming event	Written scheme of examination in accordance with condition 1.1.1	Operator must ensure that valves are re-seated after release, after a foaming event or sticking, build-up of debris, obstructions or damage. Operator must ensure that PRV function remains within designed operation gas pressure in accordance with the manufacturer's design by suitably trained/qualified personnel. Inspection, calibration and validation report. In accordance with industry Approved Code of Practice
Storage lagoons and storage tanks	Volume	Daily	Visual or flow metre measurement	750 mm freeboard must be maintained for storage lagoons. Records of volume must be maintained.

Table S3.14 Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Odour abatement plant				
Closed biofilters				
Biofilters 1 and 2	Gas temperature – inlet and outlet	Continuous	Temperature probe / Traceable to national standards	Odour abatement plant shall be regularly checked and maintained to ensure appropriate temperature and moisture content. Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations. Equipment shall be calibrated on a 4 monthly basis, or as agreed in
	Biofilter media moisture	Daily	Moisture meter, Grab test, oven drying or recognised industry method	
	Thatching /compaction	Weekly	Back pressure	
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter / EN 16911-1 and MID for EN 16911-1	
	pH (biofilter drainage effluent)	Weekly	pH metre or litmus paper	

	Efficiency assessment	Annual	Media health, air-flow distribution and emission removal efficiency (BS EN 13725 for odour removal)	writing by the Environment Agency.
	Ammonia – inlet	Every 6 months or as agreed in writing by the Environment Agency.	EN ISO 21877	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling NIOSH 6013 for analysis	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.

	Odour concentration – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	BS EN 13725	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
Scrubber 1 (water)				
Scrubber 1	Gas flow rate – inlet and outlet	Continuous	Gas flow meter / EN 16911-1 and MID for EN 16911-1	Odour abatement plant shall be regularly checked and maintained to ensure appropriate temperature and moisture content. Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	Moisture content or humidity – inlet and outlet (for dry scrubbers only)	Daily	Moisture meter	
	Moisture content or humidity – outlet (for wet scrubbers if used before other abatement systems)	Daily	Moisture meter	
	Back pressure	Weekly	Pressure differential using sensors	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	
	pH scrubber solution (pre-abatement)	Continuous	pH meter	
	pH scrubber solution (post-abatement)	Continuous	pH meter	

	Ammonia – inlet	Every 6 months or as agreed in writing by the Environment Agency.	EN ISO 21877	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Odour concentration – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	BS EN 13725	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling NIOSH 6013 for analysis	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
Carbon filters				
Carbon filters 1 and 2	Carbon bed temperature – inlet and outlet	Continuous	Temperature probe	Odour abatement plant shall be managed in accordance with permit
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	

	Moisture or humidity	Daily	Moisture meter	condition 3.3, the odour management plan and manufacturer's recommendations Carbon filter(s) to be replaced in accordance with manufacturer's recommendations Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	Back pressure	Weekly	Recognised industry method	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling NIOSH 6013 for analysis	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Ammonia – inlet	Every 6 months or as agreed in writing by the Environment Agency.	EN ISO 21877	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.

	Odour concentration – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	BS EN 13725	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.

Table S3.15 Bioaerosols monitoring requirements – ambient monitoring					
Location or description of point of measurement	**Parameter**	**Bioaerosols action levels (CFU m^{-3})**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Upwind of the operational area, as described in the Technical Guidance Note M9	Total bacteria	1000 Note 1	Twice a year, unless another frequency is agreed in writing by the Environment Agency Note 2	In accordance with Technical Guidance Note M9 – Environmental monitoring of	As described in the Technical Guidance Note M9, including all the additional data requirements specified therein.

Table S3.15 Bioaerosols monitoring requirements – ambient monitoring					
Location or description of point of measurement	**Parameter**	**Bioaerosols action levels (CFU m^{-3})**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Downwind of the operational area, as described in the Technical Guidance Note M9	Aspergillus Fumigatus	500 Note 1		bioaerosols at regulated facilities.	
Note 1 – The bioaerosols action levels are only applicable at downwind sampling locations equivalent to the distance of the nearest sensitive receptor. Where these action levels are elevated, the operator must take action to mitigate the impact on sensitive receptors. Assessment of compliance will be based on risk and in line with guidance. Note 2. Where the bioaerosols action levels are exceeded, then monitoring shall be quarterly until such time that it is demonstrated that the site has adequate mitigation for a 12 month period.					

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data		
Parameter	**Reporting period**	**Period ends**
Leachate [and/ or groundwater] level As specified by schedule 3, table S3.1	Every 3 months	31 March, 30 June, 30 September, 31 December
Point source emission to air As specified by schedule 3, table S3.2	Every 12 months	31 December
Emissions to air from CHP engines Parameters as required by condition 3.5.1.	Every 12 months	31 December
Emissions to air from odour abatement plant Parameters as required by condition 3.5.1.	Every 6 months	31 December, 30 June
Process monitoring – digester tank integrity Parameters as required by condition 3.5.1	Every 5 years from the date of commissioning or as per the manufacturer's recommendation, whichever is sooner	31 December
Process monitoring – under and over pressure relief systems Parameters as required by condition 3.5.1	Every 12 months Yearly summary report of over-pressure and under-pressure events detailing mass balance release	31 December
Process monitoring – pressure relief systems (inspection, calibration and maintenance) Parameters as required by condition 3.5.1	Every 3 years	31 December
Process monitoring – leak detection and repair surveys Parameters as required by condition 3.5.1	Every 12 months LDAR report to be submitted annually	31 December
Process monitoring – use of emergency flare Parameters as required by condition 3.5.1	Every 12 months	31 December
Total annual VOCs emissions from gas engines (calculated)	Every 12 months	31 December

Table S4.1 Reporting of monitoring data		
Parameter	**Reporting period**	**Period ends**
Bioaerosols monitoring Parameters as required by condition 3.5.1	Every 3 months or as agreed in writing by the Environment Agency	1 January, 1 July,
Point source emission to water (other than sewer) As specified by schedule 3, table S3.3	Every 3 months	31 March, 30 June, 30 September, 31 December
Emission to groundwater As specified by schedule 3, table S3.4	Every 3 months	31 March, 30 June, 30 September, 31 December
Landfill gas in external monitoring boreholes As specified by schedule 3, table S3.5	Every 3 months	31 March, 30 June, 30 September, 31 December
Point source emission to sewer, effluent treatment plant, tankering or other off site transfer As specified by schedule 3, table S3.6	Every 3 months	31 March, 30 June, 30 September, 31 December
Emission of landfill gas from capped surfaces As specified by schedule 3, table S3.7	Every 12 months	31 December
Other groundwater monitoring As specified by schedule 3, table S3.8	Every 3 months	31 March, 30 June, 30 September, 31 December
Other Landfill gas monitoring As specified by schedule 3, table S3.9 Trace gas monitoring	Every 3 months Every 12 months	31 March, 30 June, 30 September, 31 December 31 December
Other leachate monitoring As specified by schedule 3, table S3.10	Every 12 months	31 December
Other surface water monitoring As specified by schedule 3, table S3.11	Every 12 months	31 December
Noise Monitoring As specified by schedule 3, table S3.12	Every 12 months	31 December
Meteorological data Landfill Directive, annex III, section 2	Every 12 months	31 December

* - where the reporting period is 12 months, you may submit this information as part of the 'annual report' required by condition 4.2.2.

Table S4.2: Annual production/treatment	
Leachate: (AR1 & AR3) Disposed of off site; Disposed of to any onsite effluent treatment plant; Recirculated into the waste mass; Accepted from offsite for treatment at any onsite effluent treatment plant.	Cubic metres/year

Table S4.2: Annual production/treatment	
Landfill gas: (AR1) combustion in flares; combustion in gas engines; Other methods of gas utilisation. Average methane content entering the landfill gas utilisation or treatment compound (based on the annual average of Table S3.10 monitoring) Methane generation rate (50%ile from a representative model)	Normalised cubic metres/year % methane v/v m^3 /hr
Anaerobic Digestion Plant (AR4)	
Electricity generated	MWh
Biomethane generated	tonnes or m3
~~CO2 generated~~	~~tonnes or m3~~
Whole digestate	tonnes
Liquid digestate	m3
Solid digestate	tonnes
Recovered outputs	tonnes or m3

Table S4.3 Performance Parameters			
Parameter	**Frequency of assessment**	**Annual total**	**Unit**
Energy used (including for leachate treatment) (AR1, AR2 & AR3)	Annually		MWh of electricity or natural gas
Anaerobic Digestion Plant (AR4)			
Water usage	Annually		tonnes or m^3
Energy usage			MWh
Raw material usage			tonnes or m^3
Emergency flare operation			hours
Electricity exported			MWh
Biomethane exported			tonnes or m^3
CHP engine usage			hours
CHP engine efficiency			%
Auxiliary boiler usage			hours

Table S4.4 Reporting Forms		
Media/parameter	**Reporting Format**	**Date of Form**
Leachate	Form leachate 1 or other reporting format to be agreed in writing with the Environment Agency	23/03/2016
Air	Form Air 1 or other reporting format to be agreed in writing with the Environment Agency	23/03/2016
Bioaerosols	As specified in the Technical Guidance Note M9 or other form as agreed in writing by the Environment Agency	-

Table S4.4 Reporting Forms		
Media/parameter	**Reporting Format**	**Date of Form**
Controlled water	Form Water 1 or other reporting format to be agreed in writing with the Environment Agency	23/03/2016
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Environment Agency	23/03/2016
Sewer	Form Sewer 1 or other reporting format to be agreed in writing with the Environment Agency	23/03/2016
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with the Environment Agency	23/03/2016
Waste Return	E-waste Return Form	-
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Environment Agency	23/03/2016
Process monitoring	Form process 1 or other form as agreed in writing by the Environment Agency	30/10/2023
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	08/03/2021
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	08/03/2021
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	08/03/2021

Schedule 5 – Notification

This page outlines the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any incident or accident which significantly affects or may significantly affect the environment	
To be notified within 24 hours of detection	
Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**

(c) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) Notification requirements in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B to be supplied as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	

The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“annually” means once every year.

“anaerobic digestion” means a process of controlled decomposition of biodegradable materials under managed conditions where free oxygen is absent, at temperatures suitable for naturally occurring mesophilic or thermophilic anaerobes and facultative anaerobe bacteria species, which convert the inputs to a methane-rich biogas and whole digestate.

“animal waste” means any waste consisting of animal matter that has not been processed into food for human consumption.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“background concentration” means such concentration of that substance as is present in:

- For emissions to surface water, the surface water quality up-gradient of the site; or
- For emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge; or
- For emissions of landfill gas, the ground or air outside the site and not attributable to the site.

Best available techniques” means 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 the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole:

(a) ‘techniques’ includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;

(b) ‘available techniques’ means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator;

(c) ‘best’ means most effective in achieving a high general level of protection of the environment as a whole

“bioaerosols action levels” mean the acceptable bioaerosols concentrations at the nearest sensitive receptor, or at an equivalent distance downwind of the biowaste treatment operations, which are attributable to the biowaste treatment operations. The acceptable concentrations are respectively 1000 and 500 CFU m^{-3} for total bacteria and Aspergillus fumigatus. Where these action levels are elevated, the operator must take action to mitigate the impact on sensitive receptors

“Biodegradable” means a material is capable of undergoing biological anaerobic or aerobic degradation leading to the production of CO_2, H_2O, methane, biomass, and mineral salts, depending on the environmental conditions of the process.

“building” means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

“Capacity” means the potential capacity and not historical or actual production levels or throughput. This means that the designed capacity is the maximum rate at which the site can operate. Biological treatment of waste usually takes place over more than one day, so the physical daily capacity can be calculated by dividing the maximum quantity of waste that could be subject to biological treatment at any one time by the minimum residence time. For in-vessel composting, the residence time for sanitisation should be calculated separately and then aggregated to the complete composting time. Further guidance ‘RGN2: Understanding the meaning of regulated facility Definition of regulated facility’ is available.

“cell layout drawing” means:

(a) A drawing or drawings of the proposed new cell that illustrate(s) in sufficient detail:

(i) the location of the new cell on the site;

(ii) the proposed level (Above Ordnance Datum) of the base of the excavation;

(iii) the proposed finished levels of all containment and leachate drainage layers;

(iv) the positions of leachate management infrastructure; and

(v) the positions of landfill gas infrastructure (if appropriate).

A detailed written explanation of any minor design changes from the most recently approved cell that result from the new cell layout. This would include, for example:

(i) changes to slope length and gradient within the cell;

(ii) new leachate or landfill gas infrastructure construction design;

(iii) slope stability issues such as new basal excavation level; and/or

(iv) depth of waste.

“combined heat and power” (CHP) or Cogeneration means the simultaneous generation in one process of thermal energy and electrical or mechanical energy.

“competent persons and resources” means that a technically competent person accredited to a relevant scheme must attend site and record their attendance, and that all roles and responsibilities are clearly stated in the management systems along with records of operatives’ training. See the guidance on the level of competence and duration of attendance

“compost” means solid particulate material that is the result of composting, which has been sanitised and stabilised, and which confers beneficial effects when added to soil, used as a component of growing media or used in another way in conjunction with plants.

“composting” means the managed biological decomposition of biodegradable waste organic materials, under conditions that are predominantly aerobic and that allow the development of thermophilic temperatures as a result of biologically produced heat and that result in compost.

“construction Proposals” means written information, at a level of detail appropriate to the complexity and pollution risk, on the design, specifications of materials selected, stability assessment (where relevant) and the construction quality assurance (CQA) programme in relation to the New Cell or Landfill Infrastructure.

“CQA Validation Report” means the final “as built” construction and engineering details of the New Cell or of the Landfill Infrastructure. It must provide a comprehensive record of the construction and must include, where relevant:

- The results of all testing required by the CQA programme - this must include the records of any failed tests with a written explanation, details of the remedial action taken, referenced to the appropriate secondary testing;
- Plans showing the location of all tests;
- “As-built” plans and sections of the works;

- Copies of the site engineer's daily records;
- Records of any problems or non-compliances and the solution applied;
- Any other site specific information considered relevant to proving the integrity of the New Cell or Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the Construction Proposals.

"digestate" means material resulting from an anaerobic digestion process.

"disposal" means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

"emissions to land" includes emissions to groundwater.

"EP Regulations" means The Environmental Permitting (England and Wales) Regulations 2016, SI 2016 No.1154 and words and expressions used in this permit which are also used in those Regulations have the same meanings as in those Regulations.

"emissions of substances not controlled by emission limits" means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

"exceeded" means that a value is above a permitted limit, or where a range of values or a minimum value is set as a permitted limit it means a value outside that range or below the minimum value, whichever is applicable.

"groundwater" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"hazardous substances" as defined by the Environmental Permitting (England and Wales) Regulations 2016, SI 2016 No.1154, schedule 22 and listed in our Hydrogeological risk assessment guidance.

"Industrial Emissions Directive" means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

"inert waste" means waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater

"landfill Infrastructure" means any specified element of the:

- permanent capping;
- temporary capping (i.e. engineered temporary caps not cover materials);
- leachate abstraction systems;
- leachate transfer, treatment and storage systems;
- surface water drainage systems;
- leachate monitoring wells;
- groundwater monitoring boreholes;
- landfill gas monitoring boreholes;
- landfill gas management systems;
- lining within the installation.

within the site.

“LFTGN 05” means Environment Agency Guidance for monitoring enclosed landfill gas flares.

“LFTGN 07” means Environment Agency Guidance on monitoring landfill gas surface emissions.

“LFTGN 08” means Environment Agency Guidance for monitoring landfill gas engines.

“liquids” means any liquid other than leachate within the engineered landfill containment system.

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“M2” means Environment Agency Guidance Monitoring of stack emissions to air.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“medicinal product” means any medicine licensed by the Medicines and Healthcare products Regulatory Agency (MHRA) or their predecessors under the Medicines Act 1968, section 130.

“medium combustion plant” or ”MCP” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

“Medium Combustion Plant Directive” or “MCPD” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion plants, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“new medium combustion plant” means an MCP which was put into operation after 20 December 2018. This includes replacement MCP and Generators.

“MEPP” Monitoring and extraction point plan, required by condition 4.2.2(h) to specify extraction points and routine monitoring locations.

“new cell” means any new cell, part of a cell or other similar new area of the site where waste deposit is to commence after issue of this permit and can comprise:

- groundwater under-drainage system;
- permanent geophysical leak location system;
- leak detection layer;
- sub-grade;
- barriers;
- liners;
- leachate collection system;
- leachate abstraction system;
- separation bund/layer;
- cell or area surface water drainage system;
- side wall subgrade and containment systems;

for the New Cell.

“no impact” means that the change made to the construction process will not affect the agreed design criteria, specification or performance in a way that has a negative effect.

“operational area” means any part of a facility used for the handling, storing and treatment of waste.

“operator” means in relation to a regulated facility:

(a) the person who has control over the operation of the regulated facility,

(b) if the regulated facility has not yet been put into operation, the person who will have control over the regulated facility when it is put into operation, or

(c) if a regulated facility authorised by an environmental permit ceases to be in operation, the person who holds the environmental permit

“pests” means Birds, Vermin and Insects.

"pollution" means emissions as a result of human activity which may—

(a) be harmful to human health or the quality of the environment,

(b) cause offence to a human sense,

(c) result in damage to material property, or

(d) impair or interfere with amenities and other legitimate uses of the environment.

“previous year” means the 12 month period preceding the month the annual report is submitted in.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“relevant waste acceptance procedures” means the procedure for the acceptance of waste at landfills and the associated sampling and test methods specified in the Council Decision Annex (2003/33/EC, European Council of 19 December 2002).

“relevant waste acceptance criteria” means the waste acceptance criteria and the associated sampling and test methods specified in the Council Decision Annex (2003/33/EC, European Council of 19 December 2002).

“review of the Hydrogeological Risk Assessment” means a written review of the hydrogeological risk assessment included in the Application, together with any other parts of the Application that addressed the requirements of the EP Regulations. The review shall assess whether the activities of disposal or tipping for the purpose of disposal of waste authorised by the permit continue to meet the requirements of the EP Regulations.

“sealed drainage system” in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

- no liquids will run off the surface otherwise than via the system
- all liquids entering the system are collected in a sealed sump, except where liquids may be lawfully discharged to foul sewer.

‘sustainably extracted’ means where suction can be applied to the extraction wells such that a flow rate of landfill gas, with a methane content capable of either being combusted, or treated by bio-oxidation, can be extracted without increasing the risk of air ingress to the waste or inducing aerobic degradation within the waste.

“VOC” means Volatile organic compounds as defined in Article 3(45) of Directive 2010/75/EU – ‘volatile organic compound’ means any organic compound as well as the fraction of creosote, having at 293.15K a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use.

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes (England)Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means the standards included in Environment Agency Guidance for Monitoring Enclosed Landfill Gas Flares LFTGN 05 or Guidance for Monitoring Landfill Gas Engine Emissions LFTGN 08.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid fuels and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

“year” means calendar year ending 31 December.

Where the following terms appear in the waste code list in Tables S2.1, S2.2, S2.3, S2.4, S2.5 and S2.6, they have the meaning given below:

‘hazardous substance’ means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008;

‘heavy metal’ means any compound of antimony, arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, selenium, tellurium, thallium and tin, as well as these materials in metallic form, as far as these are classified as hazardous substances;

‘polychlorinated biphenyls and polychlorinated terphenyls’ (‘PCBs’) means PCBs as defined in Article 2(a) of Council Directive 96/59/EC’.
Article 2(a) says that ‘PCBs’ means:

- polychlorinated biphenyls
- polychlorinated terphenyls
- monomethyl-tetrachlorodiphenyl methane, Monomethyl-dichloro-diphenyl methane, Monomethyldibromo-diphenyl methane
- any mixture containing any of the above mentioned substances in a total of more than 0,005 % by weight;

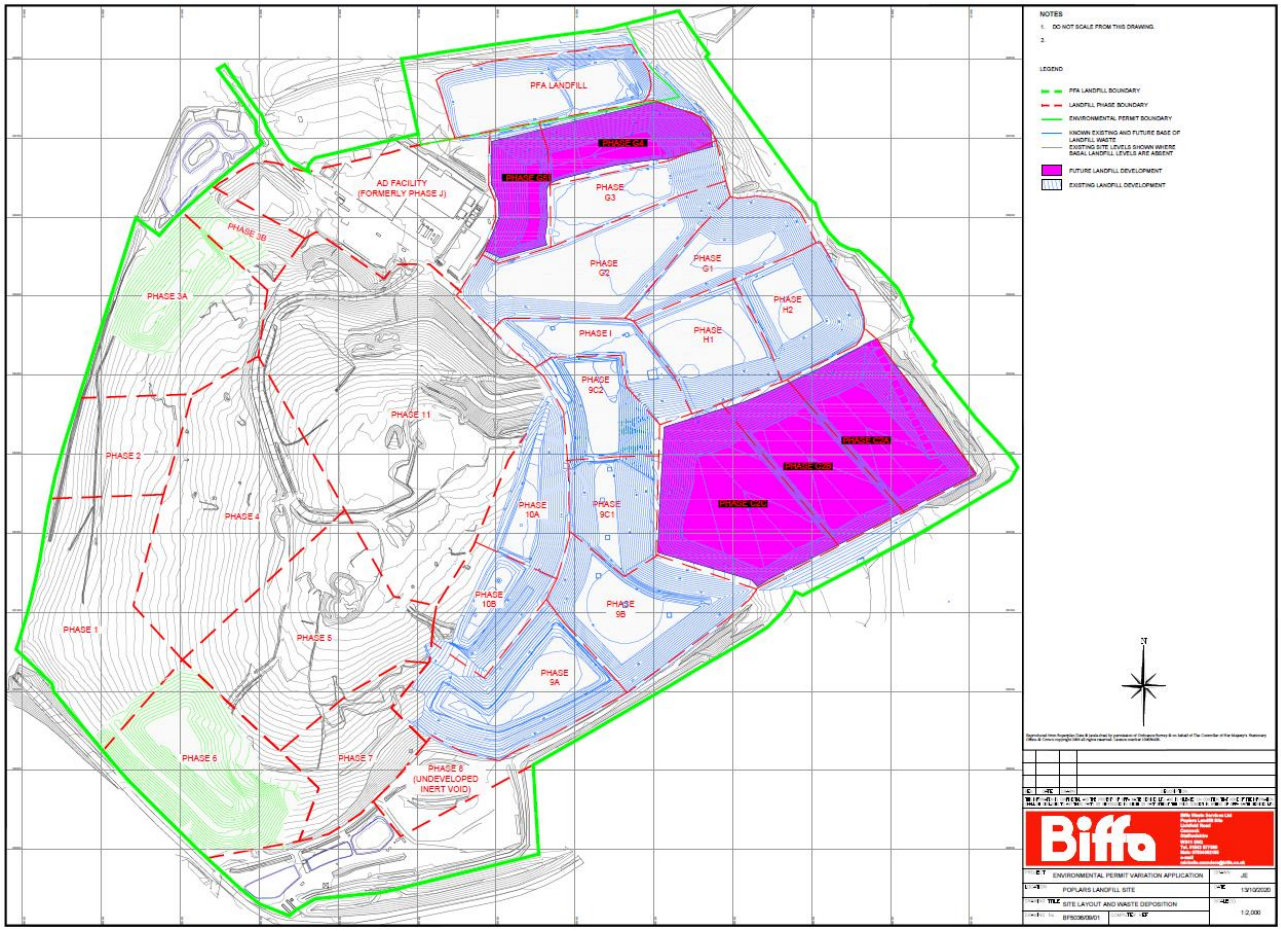
‘transition metals’ means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified as hazardous substances;

‘stabilisation’ means processes which change the hazardousness of the constituents in the waste and transform hazardous waste into non-hazardous waste;

‘solidification’ means processes which only change the physical state of the waste by using additives without changing the chemical properties of the waste;

‘partly stabilised wastes’ means wastes containing, after the stabilisation process, hazardous constituents which have not been changed completely into non-hazardous constituents and could be released into the environment in the short, middle or long term.

Schedule 7 – Site plan



Installation boundary drawing No BF5036/09/01 dated 13/10/2020 ‘Site Layout and Waste Deposition’.

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Annex 1 of MCP

1. Rated thermal input (MW) of the medium combustion plant.	
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	
5. Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code.	
6. Expected number of annual operating hours of the medium combustion plant and average load in use.	
7. Where the option of exemption under Article 6(3) or Article 6(8) is used, a declaration signed by the operator that the medium combustion plant will not be operated more than the number of hours referred to in those paragraphs.	
8. Name and registered office of the operator and, in the case of stationary medium combustion plants, the address where the plant is located.	

END OF PERMIT