

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Biffa Waste Services Limited

Trecatti Landfill Site
Fochriw Road
Merthyr Tydfil
Glamorgan
CF48 4AB

Permit number

EPR/RP3733PC

Trecatti Landfill Site

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Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

Trecatti landfill is located to the immediate north-east of Merthyr Tydfil and approximately 3km west of Rhymney at National Grid Reference SO 082077. It is located within an area of historic open-cast coal and ironstone working and lies to the north-west of the Gelligaer and Merthyr Common. The site is immediately surrounded by common land that includes vegetated colliery spoil tips and is used for rough grazing. The nearest residential area is Dowlais Top which lies approximately 200 metres to the northwest of the landfill. Access to the site is from the unclassified Fochriw Road to the east. The main watercourses present in the vicinity are the River Taff and Rhymney River, which flow in a general southerly direction 3.5km west and 2.1km east of the site respectively.

The permitted installation includes all areas of the existing and proposed landfill and site infrastructure in addition to the landfill gas utilisation and leachate treatment plants. The following non-listed directly associated activities are also included as part of the permitted installation: discharge of treated leachate to sewer; discharge of surface water drainage to a controlled watercourse; and gas flaring.

Merthyr Tydfil Borough Council commenced landfilling at Trecatti in 1986 and operated the site up until 1992 when the management transferred to Biffa Waste Services Limited. The site was licensed at that time to receive domestic, commercial and industrial wastes including difficult and special wastes. Engineered containment principles were introduced at Trecatti from 1993 in Phase 1 within the north-western corner. Subsequent landfilling took place within Phase 2, which then formed the basal containment for Phases 2A, 3A, and 4A. Phase 2A also forms the basal containment for all the remaining 7 Phases to be developed.

Trecatti Landfill has been constructed above the regional groundwater table of the Coal Measures strata and therefore no permanent groundwater management system is required. However, temporary underliner drainage systems have been installed beneath the Phases developed to date due to the presence of perched groundwater. Leachate accumulating within the site is abstracted and treated at the on-site treatment plant, which will in the future be supplemented by a further treatment plant. Landfill gas is collected and pumped to an on-site gas management plant which should eventually be capable of producing approximately 4MW electricity. Surplus gas is flared off.

The landfill has recently been permitted to allow the deposit of asbestos containing wastes within a dedicated cell constructed on the engineered southern side slope area of the landfill. The deposit of stable Non-Reactive Hazardous Wastes (SNRHW) including asbestos, was previously authorised through the original PPC permit issues for the site but was removed by a permit holder-initiated application in December 2007. Conditions stated in this permit allow asbestos to be accepted at Trecatti Landfill Site in accordance with stringent regulatory standards.

This permit includes permitted waste activities associated with an onsite Multipurpose Waste Treatment and Remediation Pad (MWTRP). As such, the Standard Rules Permit set SR2012 No. 8 is included within the permit to allow for the operation of a composting facility on the Multipurpose Pad.

The MWTRP allows the following permitted waste treatment and processing activities to take place:

1. Waste Treatment Facility (WTF) – treatment and bioremediation of hazardous and non-hazardous waste including soils and sludges; and
2. Green Waste Composting Facility (GWCF).

The MWTRP comprises a single impermeable surfaced pad. The northern most part of the pad is used for the composting of green waste at approximately 3,250m². Adjoining this is an area used for the bioremediation of contaminated soils or sludges, with a footprint of approximately 6,000m². Each area is separated by a low-level bund. The MWTRP site infrastructure is located in the southern area of the site which includes two process water tanks (within a bunded enclosure), a biofilter, air/water separators, attendant process equipment and a substation. The area to the west is used for processing green waste and compost. Additionally, there are two surface water drainage lagoons; one located within the southern part of the site and the other within the north-eastern part of the site.

This permit introduces the inclusion of an asbestos picking station and appropriate European Waste Codes (EWC) to allow the onsite acceptance, transfer and processing of asbestos contaminated soils and fire damaged wastes (contaminated with or without hydrocarbons). To summarise the process, soils will be accepted onto the asbestos picking pad and stockpiled adjacent to the picking station and feed hopper. Completed stockpiles will remain covered until the material is due to be processed. An excavator will load the material on a conveyer belt that will feed into the picking station where operatives will remove visible fragments of Asbestos Containing Material (ACM) into hinged shoots conveying ACM into lockable/sealed skips below. ACM containing skips will be transferred from the asbestos treatment pad area to a designated landfill cell for proper permitted disposal. Soils deemed to have no visible asbestos and approved for further treatment or landfill disposal will be transferred via the output conveyor belt to a second stockpile area to be quarantined for sampling. Quarantined soils will be sampled for ACM on a representative 1 in 500m³ ratio and remain quarantined until analyses indicate that samples are below 0.1% wt/wt asbestos. Soils confirmed below 0.1% wt/wt asbestos will be either be landfilled onsite, or if impacted with hydrocarbons, transported to the WTF for bioremediation treatment. Soils that fail visible inspection for ACMs will be processed back through the picking station. Soils confirmed greater than 0.1% wt/wt asbestos will be classed as hazardous waste and will be disposed onsite within the permitted asbestos landfill cell.

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application EPR/RP3733PC (reference EPR/RP3733PC/A001)	Received 07/05/2004	Duly Made on 21/05/2004
Permit EPR/RP3733PC determined	09/03/2005	
Application for permit variation YP3037UA (reference EPR/RP3733PC/V002)	Received 28/09/2007	Duly Made 09/10/2007
Application for permit variation EPR/DP3037UY (reference EPR/RP3733PC/V003)	Received 17/12/2007	Duly Made 02/01/2008
Variation notice DP3037UY (reference EPR/RP3733PC/V003) determined	18/01/2008	
Variation notice YP3037UA (reference EPR/RP3733PC/V002) determined	14/04/2008	
EA-initiated Variation EPR/RP3733PC/V004 determined	18/01/2011	
Admin variation determined EPR/RP3733PC/V005	17/10/2012	
Admin variation determined EPR/RP3733PC/V006	12/02/2013	
Agency variation determined EPR/RP3733PC/V007	12/06/2013	Agency variation to implement the changes introduced by IED.
Application EPR/RP3733PC/V008	Duly Made 16/05/2014	Application for variation and consolidation of permit to allow the acceptance of asbestos in a dedicated monocell.
Additional information received	13/06/2014	Addendum to Stability Risk Assessment
Additional information received	26/09/2014	Revised Stability Risk Assessment
Additional information received	12/09/2014	Response to Schedule 5 Notice
Additional information received	21/10/2014	Further information relating to Schedule 5 Notice
Additional information received	02/12/2014	Clarification of information relating to Stability Risk Assessment

Permit determined	27/02/2015	Consolidated Permit issued
Application for substantial variation EPR/RP3733PC/V009	Received 04/08/2015	Duly Made 07/08/2015
Application for a substantial variation EPR/RP3733PC/V009 determined	15/01/2015	
Application received EPR/RP3733PC/V010	Duly made 11/07/2018	Application to add additional waste codes to permit
Application determined EPR/RP3733PC/V010	22/08/2018	Varied and consolidated permit issued
Application for substantial variation received EPR/RP3733PC/V011	Received 14/03/2019	Duly Made 14/03/2019 Application to include an asbestos picking station and associated waste codes
Application for a substantial variation EPR/RP3733PC/V011 determined	19/06/2019	

Other existing licenses/authorisations/registrations relating to this site		
Operator	Reference Number	Date of issue
Biffa Waste Services Limited	Trade effluent discharge consent (to sewer) reference number TE456	14/04/1993

End of introductory note.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number
EPR/RP3733PC

This is the consolidated permit referred to in the variation and consolidation notice for the application EPR/RP3733PC/V011 authorising

Biffa Waste Services Limited (“the operator”),

whose registered office is

**Coronation Road
Cressex
High Wycombe
Bucks
HP12 3TZ**

company registration number **00946107**

to operate an installation at

**Trecatti Landfill Site
Fochriw Road
Merthyr Tydfil
Glamorgan
CF48 4AB**

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

Name	Date
Holly Noble	25/07/2019

Authorised on behalf of Natural Resources Wales

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 between the operator and Natural Resources Wales dated March 9, 2005 or other subsequent agreement agreed in writing with Natural Resources Wales shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by Natural Resources Wales.
- 1.2.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all 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) take any further appropriate measures identified by a review.

1.4 Efficient use of raw materials

- 1.4.1 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.

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

1.5.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.5.2 The operator shall review and record at least every four years whether changes to those measures should be made and 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 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 site plan in schedule 7 to this permit.

2.3 Operating techniques

2.3.1 Operating techniques to be adhered to by the operator are as follows:

- a) 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 ("Operating techniques"), unless otherwise agreed in writing by Natural Resources Wales.
- b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales 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 Natural Resources Wales.

- 2.3.2 Any raw materials or fuels listed in schedule 2, table S2.1 shall conform to the specifications set out in that table.

2.4 Waste Acceptance

- 2.4.1 Wastes for disposal in the landfill shall only be accepted if:

- (a) they are non-hazardous of the type listed in schedule 2, table S2.2 and limited to the quantities specified in table S1.4;
- (b) it is asbestos, and or construction materials containing asbestos (that includes waste from the Asbestos Picking Station) of the type listed in schedule 2, table S2.4 and limited to the quantities specified in table S1.4;
- (c) they conform to the description in the documentation supplied by the producer and holder;
- (d) they not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm);
- (e) they are not shredded used tyres;
- (f) they are not liquid wastes (including waste waters but excluding sludge);
- (g) 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;
- (h) all the relevant waste acceptance procedures have been completed;
- (i) they fulfil the relevant waste acceptance criteria;
- (j) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria;
- (k) 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
- (l) where 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.

- 2.4.2 Wastes shall only be accepted for recovery operations (construction, reclamation, restoration or improvement of land other than by mobile plant) if;

- (a) they are non-hazardous and inert wastes of the type listed in schedule 2, table S2.3 and limited to the quantities specified in table S1.4;

- 2.4.3 Wastes shall only be accepted for the Multipurpose Waste Treatments and Remediation Pad for permitted activities if;

- (a) they are of the types listed in schedule 2, table S2.5 and limited to the quantities specified in table S1.4;

- 2.4.4 Wastes shall only be accepted at the Asbestos Picking Station for permitted activities if;

- (a) they are of the types listed in schedule 2, table S2.6 and limited to the quantities specified in table S1.4;
- (b) they do not include insulation materials containing asbestos. Insulation materials containing asbestos (i.e. EWC code 17 06 01*) shall not be accepted at the Asbestos Picking Station.

- 2.4.5 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.
- 2.4.6 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.
- 2.4.7 Asbestos containing wastes and construction materials containing asbestos shall only be disposed of with other suitable wastes and not in cells containing biodegradable non-hazardous waste. Asbestos waste and construction material containing asbestos must meet the relevant waste acceptance criteria and must be covered daily and before each compaction operation with appropriate material.
- 2.4.8 The operator shall visually inspect:
- (a) without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill;
 - (b) waste at the point of deposit;
 - (c) waste at the point of dispatch;
- and shall satisfy itself that it conforms to the basic characterisation documentation submitted by the holder.
- 2.4.9 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.
- 2.4.10 The operator on accepting each delivery of waste shall provide a receipt to the person delivering it.
- 2.4.11 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing BF4857/10/04 dated 04/04/2014.
- 2.4.12 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1, table S1.4.
- 2.4.13 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.
- 2.4.14 The operator shall maintain and implement a system to record the disposal location of any hazardous waste.

2.5 Hazardous waste storage and treatment

- 2.5.1 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1, table S1.1 and appropriate measures are taken.

2.6 Improvement programme

- 2.6.1 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 Natural Resources Wales.
- 2.6.2 Except in the case of an improvement which consists only of a submission to Natural Resources Wales, the operator shall notify Natural Resources Wales within 14 days of completion of each improvement.

2.7 Landfill Engineering

- 2.7.1 No construction of any new cell of the landfill shall commence until the operator has submitted construction proposals and Natural Resources Wales has confirmed that it is satisfied with the construction proposals.
- 2.7.2 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 Natural Resources Wales has confirmed that it is satisfied with the cell layout drawing.
- 2.7.3 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 Natural Resources Wales.
- 2.7.4 No disposal of waste shall take place in a new cell until the operator has submitted a Construction Quality Assurance (CQA) Validation Report and Natural Resources Wales has confirmed that it is satisfied with the CQA Validation Report (except for the Asbestos cell CQA report). A CQA report shall be submitted for each lift of the Asbestos cell.
- 2.7.5 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 Natural Resources Wales has confirmed that it is satisfied with the construction proposals.
- 2.7.6 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 Natural Resources Wales missions and monitoring.
- 2.7.7 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill infrastructure.
- 2.7.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.7.5 and 2.7.6 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to Natural Resources Wales as soon as practicable.
- 2.7.9 For the purposes of conditions 2.7.1, 2.7.2, 2.7.4 and 2.7.5 (except for the report required for the asbestos cell), Natural Resources Wales 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 it is satisfied; or
 - b) informed the operator that it requires further information.

- 2.7.10 Where Natural Resources Wales has required further information under condition 2.7.9 (b), Natural Resources Wales 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 it is satisfied; or
 - b) informed the operator that it requires further information.

2.8 Leachate Levels

- 2.8.1 The limits for the level of leachate listed in schedule 3, (Emissions and monitoring), 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 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 flare the gas.
- 2.10.3 The operator shall:
- (a) if notified by Natural Resources Wales, submit to Natural Resources Wales 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 Natural Resources Wales.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 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 and S3.4.
- 3.1.2 The limits given in schedule 3 shall not be exceeded, save that compliance with an emission limit in that table shall include incorporation of the uncertainty allowance stated in Environment Agency guidance LFTGN 05 and LFTGN 08.
- 3.1.3 There shall be no emission from the activities into groundwater of any hazardous substances contrary to the EP Regulations.
- 3.1.4 There shall be no emission from the activities into groundwater of any non-hazardous pollutants to cause pollution.
- 3.1.5 The trigger levels for emissions into groundwater for the parameters and monitoring points set out in schedule 3, table S3.5 shall not be exceeded.
- 3.1.6 The operator shall submit to Natural Resources Wales a review of the Hydrogeological Risk Assessment:

- (a) between nine and six months prior to the sixth anniversary of the granting of the permit, and
 - (b) between nine and six months prior to every subsequent six years after the sixth anniversary of the granting of the permit.
- 3.1.7 The limits for landfill gas arising from the installation set out in schedule 3, tables S3.6 and S3.7 shall not be exceeded.
- 3.1.8 The limits for particulate matter arising from the installation set out in schedule 3, table S3.12 shall not be exceeded.
- 3.1.9 For the activities referenced in schedule 1, table S1.1, where a substance is specified in schedule 3, table S3.2 or S3.3 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.
- 3.1.10 Total annual emissions from the emission point(s) set out in tables schedule 3, S3.1, S3.2 and S3.3 of a substance listed in schedule 3, table S3.4 shall not exceed any relevant limits in table S3.4.
- 3.1.11 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 a 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 Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales 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 Natural Resources Wales.
- 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.

3.3 Monitoring

- 3.3.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in the following tables in schedule 3 to this permit:
 - (a) Leachate specified in tables S3.1 and S3.9;
 - (b) Point source emissions specified in tables S3.2, S3.3 and S3.4;
 - (c) Groundwater specified in tables S3.5 and S3.11;
 - (d) Landfill gas specified in table S3.6, S3.7 and S3.8;
 - (e) Surface water specified in table S3.10;

- (f) Particulate matter specified in table S3.12;
 - (g) Separation bund topography as specified in table S3.13; and
 - (h) Separation bund inclination specified in table S3.13.
- 3.3.2 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.
- 3.3.3 A topographical survey of the site referenced to ordnance datum shall be carried out:
- (a) annually;
 - (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.
- The topographical survey shall be used to produce a plan of a scale adequate to show the surveyed features of the site.
- 3.3.4 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by Natural Resources Wales.
- 3.3.5 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 S3.1 to S3.2 unless otherwise agreed in writing by Natural Resources Wales.

3.4 Odour

- 3.4.1 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 Natural Resources Wales, 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.
- 3.4.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.5 Noise and vibration

- 3.5.1 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 Natural Resources Wales, 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.
- 3.5.2 The operator shall:

- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales 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 Natural Resources Wales.

3.6 Pests

- 3.6.1 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.
- 3.6.2 The operator shall:
 - (a) if notified by Natural Resources Wales, submit to Natural Resources Wales for approval within the period specified, a pests management plan which identifies and minimises risks of pollution, hazard or annoyance from pests;
 - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by Natural resources Wales.

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 Natural Resources Wales, 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) off-site environmental effects;
 - (ii) matters which affect the condition of the land and groundwater;
 - (iii) the results of groundwater monitoring;
 - (iv) sub-surface landfill gas monitoring;
 - (v) leachate levels, quality and quantities;
 - (vi) landfill gas generation and collection;
 - (vii) waste types and quantities;
 - (viii) the location of hazardous waste deposits;
 - (ix) the specification and as built drawings of the basal, sidewall and capping engineering systems; and
 - (x) the results of the asbestos cell separation bund topographic and inclination surveys.

- 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 Natural Resources Wales.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) 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 the permit including an interpretive review of that data;
 - (b) the energy consumed at the site, reported in the format set out in schedule 4, table S4.3;
 - (c) the annual production /treatment data set out in schedule 4, table S4.2;
 - (d) the topographical surveys required by condition 3.3.3 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) an assessment of the deformation behaviour of the separation bund based on the results of topographic surveys and inclinometer readings together with a comparison of this measured deformation to the deformation predicted during the Stability Risk Assessment Review until completion of the asbestos cell; and
 - (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 Natural Resources Wales, 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) for the reporting periods specified in schedule 4, table S4.1 and using the forms specified in schedule 4, table S4.4; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to Natural Resources Wales, 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.
- 4.2.5 Within 1 month of the end of each quarter, the operator shall submit to Natural Resources Wales 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.

4.3 Notifications

- 4.3.1 (a) In the event 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 Natural Resources Wales,
 - (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) In the event of a breach of any permit condition the operator must immediately:
- (i) inform Natural Resources Wales, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time.
- (c) 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, 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 (a)(i), or 4.3.1 (b)(i) 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 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Natural Resources Wales 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.

4.3.5 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) Natural Resources Wales 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.

4.3.6 Natural Resources Wales shall be given at least 14 days notice before implementation of any part of the site closure plan.

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 "without delay", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity
A1	S5.2 A(1)(a) The disposal of waste in a landfill.	Landfill for non-hazardous and asbestos containing waste. D5: Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc).	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in condition 2.4 as an integral part of landfilling.
A2	S5.4 A(1)(a)(i) Disposal of non-hazardous waste in a facility with a capacity exceeding 50 tonnes per day by biological treatment.	Storage and treatment of leachate in a facility with a capacity of >50 tonnes/day. D8: Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12.	Leachate arising from the landfill.
A3	Section 5.3, Part A(1)(a)(ii) Recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico chemical treatment. Section 5.6, Part A(1)(a) Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes.	R3: Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes). R5: Recycling/reclamation of other inorganic materials. R13: Storage of waste pending any of the operations numbered R1 to R12. D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it was produced).	Acceptance of up to 25,000 tonnes per annum of asbestos contaminated wastes for the Asbestos Picking Station per condition 2.4.
Directly Associated Activity			
A4	Burning of waste as a fuel.	Combustion of landfill gas for the purpose of electricity generation.	Landfill gas arising from the landfill.
A5	Landfill gas flaring.	Flaring of landfill gas for disposal in an appliance.	Landfill gas arising from the landfill.

Table S1.1 activities

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity
A6	Effluent discharge to sewer.	Discharge of treated leachate to sewer.	Leachate arising from the landfill.
A7	Water discharges to controlled waters.	Discharges of site drainage from the landfill.	From surface water management system to point of entry to controlled waters.
A8	Fuel storage.	Storage of fuel for operation of plant and equipment.	From storage of fuel to use in the operation of plant and equipment.
A9	Storage of other raw materials including lubricating oils and antifreeze.	Storage in bulk storage tanks.	From receipt of raw materials to their use within the installation.
A10	Production and storage of waste oils.	Production of waste oil during the operation of the listed activity and subsequent storage.	From the production of the waste to storage at the installation prior to removal by a third party.
A11	Landfill	R10: Land treatment resulting in benefit to agriculture or ecological improvement	Recovery of waste (specified within Table S2.3) for restoration above the landfill cap

Table S1.1 activities

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity
A12	Multipurpose waste treatment and remediation pad	Waste treatment facility (WTF)	WTF can treat up to 30,000 tonnes of hazardous soils per year.
		<p>S5.3 A(1)(a)(i): Recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving biological treatment.</p> <p>S5.4 A(1)(b)(i): Recovery of non-hazardous waste soils with a capacity exceeding 75 tonnes per day involving biological treatment.</p> <p>S5.6 A(1)(a): Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes.</p> <p>R5: Recycling/reclamation of other inorganic products.</p> <p>R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it was produced).</p> <p>D8: Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D 12.</p> <p>D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it was produced).</p>	<p>Waste shall be treated on an impermeable surface.</p> <p>Waste accepted shall be pre-booked and characterised prior to acceptance to confirm accepted materials are suitable and can be treated.</p> <p>All loads of waste shall be visually inspected before accepting the waste for deposit.</p> <p>The treatment pad and associated WTF infrastructure shall have sufficient low level bunding surrounding it.</p>
	Green waste composting facility (GWCF)	<p>R3: Recycling/reclamation of organic substances which are not used as solvents.</p> <p>R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it was produced).</p>	<p>GWCF can treat up to 75,000 tonnes of source segregated green wastes per year in accordance with SR2012 No.8.</p> <p>Composting operations shall take place on an impermeable surfaced pad.</p> <p>The composting area of the pad shall be surrounded by low level bunding to prevent the escape of material and leachate.</p>

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the Application;	07/05/2004
	The response to questions raised to the Schedule 4 Further Information Notice dated 21 st July 2004;	01/09/2004
	The e-mail from Biffa Waste Services Limited confirming that the Application should include the European Waste Code 16 01 03 as a permitted waste type;	08/03/2005
	With the following exclusions: <ul style="list-style-type: none"> • Response to question B2.1.1 • Response to question B2.1.5; and • Response to question B2.2.36 insofar as it applies to monitoring of the surface water discharge; and • Response to question B2.2.65 insofar as particulate monitoring is not carried out in accordance with Agency guidance 'M17 - Monitoring of particulate matter in ambient air around waste facilities'; and • Response to question B2.2.31 insofar as it applies to the leachate head control and trigger levels; and • The proposed methane trigger level for landfill gas boreholes 1-3 as detailed in Table LFGRA21 of the Landfill Gas Risk Assessment; and • Response to question B3.1.10 insofar as the proposed CO emission level for the future landfill gas flares (Haase HTN) as detailed in Table LFGRA23 of the Landfill Gas Risk Assessment; and • Table 2.10.1 of the generic part B form insofar as it applies to the daily frequency for the monitoring of suspended solids; and • The paragraph titled Perimeter Borehole Location and Spacing of section 3.3.2 of the Landfill Gas Risk assessment submitted as part of the Application; and • Section 3.3.3 of the Landfill Gas Risk Assessment submitted as part of the Application; and • Drawing ESID 4a, entitled 'Site Layout and Waste Deposition' and dated 04/05/04 insofar as it has been superseded by Drawing ESID 4a Rev. 1, entitled 'Site Layout and Waste Deposition' dated 27/08/04; and • Drawing ESID7b, entitled 'Leachate Management Construction Details' and dated insofar as it has been superseded by Drawing ESID7b Rev. 1 dated 04/05/04. 	
Provision of information	Particulate monitoring information	17/06/2005
Provision of information	Report in response to improvement condition 15a, dated 8 th September 2005, on the trace gases found in BH5.	-
Variation application – Remove SNRHW and asbestos waste Ref. DP3037UY	All parts, removing provision to construct a separate cell(s) for SNRHW and asbestos wastes, as detailed on Drawings ESID 4a Rev. 1, and Drawing ESID 4b.	17/12/2007
Variation application – LFG Engines Ref. YP3037UA	The response to questions C2.1 and C2.2 and given in section 1.2, Table 1/1 and Appendix 2 of the Variation Supporting Statement reference 407-0034-00246-002/SS.	28/09/2007
Provision of information	Report 08514290139.500/B.0 on landfill gas management Trecatti landfill site dated March 2009	-

Table S1.2 Operating techniques

Description	Parts	Date Received
	Action plan for the investigation of the exceedance of groundwater trigger levels in borehole GW2.	21/05/2016
Variation application EPR/RP3733PC/V008	Supporting Statement – Section 2 – Summary of Additional Management Techniques – Report reference BF4857/04	16/05/2014
	Construction and Operational Management Plan – Report reference BF4858/01	
Stability Risk Assessment Review: BF4857/SRA Revision 1 Final issue	All parts	25/09/2014
Nuisance and Health Risk Assessment – Report Reference BF4857/09 rev02	All	21/10/2014
Letter from Stratus in response to concerns relating to stability risk Assessment – Reference BF4858/2/RW001	N/A	02/12/2014
Substantial variation application EPR/RP3733PC/V009	All	04/08/2015
Substantial variation application EPR/RP3733PC/V011	Best Available Technique and Operating Techniques – Report – Version 1, March 2019 – Report reference 190205.416.00034.00575	14/03/2019
	Asbestos Management Plan for the Treatment of Asbestos Containing Soils (ACS) at the Trecatti STF – Report STF07/19/2459, January 2019 – Report reference Appendix BATOT01 Trecatti STF Asbestos Management Plan	
	Environmental Risk Assessment – Report – Version 1, March 2019, Report reference 190205.416.00034.00575 Trecatti Final to EA.	
	Site Layout Drawings, <ul style="list-style-type: none"> • Site Layout & Environmental Permit Boundary, No. 002, Date 03/19. Reference - 00034.00575.13.002.0a Site Layout&Env Per BDY • Asbestos Picking Station, No. 003, Date 03/19. Reference - 00034.00575.13.003.0a Asbestos Picking Station • Containment Bund Construction Details, No. 005, Date 03/19. Reference - 00034.00575.13.005.0 Containment Bund Construction Details Layout1 	

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
1	The operator is to implement a geotechnical monitoring system as described in the Stability Risk Assessment Review (SNRHW Cell revision 1 dated September 2014) and is to be monitored at the intervals stated. The monitoring data is to be reviewed annually, compared with the finite element models and the results reported to Natural Resources Wales for approval.	Complete
2	The operator is to submit for approval by Natural Resources Wales a plan showing additional monitoring points for airborne asbestos fibres at the eastern and northern most perimeter of the site.	Complete
3	The operator is to carry out background monitoring to establish baseline levels of airborne asbestos fibre levels prior to disposal of any asbestos wastes. Once a baseline is established all monitoring points are to be monitored on a 6-monthly basis.	Complete
4	The Operator is to provide a report quantifying how much inert waste is accepted for disposal, how much is to be utilised for engineering purposes and how much will be required for restoration purposes. Using this information, the Operator is to provide a restoration plan specifying appropriate quantities, waste acceptance criteria and waste acceptance procedures for approval to Natural Resources Wales. Upon approval, this Restoration Plan will be incorporated into the Operators Management Plan.	Complete

Table S1.4 Annual Waste Input Limits

Category	Limit Tonnes per Year
Non-hazardous waste including non-hazardous and inert wastes imported for recovery operations (construction, reclamation, restoration or improvement of land other than by mobile plant)	625,000
Asbestos containing wastes for landfill	50,000
Wastes for the Asbestos Picking Station	25,000
Wastes (including hazardous soils) for the Multipurpose Waste Treatments and Remediation Pad (MWTRP)	30,000
Waste for the Green Waste Composting Facility (GWCF)	75,000
Total Waste Deposits	675,000

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw Materials and Fuels

Raw materials and fuel description	Specification
Lubricants (oil and grease)	-

Table S2.2 Permitted Waste types for disposal by Non-Hazardous Landfill

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 07
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)
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

Table S2.2 Permitted Waste types for disposal by Non-Hazardous Landfill

Waste code	Description
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
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

Table S2.2 Permitted Waste types for disposal by Non-Hazardous Landfill

Waste code	Description
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
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 MFSU 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 opacifiers
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	wastes 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
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

Table S2.2 Permitted Waste types for disposal by Non-Hazardous Landfill

Waste code	Description
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 waterproofing 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
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 06 01	slags from primary and secondary production
10 06 04	other particulates and dust
10 05 11	dross and skimmings other than those mentioned in 10 05 10

Table S2.2 Permitted Waste types for disposal by Non-Hazardous Landfill

Waste code	Description
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
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 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
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

Table S2.2 Permitted Waste types for disposal by Non-Hazardous Landfill

Waste code	Description
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, phosphatising, 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
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
12 01 17	waste blasting material other than those mentioned in 12 01 16
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

Table S2.2 Permitted Waste types for disposal by Non-Hazardous Landfill

Waste code	Description
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 03	end-of-life tyres
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 06	batteries and accumulators
16 06 04	alkaline batteries (except 16 06 03)
16 06 05	other batteries and accumulators
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
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

Table S2.2 Permitted Waste types for disposal by Non-Hazardous Landfill

Waste code	Description
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
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 01 07	chemicals other than those mentioned in 18 01 06
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 ¹
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

¹ Stabilisation processes change the dangerousness of the constituents in the waste and thus transform hazardous waste into non-hazardous waste. Solidification processes only change the physical state of the waste (e.g. liquid into solid) by using additives without changing the chemical properties of the waste.

Table S2.2 Permitted Waste types for disposal by Non-Hazardous Landfill

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 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
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 34	batteries and accumulators other than those mentioned in 20 01 33
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
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

Table S2.2 Permitted Waste types for disposal by Non-Hazardous Landfill

Waste code	Description
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 Recovery Operations

Waste code	Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
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
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
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 03	wastes from pulp, paper and cardboard production and processing
03 03 05	de-inking sludges from paper recycling
03 03 09	lime mud waste
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
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
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 06	wastes from anaerobic treatment of waste
19 06 04	digestate from anaerobic treatment of municipal waste
19 08	wastes from waste water treatment plants not otherwise specified
19 08 05	sludges from treatment of urban waste water
19 09	wastes from the preparation of water intended for human consumption or water for industrial use
19 09 02	sludges from water clarification
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 13	wastes from soil and groundwater remediation
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 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 for disposal in the Asbestos Cell

Waste code	Description
06	WASTES FROM INORGANIC CHEMICAL PROCESSES
06 07	wastes from the MFSU of halogens and halogen chemical processes
06 07 01*	wastes containing asbestos from electrolysis
06 13	wastes from inorganic chemical processes not otherwise specified
06 13 04*	wastes from asbestos processing
10	WASTES FROM THERMAL PROCESSES
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 09*	wastes from asbestos-cement manufacture containing asbestos
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 11*	metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers
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 11*	brake pads containing asbestos
16 02	wastes from electrical and electronic equipment
16 02 12*	discarded equipment containing free asbestos
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03*	soil and stones containing dangerous substances
17 06	insulation materials and asbestos-containing construction materials
17 06 01*	insulation materials containing asbestos
17 06 03*	other insulation materials consisting of or containing dangerous substances
17 06 05*	construction materials containing asbestos ²
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 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 11*	other wastes (including mixtures of materials) from mechanical treatment of waste containing hazardous substances
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 01*	Solid wastes from soil remediation containing hazardous substances

² As far as the landfilling of waste is concerned, Member States may decide to postpone the entry into force of this entry until the establishment of appropriate measures for the treatment and disposal of waste from construction material containing asbestos. These measures are to be established according to the procedure referred to in Article

17 of Council Directive 1999/31/EC on the landfill of waste (OJ L 182, 16.7.1999, p.1) and shall be adopted by 16 July 2002 at the latest.'

Table S2.5 Permitted Waste types for the Multipurpose Waste Treatment Facility

Waste code	Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 04 07*	wastes containing dangerous substances 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 05	drilling muds and other drilling wastes
01 05 04	freshwater drilling muds and wastes
01 05 05*	oil-containing drilling muds and wastes
01 05 06*	drilling muds and other drilling wastes containing dangerous substances
13	OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)
13 05	oil/water separator contents
13 05 01*	solids from grit chambers and oil/water separators
13 05 02*	sludges from oil/water separators
13 05 03*	interceptor sludges
13 05 08*	mixtures of wastes from grit chambers and oil/water separators
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03*	soil and stones containing dangerous substances
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 05*	dredging spoil containing dangerous substances
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 07*	track ballast containing dangerous substances
17 05 08	track ballast other than those mentioned in 17 05 07
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 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 05*	sludges from physico/chemical treatment containing dangerous substances
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 03	stabilised/solidified wastes ³
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 08	wastes from waste water treatment plants not otherwise specified
19 08 13*	sludges containing dangerous substances from other treatment of industrial waste water
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 10	wastes from shredding of metal-containing wastes
19 10 05*	other fractions containing dangerous substances
19 10 06	other fractions other than those mentioned in 19 10 05
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 11*	other wastes (including mixtures of materials) from mechanical treatment of waste containing hazardous substances
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 01*	solid wastes from soil remediation containing dangerous substances
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01

³ Stabilisation processes change the dangerousness of the constituents in the waste and thus transform hazardous waste into non-hazardous waste. Solidification processes only change the physical state of the waste (e.g. liquid into solid) by using additives without changing the chemical properties of the waste.

Table S2.5 Permitted Waste types for the Multipurpose Waste Treatment Facility

Waste code	Description
19 13 03*	sludges from soil remediation containing dangerous substances
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03

Table S2.5 Permitted waste types for the Remediation Pad (to aid in the remediation process)

Waste code	Description
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 02	wood, glass and plastic
17 02 01	wood
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 01	screenings
19 08 02	waste from desanding
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 07	wood other than that mentioned in 19 12 06
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 38	wood other than that mentioned in 20 01 37
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
20 03	other municipal wastes
20 03 03	street-cleaning residues

Table S2.6 Permitted Waste Types for the Asbestos Picking Station

Waste code	Description
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 05 03*	soil and stones containing hazardous substances
17 05 04	soil and stones other than those mentioned in 17 05 03
17 06 05*	construction materials containing asbestos
17 09 03*	other construction and demolition wastes (including mixed wastes) containing hazardous substances

Schedule 3 – Emissions and monitoring

Table S3.1 Leachate level limits and monitoring requirements

Monitoring point ref. & location	Limit (including unit)	Monitoring frequency	Monitoring standard or method
81703050 (LW5) and 81703060 (LW6) (Monitoring points located in Phase 1) identified on Site Monitoring Plan BF4857/10/06 (rev 2).	5 metres above the base of Phase 1	Monthly	Unless otherwise agreed in writing with Natural Resources Wales, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02).
81703010 (LW1), 81703020 (LW2), 81703030 (LW3), 81703040 (LW4), 81703070 (LW7) and 81703080 (LW8) (Monitoring points located in Phase 2) identified on Site Monitoring Plan BF4857/10/06 (rev 2).	33 metres above the base of Phase 2	Monthly	Unless otherwise agreed in writing with Natural Resources Wales, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02).
Lagoon 2 as part of MWTRP on Drawing 002/Proposed site layout and boundary for variation EPR/ RP3733PC/V009	Within Lagoon	Monthly	Unless otherwise agreed in writing with Natural Resources Wales, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02).

Table S3.2 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
T1G1, T2G1 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Gas utilisation plant	650 mg/m ³	Hourly mean	Annually	As per M2 version 7 issued August 2016 'Monitoring of stack emissions to air'.
	CO		1500 mg/m ³			
	Total VOCs		1750 mg/m ³			
T2G2, T2G3, T2G4 and T2G5 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Gas utilisation plant	500 mg/m ³	Hourly mean	Annually	As per M2 version 7 issued August 2016 'Monitoring of stack emissions to air'.
	CO		1400 mg/m ³			
	Total VOCs		1000 mg/m ³			

Table S3.2 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method		
A8, A9 and A10 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Landfill Gas Flares	150 mg/m ³	Hourly mean	Annually ⁽¹⁾	As per M2 version 7 issued August 2016 Monitoring of stack emissions to air'.		
	CO		100 mg/m ³ (50 mg/m ³) ⁽²⁾					
	Total VOCs		10 mg/m ³					
MWTRP on Drawing 002/Proposed site layout and boundary for variation EPR/RP3733PC/V008	VOCs	Biofilter	No Limit	Hourly mean	Monthly	.		
	TPHs		No Limit					
	Benzene		No Limit					
	Toluene		No Limit					
	Ethyl Benzene		No Limit					
	Xylene		No Limit					
	PAHs		No Limit					
	CO ₂		No Limit					
	PM ¹⁰		No Limit					
	Outlets from biofilters emitting treated air from inside building		No Limit				-	
	Inlet from biofilters accepting untreated air from inside building							
	Dust		None specified				Weekly	Visual and Olfactory Observations
	Odour							
Temperature								
MWTRP on Drawing 002/Proposed site layout and boundary for variation EPR/RP3733PC/V008	Dust	Biopiles	None specified	-	Weekly	Visual Observations		
Note (1): Annual monitoring of flares is only required when flare operate in excess of 10% of the time, taken on an annual assessment period.								
Note (2): 50 mg/m ³ limit applies for flares commissioned after 31 December 2003.								

Table S3.3 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method	
81702001 and 81702002 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Site drainage and uncontaminated groundwater from beneath composite liner via balancing lagoon system.	Volume of pumped discharge	8985 cubic metres per day	-	Daily	As per LFTGN02 issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'.	
		Rate of pumped discharge	150 litres per second	-	Continuous		
		Suspended solids	100 mg/l	Spot sample	Monthly		
		COD	120 mg/l				
		Ammoniacal nitrogen	5 mg/l				
		pH	Minimum 6 pH units Maximum 8 pH units				
		Oil and grease	None visible	Observation			
81702014 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Monocell surface water side-riser and sump (operational areas of asbestos monocell area)	Suspended solids	100 mg/l	Spot sample	Monthly	As per LFTGN02 issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'.	
		COD	120 mg/l				
		Ammoniacal Nitrogen	5 mg/l				
		pH	Minimum 6 pH units Maximum 8 pH units				
		Asbestos fibres	None detectable				
		Oil and grease	Non visible	Observation			
MWTRP on Drawing 002/Proposed site layout and boundary for variation EPR/RP3733PC/V0 08	Process water discharged to surface water from Biopiles ¹	Suspended solids	100 mg/l	Spot sample	Monthly	As per LFTGN02 issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'.	
		COD	120 mg/l				
		Ammoniacal Nitrogen	5 mg/l				
		pH	Minimum 6 pH units Maximum 8 pH units				
		Oil and grease	Non visible	Observation			

Table S3.3 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
Process water tanks at MWTRP on Drawing 002/Proposed site layout and boundary for variation EPR/ RP3733PC/V0 08	Process water discharge to surface water from Biopiles and the air/water separators located on composting pad ¹	Suspended solids	100mg/l	Spot sample	Monthly	As per LFTGN02 issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'.
		COD	120mg/l			
		Ammoniacal Nitrogen	5mg/l			
		pH	Minimum 6pH units Maximum 8 pH units			
		Oil and grease	None visible	Observation		
Lagoon 1 at MWTRP on Drawing 002/Proposed site layout and boundary for variation EPR/ RP3733PC/V0 08	Clean surface water run off collected within the bunding surrounding the MWTRP infrastructure ² .	Suspended solids	100mg/l	Spot sample	Monthly	As per LFTGN02 issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'.
		COD	120mg/l			
		Ammoniacal Nitrogen	5mg/l			
		pH	Minimum 6pH units Maximum 8 pH units			
		Oil and grease	None visible	Observation		

Note 1: Effluent from biopiles shall be discharged to surface waters subject to testing results. If test results exceed allowable limits for discharge to surface waters they will be either tankered off to a suitably licensed facility or released to the existing Trecatti leachate treatment system. Water will only be discharged to surface water if compliant.

Note 2: A cut-off valve will be provided at Lagoon 1 and should any contamination be evident, the water will be prevented from entering the existing surface water management system and controlled waters.

Table S3.4 Point source emissions to sewer, effluent treatment plant or by tankering or other transfers off-site– emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
81703400 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Landfill Leachate	-	-	-	-	-
WTP on Drawing 002/Proposed site layout and boundary for variation EPR/ RP3733PC/V008	Process water (effluent) from Biopiles located on composting pad	-	-	-	-	-

Table S3.5 Trigger levels for emissions to groundwater and monitoring requirements

Emission point ref. & location	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
81701110 (GW1) identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Ammoniacal Nitrogen	1.50 mg/l	Spot sample	Quarterly	As per LFTGN02 (issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'. H1 - Technical Annex to Annex (j): Hydrogeological Risk Assessments for Landfills and the Derivation of Groundwater Control Levels and Compliance Limits, v2.0, April 2010.
	Chloride	250 mg/l			
	Cadmium	0.10 µg/l			
	Mecoprop	0.04 µg/l			
	Toluene	4.00 µg/l			
	Xylene	3.00 µg/l			
	Naphthalene	1.00 µg/l			
81701120 (GW2)	Ammoniacal Nitrogen	17 mg/l			
	Chloride	650 mg/l			
	Cadmium	0.16 µg/l			
	Mecoprop	1.0 µg/l			
	Toluene	65 µg/l			
	Xylene	15 µg/l			
	Naphthalene	1.0 µg/l			
81701209 (GW9)	Ammoniacal Nitrogen	2.8 mg/l			
	Chloride	550 mg/l			
	Cadmium	21 µg/l			
	Mecoprop	0.34 µg/l			
	Toluene	4.0 µg/l			
	Xylene	3.0 µg/l			
	Naphthalene	1.0 µg/l			
81701210 (GW10)	Ammoniacal Nitrogen	74 mg/l			
	Chloride	950 mg/l			
	Cadmium	0.25 µg/l			
	Mecoprop	4.2 µg/l			
	Toluene	4.0 µg/l			
	Xylene	3.0 µg/l			
	Naphthalene	1.0 µg/l			
81701211 (GW11)	Ammoniacal Nitrogen	1.5 mg/l			
	Chloride	250 mg/l			
	Cadmium	0.1 µg/l			
	Mecoprop	0.04 µg/l			
	Toluene	4.0 µg/l			
	Xylene	3.0 µg/l			
	Naphthalene	1.0 µg/l			
81701212 (GW12)	Ammoniacal Nitrogen	1.5 mg/l			
	Chloride	250 mg/l			
	Cadmium	0.1 µg/l			
	Mecoprop	0.04 µg/l			
	Toluene	4.0 µg/l			
	Xylene	3.0 µg/l			
	Naphthalene	1.0 µg/l			

81701213 (GW13)	Ammoniacal Nitrogen	1.5 mg/l
	Chloride	250 mg/l
	Cadmium	0.1 µg/l
	Mecoprop	0.07 µg/l
	Toluene	4.0 µg/l
	Xylene	3.0 µg/l
	Naphthalene	1.0 µg/l

Table S3.6 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Emission point ref. & location	Parameter	Limit (incl. Unit)	Monitoring frequency	Monitoring standard or method
81701001, 81701002, 81701003, 81701006, 81701007, 81701009, 81701010, 81701011, 81701012, 81701013, 81701014, 81701017, 81701018, 81701019, 81701020, 81701022, 81701023 and . identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Methane	1.0 %v/v	Monthly	As per LFTGN 03 issued September 2004 'Guidance on the management of landfill gas'.
	Carbon Dioxide	10.0 %v/v		
	Oxygen	No limit		
	Atmospheric pressure	No limit		
	Meteorological data	No limit		
81701004 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Methane	3.0 %v/v		
	Carbon Dioxide	10.0 %v/v		
	Oxygen	No limit		
	Atmospheric pressure	No limit		
	Meteorological data	No limit		
81701005 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Methane	13.0 %v/v		
	Carbon Dioxide	17.0 %v/v		
	Oxygen	No limit		
	Atmospheric pressure	No limit		
	Meteorological data	No limit		
81701008 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Methane	1.0 %v/v		
	Carbon Dioxide	12.0 %v/v		
	Oxygen	No limit		
	Atmospheric pressure	No limit		
	Meteorological data	No limit		
81701015 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Methane	1.0 %v/v		
	Carbon Dioxide	No limit		
	Oxygen	No limit		

Table S3.6 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Emission point ref. & location	Parameter	Limit (incl. Unit)	Monitoring frequency	Monitoring standard or method
81701016, 81701021, 81701024, 81701025 and 81701026 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Atmospheric pressure	No limit		
	Meteorological data	No limit		
	Methane	No limit		
	Carbon Dioxide	No limit		
	Oxygen	No limit		
	Atmospheric pressure	No limit		
	Meteorological data	No limit		

Table S3.7 Landfill gas from capped surfaces – limits and monitoring requirements

Emission point ref. & location	Parameter	Limit (incl. Unit)	Monitoring frequency	Monitoring standard or method
Permanently capped zone	Average methane flux and total methane emission	Average zone emission rate of 0.001 mg/m2/second	Annually	As per LFTGN 07 issued September 2004 'Guidance on monitoring landfill gas surface emissions'
Temporarily capped zone	Average methane flux and total methane emission	Average zone emission rate of 0.1 mg/m2/second		

Table S3.8 Landfill gas – other monitoring requirements

Emission point ref. & location	Parameter	Monitoring frequency	Monitoring standard or method	
T1G1, T2G1, T2G2, T2G3, T2G4 and T2G5 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	NOx and CO	Quarterly	Portable combustion analyser, as agreed Natural Resources Wales.	-
	Sulphur Dioxide	Annually	As per M2 version 7 issued August 2016 'Monitoring of stack emissions to air'.	
Gas collection system at well control valve and manifolds on gas system	Methane	Weekly	As per LFTGN03 issued September 2004 'Guidance on the management of landfill gas'.	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 undertaken.
	Carbon Dioxide			
	Oxygen			
	Carbon Monoxide			
	Atmospheric pressure			
	Differential pressure			
	Suction			
	% Balance Gas (calculated as the difference between the sum of measured gases and 100%)			

Table S3.8 Landfill gas – other monitoring requirements

Emission point ref. & location	Parameter	Monitoring frequency	Monitoring standard or method	
Manifolds 1, 2, 3, 3A, 4, 5 and 7	Gas flow rate			
Input to LFG Utilisation Compound. identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Trace gas analysis in accordance with LFTGN04.	Annually	As per LFTGN04 issued September 2004 'Guidance for Monitoring Trace Components in Landfill Gas'.	The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.
Flares- A8, A9, and A10. identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Temperature	Weekly while flare operational	As per M2 version 7 issued August 2016	-
Input to LFG Utilisation Compound. Identified on Site Monitoring Plan BF4857/10/06 (rev 2).	<div>Methane</div> <div>Carbon Dioxide</div> <div>Oxygen</div> <div>Gas flow rate</div> <div>% Balance Gas (calculated as the difference between the sum of measured gases and 100%)</div>	Weekly	As per LFTGN05 issued September 2004 'Guidance for monitoring enclosed landfill gas flares'.	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 S3.9 Leachate – other monitoring requirements

Emission point ref. & location	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
81703050 (LW5) and 81703060 (LW6). (Monitoring points located in Phase 1)	<div>Electrical conductivity</div> <div>Chloride</div> <div>Ammoniacal Nitrogen</div> <div>pH</div> <div>Total alkalinity</div> <div>Magnesium</div>	Quarterly	As per LFTGN02 issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'.	-

Table S3.9 Leachate – other monitoring requirements

Emission point ref. & location	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
81703010 (LW1), 81703020 (LW2), 81703030 (LW3) and 81703040 (LW4), 81703070 (LW7) and 81703080 (LW8) (Monitoring points located in Phase 2) identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Potassium	Annually		
	Total sulphates			
	Calcium			
	Sodium			
	BOD			
	COD			
	TOC			
	TON			
	Manganese			
	Iron			
	Chromium			
	Copper			
	Lead			
	Zinc			
	Nickel			
	Mecoprop			
	Toluene			
	Xylene			
	Naphthalene			
	Cadmium			
	Hazardous substances			
	Depth to base of monitoring well			

Table S3.10 Surface water – other monitoring requirements

Emission point ref. & location	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
81702001, 81702002 and 81702003 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Electrical conductivity	Monthly	As per LFTGN02 issued February 2003 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water'.	-
	Chloride			
	Ammoniacal Nitrogen			
	pH			
	Suspended solids			
	BOD			
	COD			

Table S3.11 Groundwater – other monitoring requirements

Emission point ref. & location	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
81701110 (GW1), 81701120 (GW2), 81701130 (GW3), 81701140 (GW4),	Water level	Monthly	As per LFTGN02 issued February 2003 'Guidance on Monitoring of Landfill Leachate,	-
	Electrical conductivity	Quarterly		
	Chloride			

Table S3.11 Groundwater – other monitoring requirements

Emission point ref. & location	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
81701150 (GW5), 81701160 (GW6), 81701170 (GW7), 81701180 (GW8) 81701209 (GW9), 81701210 (GW10), 81701211 (GW11) and 81701212(GW12) and 81701213 (GW13) identified on Site Monitoring Plan BF4857/10/06 (rev 2).	Ammoniacal Nitrogen		Groundwater and Surface Water'.	
	pH		H1 - Technical Annex to Annex (j):	
	Total alkalinity		Hydrogeological Risk Assessments for	
	Magnesium		Landfills and the	
	Potassium		Derivation of	
	Total sulphates		Groundwater Control	
	Calcium		Levels and	
	Sodium		Compliance Limits,	
	Nitrates		v2.0, April 2016.	
	Nitrites			
	Phosphates			
	Manganese			
	Iron			
	Chromium			
	Copper			
	Lead			
	Zinc			
	Nickel			
	Mecoprop			
	Toluene			
	Xylene			
	Naphthalene			
	Cadmium			
	Hazardous substances	Annually		
	Depth to base of monitoring well			

Table S3.12 Particulate matter in ambient air – limits and monitoring requirements

Emission point ref. & location	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
D1, D2, D3 and D4 identified on Site Monitoring Plan BF4857/10/06 (rev 2).	PM ¹⁰	40µm ³ - annual mean. 50µm ³ - 24 hour mean, not to be exceeded >35 times per year.	24 hours	Six monthly	As per M17 issued July 2013 'Monitoring of Particulate Matter in ambient air around waste facilities'.
	Deposited particulate	200mg/m ² day ⁻¹			
	Asbestos fibres	0.001 asbestos fibres/mL	24 hours	Six monthly	

Table S3.13 Asbestos Cell Stability Monitoring Requirements

Emission point ref. & location	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Asbestos cell separation bund inclinometers 1, 2 and 3	Deformation behaviour of the separation bund measured at each inclinometer.	Prior to commencement and upon completion of each separation bund lift and at 6 monthly intervals.	Separation bund inclination and topography assessment.	-

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	Emission or monitoring point/reference	Reporting period	Period begins
Leachate levels As required by condition 3.5.1	81703010 (LW1), 81703020 (LW2), 81703030 (LW3), 81703040 (LW4), 81703050 (LW5), 81703060 (LW6), 81703070 (LW7) and 81703080 (LW8).	Every 3 months	1 January 1 April, 1 July, 1 October
Emissions to air Parameters as required by condition 3.5.1	T1G1, T2G1, T2G2, T2G3, T2G4, T2G5, A8, A9 and A10.	Every 12 months	1 January
Emissions to water Parameters as required by condition 3.5.1	81702001 and 81702002	Every 3 months	1 January, 1 April, 1 July, 1 October
Groundwater Parameters as required by condition 3.5.1	81701110 (GW1), 81701120 (GW2), 81701091 (GW9), 81701101 (GW10), 81701111 (GW11), 81701121 (GW12) and 81701213 (GW13).	Every 3 Months	1 January, 1 April, 1 July, 1 October
Landfill gas lateral migration Parameters as required by condition 3.5.1	81701001, 81701002, 81701003, 81701004, 81701005, 81701006, 81701007, 81701008, 81701009, 81701010, 81701011, 81701012, 81701013, 81701014, 81701015, 81701016, 81701017, 81701018, 81701019, 81701020, 81701021, 81701022, 81701023, 81701024, 81701025 and 81701026.	Every 3 months	1 January, 1 April, 1 July, 1 October
Landfill gas surface emissions Parameters as required by condition 3.5.1	Permanently and Temporarily capped zone	Every 12 months	1 January
Other Landfill gas monitoring Parameters as required by condition 3.5.1	81701005	Every 3 months	1 January, 1 April, 1 July, 1 October
	Input to LFG Utilisation Compound	Every 12 months	1 January

Table S4.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Other leachate monitoring Parameters as required by condition 3.5.1	81703010 (LW1), 81703020 (LW2), 81703030 (LW3), 81703040 (LW4), 81703050 (LW5), 81703060 (LW6), 81703070 (LW7) and 81703080 (LW8)	Monthly and quarterly parameters every 3 months	1 January, 1 April, 1 July, 1 October
Hazardous substances Screen	As above	Every 12 months	1 January
Other surface water monitoring Parameters as required by condition 3.5.1	81702001, 81702002 and 81702003.	Every 3 months	1 January, 1 April, 1 July, 1 October
Other groundwater monitoring Parameters as required by condition 3.5.1	81701110 (GW1), 81701120 (GW2), 81701130 (GW3), 81701140 (GW4), 81701150 (GW5), 81701160 (GW6), 81701170 (GW7), and 81701180 (GW8).	Monthly and quarterly parameters every 3 months	1 January, 1 April, 1 July, 1 October
Hazardous Substances Screen	81701209 (GW9), 81701210 (GW10), 81701211 (GW11), 81701212 (GW12) and 81701213 (GW13).	Every 12 months	1 January
Particulate matter Parameters as required by condition 3.5.1	D1, D2, D3 and D4	Every 6 months	1 January, 1 July
Separation bund topography as required by condition 3.5.1	Asbestos cell separation bund	After Each lift but in any case no longer than every 6 months	Upon commencement of construction
Separation bund inclination as required by condition 3.5.1	Asbestos cell separation bund	After Each lift but in any case no longer than every 6 months	Upon commencement of construction
Biofilter Efficiency	MWTRP on Drawing 002/Proposed site layout and boundary for variation EPR/ RP3733PC/V008	Every 6 months	1 January, 1 July

Table S4.2: Annual production/treatment

Parameter	Units
Leachate: Disposed of off-site; Disposed of to any onsite effluent treatment plant; Recirculated into the waste mass.	Cubic metres/year
Surface water and/ or groundwater: Disposed of offsite; Disposed of to any onsite effluent treatment plant.	Cubic metres/year

Table S4.2: Annual production/treatment

Parameter	Units
Landfill gas: combustion in flares; combustion in gas engines; Other methods of gas utilisation.	Normalised cubic metres/year

Table S4.3 Performance parameters

Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes
Energy usage (including for leachate treatment)	Annually	MWh
Total raw material used	Annually	tonnes

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 Natural Resources Wales	18/01/11
Air	Form air 1 or other form as agreed in writing by Natural Resources Wales	18/01/11
Controlled water	Form water 1 or other form as agreed in writing by Natural Resources Wales	18/01/11
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with Natural Resources Wales	18/01/11
Sewer	Form sewer 1 or other form as agreed in writing by Natural Resources Wales	18/01/11
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with Natural Resources Wales	18/01/11
Particulate matter	Form Particulate 1 or other reporting format to be agreed in writing with Natural Resources Wales	18/01/11
Waste return	Waste tonnage return form version: 1.2	20/09/14
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with Natural Resources Wales	28/01/15
Inclinometer readings of asbestos bund separation bund	Reporting format to be agreed in writing with Natural Resources Wales	28/01/15
Water usage	Form water usage 2 or other form as agreed in writing by Natural Resources Wales	23/11/15
Energy usage	Form energy 2 or other form as agreed in writing by Natural Resources Wales	23/11/15
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	23/11/15
Biofilter efficiency	Form biofilter 1 or other form as agreed in writing by Natural Resources Wales	23/11/15

Schedule 5 - Notification

These pages outline 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	EPR/RP3733PC
Name of operator	Biffa Waste Services Limited
Location of Facility	Trecatti Landfill Site Fochriw Road Merthyr Tydfil Mid Glamorgan CF48 4AB
Time and date of the detection	

(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment	
To be notified Immediately	
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 permit condition	
To be notified immediately	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
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) 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 immediately	
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 submitted 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.

“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 Natural Resources Wales 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.

“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).

(b) 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.

“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.

“disposal” means any of the operations provided for in Annex IIA to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.675 and words and expressions used in this permit which are also used in the 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.

“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 property” has the meaning given in Schedule 3 of the Hazardous Waste (England and Wales) Regulations 2005 No.894 and the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138).

“Industrial Emissions Directive” means DIRECTIVE 2016/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2016 on industrial emissions

“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.

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

“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.

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

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

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

“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.

Pests” means *Birds, Vermin and Insects*.

“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 IIB to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

“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.

“Solvent Emissions Directive” means Directive 1999/13/EC (as amended by Directive 2004/42/EC) on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations.

“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.

“WFD” means Waste Framework Directive, Directive 2008/98/EC of the European Parliament and of the Council on waste

“year” means calendar year ending 31 December.

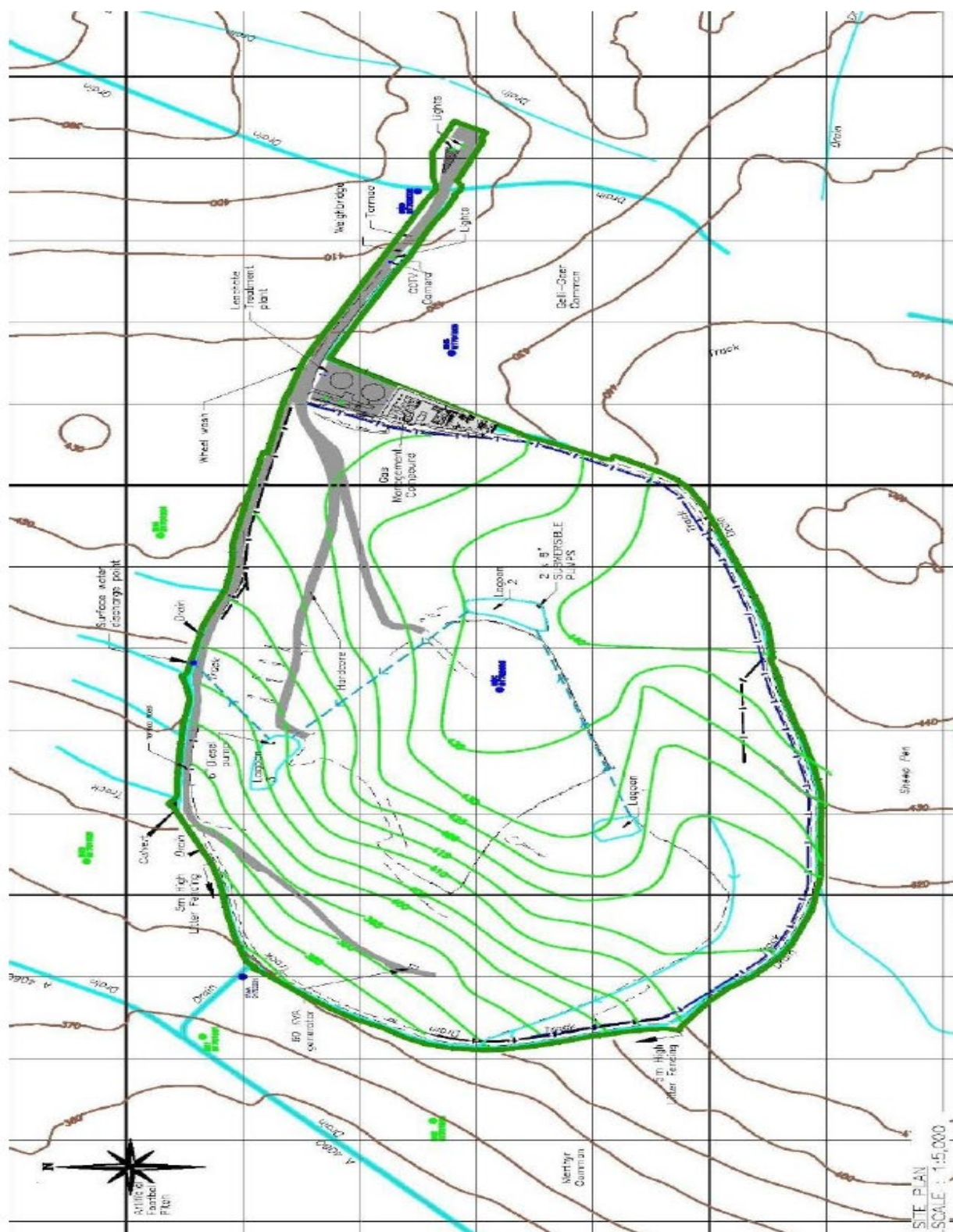
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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 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

Schedule 7 - Site plan



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