

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Enovert North Limited
Himley Quarry Landfill Site
Oak Lane
Kingswinford
West Midlands
DY6 7JS

Variation application number

EPR/BV7265IS/V010

Permit number

EPR/BV7265IS

Himley Quarry Landfill Site

Permit number EPR/BV7265IS

Introductory note

This introductory note does not form a part of the notice

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

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

The site

Himley Quarry Landfill Site is located near to Kingswinford in the West Midlands and approximately centres on National Grid Reference SO 89628 90245. The site is bordered to the south by Stallings Lane, to the north by Oak Lane and to the west by industrial units. Residential properties are present to the south of Stallings Lane.

The installation is permitted to operate as a landfill for the disposal of non-hazardous and stable non-reactive hazardous wastes. Landfill gas arising from the installation is either flared or used in a gas utilisation plant on-site for the production of electricity. The permit also authorises the recovery of hazardous wastes through soil treatment and the storage of wastes for this purpose.

The variation

This variation authorises the operation of listed activity Section 5.4 Part A(1)(a)(i) biological treatment of non-hazardous waste in a plant with a capacity above 50 tonnes per day. The operator will treat both on-site and imported non-hazardous leachates in a sequencing batch reactor tank (SBR) with a maximum throughput of 130m³ per day. Leachate will be stored in bunded tanks prior to treatment in the SBR and again prior to discharge to foul sewer.

The operator holds Trade Effluent Consents from Severn Trent Water Limited to discharge effluent to foul sewer and surface water drainage to storm sewer. We have re-listed the emission point to storm sewer from table S3.3 for point source emissions to water (now removed) to table S3.5 for point source emissions to sewer. The subsequent tables in schedule 3 have been renumbered.

We have set improvement programmes IP6 and IP7 to require the operator to propose a monitoring programme, undertake monitoring of the treated effluent and assess the monitoring results. This is to validate the conclusions of the operator's environmental risk assessment and our water quality modelling.

Improvement programme IP2 has been set to require the operator to update their leachate management plan (LMP). This is to ensure that the LMP reflects the change in operation from leachate recirculation to extraction for treatment and disposal and to incorporate changes to the way in which leachate is monitored on site.

Pre-operational measures 3 and 4 have been set to preclude the import of leachate for treatment until we are satisfied that the waste acceptance reception area is completely contained and proposals to monitor the hazardous pollutants contained in imported leachates are agreed.

We have also partially amended the landfill monitoring and emission limits for leachate, groundwater, landfill gas and surface waters. Improvement programmes have been set to establish limits on the down-hydraulic-gradient groundwater monitoring boreholes (IP3), to install additional perimeter gas monitoring boreholes (IP4) and to review and set limits for emissions from all perimeter gas boreholes (IP5).

This variation also recognises the change in operator name from Cory Environmental (Central) Limited to Enovert North Limited.

The schedules specify the changes made to the permit.

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

Status log of the permit		
Description	Date	Comments
Application BV7265IS (EPR ref. EPR/BV7265IS/A001)	Duly made 08/10/03	Application for non-hazardous waste landfill site with stable, non-reactive hazardous waste cell.
Permit BV7265IS (EPR ref. EPR/BV7265IS/A001) determined	23/07/04	Permit issued to Cory Environmental (Central) Ltd.
Variation VP3538SB (EPR ref. EPR/BV7265IS/V002)	17/01/05	Application to vary Schedule 6 list of permitted wastes.
Variation VP3538SB (EPR ref. EPR/BV7265IS/V002) determined	26/07/05	Variation issued.
Variation EP3037SD (EPR ref. EPR/BV7265IS/V003)	22/08/05	Application to vary Table 1.1.1 listed activities, Table 2.1.1 operating techniques, condition 2.2.1 and table 2.2.2 emissions to air and monitoring.
Variation EP3037SD (EPR ref. EPR/BV7265IS/V003) determined	31/03/06	Variation issued.
Variation LP3039MB (EPR ref. EPR/BV7265IS/V004) determined	23/08/07	Agency initiated variation and consolidation based on standard permit template.
Variation TP3836XX (EPR ref. EPR/BV7265IS/V005)	20/03/08	Application to discharge leachate to foul sewer.
Variation TP3836XX (EPR ref. EPR/BV7265IS/V005) determined	12/05/08	Variation issued.
Variation EPR/BV7265IS/V006	26/04/10	Application to add a waste code to the list of permitted waste codes.
Variation EPR/BV7265IS/V006 determined	08/06/10	Variation issued.
Variation EPR/BV7265IS/V007	24/03/11	Application to operate soil treatment activity for hydrocarbon impacted soils.
Additional information requested	16/05/11	Response received 19/05/11.
Variation EPR/BV7265IS/V007 determined	17/06/11	Variation issued.
Agency variation determined EPR/BV7265IS/V008	30/05/13	Agency variation to implement the changes introduced by IED.
Environment Agency Landfill Sector Review 2013 Permit reviewed Variation determined EPR/BV7265IS/V009	27/04/15	Varied and consolidated permit issued in modern condition format.

Status log of the permit		
Description	Date	Comments
Application EPR/BV7265IS/V010 (variation and consolidation)	Duly made 30/05/17	Application to add a leachate treatment plant and to amend the landfill monitoring conditions and emission limits.
Additional information received	22/09/17	Response to Schedule 5 Notice regarding how the leachate treatment plant will implement best available techniques and supporting information for the changes proposed to the landfill emission limits and monitoring regime.
	02/11/17	Response to second Schedule 5 Notice providing a H1 risk assessment and further details about how the leachate treatment plant will implement best available techniques.
Variation determined EPR/BV7265IS (Billing reference: MP3038YC)	15/01/18	Varied and consolidated permit issued to Enovert North Limited (formerly named Cory Environmental (Central) Limited).

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

EPR/BV7265IS

Issued to

Enovert North Limited (“the operator”)

whose registered office is

**20 Old Broad Street
London
EC2N 1DP**

company registration number 02773558

to operate a regulated facility at

**Himley Quarry Landfill Site
Oak Lane
Kingswinford
West Midlands
DY6 7JS**

to the extent set out in the schedules.

The notice shall take effect from 15/01/2018

Name	Date
Claire Roberts	15/01/2018

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

The following conditions are added following an Environment Agency initiated variation:

- Improvement programme IP5, as referenced in condition 2.4.1, has been added for the operator to review their emission limits on all perimeter gas boreholes.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/BV7265IS

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BV7265IS/V010 authorising,

Enovert North Limited (“the operator”),

whose registered office is

20 Old Broad Street

London

EC2N 1DP

company registration number 02773558

to operate an installation at

Himley Quarry Landfill Site

Oak Lane

Kingswinford

West Midlands

DY6 7JS

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

Name	Date
Claire Roberts	15/01/2018

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Finance

- 1.2.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and the Environment Agency dated 15/12/05 shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by the Environment Agency.
- 1.2.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:
- (a) the costs of setting up and operating the landfill;
 - (b) the costs of the financial provision required by condition 1.2.1; and
 - (c) the estimated costs for the closure and aftercare of the landfill.

1.3 Energy efficiency

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) implement any appropriate measures identified by a review.

1.4 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:

- (a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;
- (b) review and record at least every four years whether changes to those measures should be made; and
- (c) take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

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

2.1.2 For the following activities referenced in schedule 1, table S1.1 (A3 and A4) 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 at schedule 7 to this permit.

2.3 Operating techniques

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

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.4 Improvement programme

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

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

2.5 Pre-operational conditions

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

2.6 Landfill Engineering

- 2.6.1 No construction of any new cell of the landfill shall commence until the operator has submitted construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.
- 2.6.2 Where the operator proposes to construct any new cell other than the first cell, but proposes no change from the design of the most recently approved cell which could have any impact on the performance of any element of the design, no construction of the new cell shall commence until the operator has submitted a cell layout drawing and the Environment Agency has confirmed that it is satisfied with the cell layout drawing.
- 2.6.3 The construction of a new cell shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Environment Agency.
- 2.6.4 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Environment Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.6.5 No construction of landfill infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Environment Agency has confirmed that it is satisfied with the construction proposals.
- 2.6.6 The construction of the landfill infrastructure shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Environment Agency.
- 2.6.7 The operator shall submit a CQA Validation Report within four weeks of the completion of the construction of the relevant landfill infrastructure, or other time period agreed in writing with the Environment Agency.
- 2.6.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.6.5 and 2.6.6 do not apply and the relevant landfill infrastructure may be constructed, provided that the construction proposals are submitted to the Environment Agency as soon as practicable.
- 2.6.9 For the purposes of conditions 2.6.1, 2.6.2, 2.6.4 and 2.6.5, the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
- (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.
- 2.6.10 Where the Environment Agency has required further information under condition 2.6.9(b), the Environment Agency shall be deemed to be satisfied where it has not, within the period of four weeks from the date of receipt of the further information, either:
- (a) confirmed whether or not it is satisfied; or
 - (b) informed the operator that it requires further information.

2.7 Waste acceptance

- 2.7.1 Wastes shall only be accepted for disposal if:
- (a) they are listed in schedule 2, tables S2.1 and S2.4; and

- (b) they are non- hazardous waste, stable, non-reactive hazardous wastes or gypsum waste; and
- (c) they are not whole used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm); and
- (d) they are not shredded used tyres; and
- (e) they are not liquid waste (including waste waters but excluding sludge and excluding liquid waste accepted at a permitted leachate treatment activity); and
- (f) they are not chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown; and
- (g) all the relevant waste acceptance procedures have been completed; and
- (h) they fulfil the relevant waste acceptance criteria; and
- (i) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria; and
- (j) they are wastes which have been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment, or liquid waste accepted for treatment at a permitted leachate treatment activity; and
- (k) they are wastes with a code beginning with 07 05 and 16 03, they shall exclude waste medicinal products and pharmaceutically active waste materials arising from their manufacture.

2.7.2 For the following activities referenced in schedule 1, table S1.1 (A3, A4 and A5) waste shall only be accepted for treatment if:

- (a) it is of a type and quantity listed in schedule 2, tables S2.2 and S2.5; and
- (b) it conforms to the description in the documentation supplied by the producer and holder.

2.7.3 Wastes shall only be accepted for restoration where:

- (a) they are listed in schedule 2, table S2.3; and
- (b) they are accepted in accordance with a restoration plan approved in writing by the Environment Agency.

2.7.4 Stable non-reactive hazardous waste shall not be deposited in cells used or intended to be used for the disposal of biodegradable non-hazardous waste. Stable non-reactive hazardous waste and non-hazardous waste which is landfilled in the same cell must meet the relevant waste acceptance criteria.

2.7.5 Gypsum and other high sulphate bearing waste shall only be disposed of in cells where no biodegradable waste is accepted. Wastes disposed of in a cell with gypsum and other high sulphate bearing wastes must meet the relevant waste acceptance criteria.

2.7.6 For the following activities referenced in schedule 1, table S1.1 (A1, A2 and A5) the operator shall:

- (a) visually inspect without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill and waste at the point of deposit; and
- (b) be satisfied that the waste conforms to the requirements of condition 2.7.1.

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

2.7.8 For the following activities referenced in schedule 1, table S1.1 (A1, A2 and A5) the operator on accepting each delivery of waste shall provide a receipt to the person delivering it.

2.7.9 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing HIM/007 dated September 2003.

- 2.7.10 The quantity of waste that is deposited or recovered in the landfill in any year shall not exceed the limits in schedule 1, table S1.5.
- 2.7.11 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.
- 2.7.12 The operator shall maintain and implement a system to record the disposal location of any hazardous waste.

2.8 Leachate levels

- 2.8.1 The limits for the level of leachate listed in schedule 3, table S3.1 shall not be exceeded.

2.9 Closure and aftercare

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

2.10 Landfill gas management

- 2.10.1 The operator shall take appropriate measures, including, but not limited to, those specified in any approved landfill gas management plan, to:
- (a) collect landfill gas; and
 - (b) control the migration of landfill gas.
- 2.10.2 The operator shall use the collected landfill gas to produce energy. If the collected landfill gas cannot be used to produce energy, the operator shall use appropriate measures to flare or treat the gas in accordance with an approved landfill gas management plan.
- 2.10.3 The operator shall:
- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a revised landfill gas management plan;
 - (b) implement the revised landfill gas management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 The limits in schedule 3 shall not be exceeded.
- 3.1.2 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3, tables S3.2 and S3.5.
- 3.1.3 The limits given in schedule 3, table S3.2 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.
- 3.1.4 The operator shall prevent the input of any hazardous substances from the activities into groundwater.
- 3.1.5 The operator shall submit to the Environment Agency a review of the Hydrogeological Risk Assessment:

- (a) between nine and six months prior to the fourth anniversary of the granting of the permit; and
 - (b) between nine and six months prior to every subsequent six years after the fourth anniversary of the granting of the permit.
- 3.1.6 For the following activities referenced in schedule 1, table S1.1 (A3, A4 and A5) periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency 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 the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

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

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring and any other actions specified in the following tables in schedule 3 to this permit:
 - (a) Leachate specified in tables S3.1 and S3.9;
 - (b) Point source emissions specified in tables S3.2 and S3.5;
 - (c) Groundwater specified in tables S3.3 and S3.7;
 - (d) Landfill gas specified in tables S3.4, S3.6 and S3.8;
 - (e) Surface water specified in table S3.10; and
 - (f) Ambient air specified in table S3.11.
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 A topographical survey of the site referenced to ordnance datum shall be carried out and shall be used to produce a plan of a scale adequate to show the surveyed features of the site:
 - (a) annually; and
 - (b) prior to the disposal of waste in any new cell or new development area of the landfill; and
 - (c) following closure of the landfill or part of the landfill.
- 3.5.4 The operator shall, unless otherwise agreed in writing with the Environment Agency:
 - (a) carry out detailed inspections of the external surfaces of the Sequencing Batch Reactor (SBR) tank every 6 months in accordance with the manufacturer's instructions. The inspections shall be carried out by a suitably qualified person; and
 - (b) carry out detailed inspections of the internal surfaces of the SBR tank. The first inspection must occur within 10 years of the date of the construction of the SBR tank (by January 2028) and subsequent inspections every 5 years during the operational life of the tank. The inspections shall be carried out by a suitably qualified person; and
 - (c) prevent the ingress of surface water into the leak detection layer below and around the SBR.

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 the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution hazard or annoyance from pests;
 - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

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

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) the results of groundwater monitoring;
 - (ii) sub-surface landfill gas monitoring;
 - (iii) leachate levels, quality and quantities;
 - (iv) landfill gas generation and collection;
 - (v) waste types and quantities;
 - (vi) the location of hazardous waste deposits; and
 - (vii) the specification and as built drawings of the basal, sidewall and capping engineering systems.

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

4.2 Reporting

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

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

- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted in relation to this installation and any agreed amendments thereto. The review will include written descriptions of the improvements made to operational performance during the year, action plans developed and planned improvements for the coming year;
- (b) the energy consumed at the site, reported in the format set out in schedule 4, table S4.3;
- (c) the annual production/treatment set out in schedule 4, table S4.2;
- (d) the topographical surveys required by condition 3.5.3 other than those submitted as part of a CQA validation report;
- (e) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
- (f) an assessment of the settlement behaviour of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;

- (g) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey; and
- (h) a plan(s) ('the monitoring and extraction point plan – MEPP') showing the locations of existing and any new leachate and landfill gas extraction and monitoring points.

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

- (a) in respect of the parameters and emission points specified in schedule 4, table S4.1;
- (b) using the forms specified in schedule 4, table S4.4 or other reporting format as agreed in writing with the Environment Agency; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

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

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

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency;
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident; and
 - (iii) take the measures necessary to prevent further possible incidents or accidents.
- (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency; and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time.
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, 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 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

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

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

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

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.4 Interpretation

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

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

Schedule 1 – Operations

Table S1.1 activities				
Activity reference	WFD Annex I and II operations (where applicable)	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
A1	D5 – Specially engineered landfill and R10 – Land treatment resulting in benefit to agriculture or ecology.	Section 5.2 Part A(1)(a), the disposal of waste in a landfill.	Landfill for non-hazardous waste and landfill restoration.	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.7, as an integral part of landfilling.
A2	D5 – Specially engineered landfill.	Section 5.2 Part A(1)(a), the disposal of waste in a landfill.	Landfill for hazardous waste (mono cell for stable non-reactive waste).	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.7, as an integral part of landfilling.
A3	R5 - Recycling/ reclamation of other inorganic materials.	Section 5.3 Part A(1)(a)(vi), recovery of hazardous waste.	Treatment of soil.	<p>Receipt, handling, storage and treatment of wastes, consisting of the types and quantities specified in Condition 2.7.2 and Schedule 2, Table S2.2.</p> <p>Treatment of waste for recovery consisting of use of the following technology and associated plant including the use of that technology and plant in combination with others listed:</p> <p>Bioremediation using windrows (including application of aeration and water where necessary);</p> <p>Treatment plant for blending, mixing, bulking, screening, shredding, particle size reduction and/or particle separation in order to facilitate remedial action.</p> <p>Including collection and recirculation of leachate from treatment within the treatment process.</p> <p>A plan showing the exact location of the proposed operation shall be provided to the Environment Agency before initial deployment and also prior to any relocation of the operation within the installation.</p>

Table S1.1 activities				
Activity reference	WFD Annex I and II operations (where applicable)	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
A4	R13 – Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).	Section 5.6 Part A(1)(a), temporary storage of hazardous waste with a total capacity exceeding 50 tonnes.	Storage of hazardous waste.	Receipt, handling and storage of wastes, consisting of the types and quantities specified in condition 2.7.2.
A5	D8 – Biological treatment of waste.	Section 5.4 Part A(1)(a)(i), biological treatment of non-hazardous waste.	Treatment of leachate in a facility with a capacity of >50 tonnes/day.	Leachate arising from the landfill and leachate imported from off-site sources consisting of the types specified in condition 2.7.2. Maximum throughput of 130m ³ per day, of which up to 70m ³ may be imported leachate.
Directly Associated Activities				
A6	R1 – Use principally as a fuel to generate energy	N/A	Pre-treatment and utilisation of landfill gas for energy recovery in an appliance with a rated thermal input <50MW.	Treatment and utilisation of landfill gas arising from the landfill.
A7	-	N/A	Flaring of landfill gas for disposal in an appliance.	Landfill gas arising from the permitted installation.
A8	-	N/A	Collection, storage and recirculation of leachate.	Leachate arising from the landfill.
A9	D6 – Release to water body except seas/ oceans	N/A	Discharges of site drainage from the landfill.	From surface water management system to point of entry to sewer.
A10	-	N/A	Discharge of treated leachate to foul sewer.	From leachate management system to point of entry to sewer.

Table S1.1 activities				
Activity reference	WFD Annex I and II operations (where applicable)	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
A11	D15 – Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced)	N/A	Temporary storage of waste (leachate)	Storage of leachate imported from off-site sources. Wastes consisting of the types specified in condition 2.7.2.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to questions 1.2, 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the application form	09/10/03
	Section entitled “Letter Ref: BV7265/CE/02” excluding subsection entitled “Stability” of Letter referenced HY/L19-1-PJH-170504 dated 17 May 2004	17/05/04
	Letter referenced COR/HI/PW/3095 dated 16 June 2004	18/06/04
	Document entitled “Stable, Non-Reactive Hazardous Waste Cell, Himley Quarry Landfill, Waste Acceptance Procedure”	18/06/04
	CQA plan for SNRHW cell	07/07/04
Variation VP3538SB	Revision to Schedule 6 List of Permitted Wastes	17/01/05
	Response to request for additional information dated 06/04/2005	14/04/05
	Response to request for additional information (meeting dated 19/07/2005)	20/07/05
Variation EP3037SD	The response to questions 2.1 – 2.12 in part C of the application form (excluding section 3)	01/08/05
	Response to Schedule 7 notice dated 22 November 2005	16/12/05
Post issue	Letters – Trace Gas Investigation BHs 44, 45 and 46;	22/10/04
	Leachate storage and disposal arrangements; Installation of landfill gas boreholes; Review of external gas monitoring boreholes.	13/12/04

Table S1.2 Operating techniques		
Description	Parts	Date Received
	Letter – Investigation on ground level concentrations of Benzene, Butadiene, Carbon Monoxide and Sulphur Dioxide.	14/07/05 10/04/06
	Revised Leachate Management Infrastructure Plan HIM/014 version 3 dated 26 February 2014	27/02/14
	Revised Gas Extraction Layout Plan HIM/017 version 3 dated 26 February 2014	27/02/14
Response to improvement programme ref 5	Email dated 04/09/2007 revised groundwater and leachate monitoring schedules.	04/09/07
Response to improvement programme ref 3	Email re VOC sampling borehole 45.	21/01/08
Response to improvement programme ref 4	Email dated 18/01/2008, proposed CH4 and CO2 trigger levels in external landfill gas monitoring boreholes	18/01/08
Response to improvement programme ref 2	Surface Water H1 Assessment, dated July 2008	July 2008
Request to accept plasterboard waste into stable non-reactive hazardous waste cell	Letter dated 27/01/2009, email dated 30/01/2009	30/01/09
	Procedure for acceptance of plasterboard waste into SNRHW cell	01/12/09
Response to improvement programme ref 6	Letter dated 30/03/2009 re assessment of fluctuation in flow or composition of landfill gas in collection system	31/03/09
Variation EPRBV7265IS/V007	The responses to questions in application forms C2 and C3.	24/03/11
	Responses to questions 1, 2 and 3 in the email request for information dated 16/05/2011	19/05/11
Groundwater boreholes 11F, 20F, 64 and 70A	Email dated 25/10/2013, amended groundwater boreholes design and plan	25/10/13
Revised Environmental Monitoring Infrastructure Plan	HIM/019 version 3 dated 26/02/2014	27/02/14
Response to improvement programme 1	Himley Quarry Landfill Site Restoration Plan v3.0	30/09/16
Variation application EPR/BV7265IS/V010	Response to question 3b of the Part C2 application form and question 3 of the Part C3 application form.	28/01/17

Table S1.2 Operating techniques		
Description	Parts	Date Received
	Response to 'indicative BAT requirements for acceptance procedures when treatment chemicals arrive at the installation'.	
	Appendix 2 'Summary of Principal Process Controls within LTP Control Philosophy' to the Construction Quality Assurance Plan for Leachate Treatment Plant Construction dated September 2016.	
	Leachate Treatment Plant Acceptance Criteria CEML-OP-08 (A4) version 1.0 dated 28/03/17 Leachate Acceptance (Procedure) CEML-OP-08 version 2.1 dated 28/03/17	04/04/17
Response to request for information dated 22/05/17	Perimeter Gas Investigation Procedure dated July 2017	24/07/17
Response to Schedule 5 Notice dated 14/08/17	Response to questions 1, 3, 4, 7, 9, 10, 18, 19 and 21 regarding the use and containment of leachate storage tanks, management of sludge, odour pollution contingency actions, import of leachate, use of chemicals and sampling of treated leachate.	22/09/17
	Inspection and maintenance schedule in CEML-OP-09 version 2.0 dated 19/05/17	
	Spillage procedure in EMG-WI-007 version 2.0 dated 05/05/17	
	Leachate Treatment Plant with Proposed Drainage Plan HQL109a dated 12/09/17	
	Leachate Treatment Plant and Site Drainage HQL131 dated 12/09/17	
	Environmental Monitoring Locations Summary HQL119a dated 15/08/17	
	Leachate Treatment Plant HQL130 dated 12/09/17	
Response to Schedule 5 Notice dated 12/10/17	Response to questions a(ii), c, d and 16 regarding the operator's planned response to spillages from the Sequencing Batch Reactor (SBR) tank, management of biomass, maintenance of effluent pipeline and design of the caustic soda storage tank.	02/11/17
	Leachate Treatment Plant Closure Plan version 1, November 2017	02/11/17

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IP1	The operator shall submit to the Environment Agency for approval details of the waste types, quantities and acceptance criteria for wastes that are and will be accepted on site for the purpose of landfill restoration.	Complete
IP2	<p>The operator shall submit an updated leachate management plan (LMP) to the Environment Agency for approval.</p> <p>The LMP shall meet the requirements of LFTGN02 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water' (Environment Agency, February 2003) and 'How to comply with your environmental permit – Additional guidance for Landfill (EPR 5.02)' (Environment Agency, March 2009) and shall include:</p> <ul style="list-style-type: none"> • The method for recording leachate levels; and • Reference to the leachate treatment plant as a method for managing leachate arising from the landfill. <p>The LMP shall include an updated site plan showing the location of all leachate monitoring points, including HQMP5a and HQMP Haz A or suitable replacements.</p>	15/04/2018
IP3	<p>The operator shall submit to the Environment Agency in writing for approval proposals for the monitoring suite, monitoring frequency and compliance limits for down-hydraulic gradient groundwater boreholes GW11F, GW20F GW70A, GW60, GW64, GWUD SR8 and GWUD SR9.</p> <p>The proposals shall be derived using the monitoring data obtained from up-hydraulic gradient boreholes GW30, GW36 and GW48 and in accordance with groundwater risk assessment for leachate (www.gov.uk) and the 'Techniques for the Interpretation of Landfill Monitoring Data Guidance notes Final Technical Report P1-471' (2002), including:</p> <ul style="list-style-type: none"> • compliance limit = mean groundwater parameter concentration + (3*STDV). <p>The proposals must be implemented as approved and from the date stipulated by the Environment Agency.</p>	15/04/2018
IP4	<p>The operator shall install perimeter gas monitoring points:</p> <ul style="list-style-type: none"> • HQGMP 30a, HQGMP 58a, HQGMP 59a, HQGMP 63a, HQGMP 64a, HQGMP 66Da, HQGMP 66Sa, HQGMP 67Da and HQGMP 67Sa. <p>An updated site plan showing the location of all perimeter gas monitoring points shall be submitted to the Environment Agency for written approval.</p>	15/07/2018
IP5	<p>The operator shall submit a written report containing proposed action and compliance limits for methane and carbon dioxide for all perimeter gas monitoring boreholes, including the new perimeter boreholes listed below, to the Environment Agency for approval.</p> <p>The report shall contain:</p>	15/07/2019

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<ul style="list-style-type: none"> for each perimeter borehole, action and compliance limits for methane and action and compliance limits as appropriate for carbon dioxide; the data and analysis used to derive the action and compliance limits, which shall be a minimum of 12 data sets for each borehole, and justification for the data used to derive the limits; a description and justification of the methodology used to derive the action and compliance limits; and an updated Gas Management Plan that includes an Action Plan detailing the actions to be taken in the event that action limits are exceeded. <p>The new perimeter boreholes are: HQGMP 30a, HQGMP 33D, HQGMP 33S, HQGMP 58a, HQGMP 59a, HQGMP 63a, HQGMP 64a, HQGMP 66Da, HQGMP 66Sa, HQGMP 67Da, HQGMP 67Sa, HQGMP 68, HQGMP 69, HQGMP 70, HQGMP 71, HQGMP 72, HQGMP 73, HQGMP 74, HQGMP 75, HQGMP 76, HQGMP 77 and HQGMP 78.</p>	
IP6	<p>The operator shall submit written proposals to undertake monitoring of fluoranthene and free cyanide in the treated effluent from the Leachate Treatment Plant to the Environment Agency for approval.</p> <p>The proposals shall identify the location and frequency at which the monitoring will be undertaken and the methods which will be used. These proposals shall ensure that the operator collects a minimum of 12 data sets for each substance.</p>	15/03/2018
IP7	<p>The operator shall undertake the monitoring proposals required by IP6 as approved by the Environment Agency.</p> <p>Within 1 month of completing the monitoring of treated effluent, the operator shall submit a report to the Environment Agency for approval to verify the results of the H1 assessment dated 1st November 2017. The report shall include a review of the monitoring data and, if deemed necessary, measures and timescales to reduce the impacts of these substances on the receiving watercourse.</p>	15/04/2019

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational Measures
1	Side wall construction	The liner shall include a low permeability sealing layer consisting of a 2mm thick high density polyethylene flexible membrane liner, or such other liner as approved in writing with similar hydraulic properties, installed to the full extent of the side wall. The operator shall choose an appropriate liner with properties to ensure the stability of the liner at the gradient proposed both under confined and unconfined conditions. The stability shall be demonstrated within the CQA Programme required by Section 2.6 of this permit.
2	Side wall construction	The liner shall include an artificially established geological barrier consisting of a minimum 1 m thick compacted clay with a maximum permeability of 1×10^{-9} m/s installed on the side wall above the 81m AOD bench, or other such geological material with equivalent hydraulic properties as approved in writing by the Agency. At no time shall the thickness of the artificially established geological barrier be less than 0.5 m. The operator shall ensure that any changes to the artificially established geological barrier will not result in the slope becoming unstable at the gradient proposed both under confined and unconfined conditions. The stability shall be demonstrated within the CQA Programme required by Section 2.6 of this permit.
3	Import of leachate for treatment	<p>Prior to importing leachate for treatment, the operator shall ensure that a review of the design, method of construction and integrity of the leachate acceptance area is carried out by a qualified civil or structural engineer. The review shall compare the construction against the standards set out in Sector Guidance Note IPPC S5.03 (February 2007).</p> <p>The review shall include:</p> <ul style="list-style-type: none"> • the physical condition of the structure; • the suitability for providing containment when subjected to loss of tanker contents; • any work required to ensure compliance with the standards set out in the above guidance; and • a preventative maintenance and inspection regime. <p>A written report of the review shall be submitted to the Environment Agency detailing the review's findings and recommendations. Remedial action shall be taken to ensure that the leachate acceptance area meets the standards set out in the technical guidance and implement the maintenance and inspection regime.</p> <p>No imported leachate shall be accepted at the facility unless the Environment Agency has given prior written permission under this condition.</p>
4	Import of leachate for treatment	<p>Prior to importing leachate for treatment, the operator shall submit a methodology for monitoring the concentrations of hazardous pollutants to validate the predictions in the operator's H1 environmental risk assessment dated 1st November 2017.</p> <p>The measures contained in the methodology shall be implemented by the operator as approved by the Environment Agency.</p>

Table S1.5 Annual waste input limits	
Category	Limit Tonnes/ Year
Non-hazardous waste	440,000
Stable non-reactive hazardous waste	127,000
Gypsum waste	
Waste for restoration	250,000

Schedule 2 – List of permitted wastes

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
01	Wastes resulting from exploration, mining, quarrying, and physical and chemical treatment of minerals
01 01	wastes from mineral excavation
01 01 01	wastes from mineral metalliferous excavation
01 01 02	wastes from mineral non-metalliferous excavation
01 03	wastes from physical and chemical processing of metalliferous minerals
01 03 06	tailings other than those mentioned in 01 03 04 and 01 03 05
01 03 08	dusty and powdery wastes other than those mentioned in 01 03 07
01 03 09	red mud from alumina production other than the wastes mentioned in 01 03 10
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
01 04 10	dusty and powdery wastes other than those mentioned in 01 04 07
01 04 11	wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11
01 04 13	wastes from stone cutting and sawing other than those mentioned in 01 04 07
01 05	drilling muds and other drilling wastes
01 05 04	freshwater drilling muds and wastes
01 05 07	barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 08	chloride-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01	sludges from washing and cleaning
02 01 02	animal-tissue waste
02 01 03	plant-tissue waste
02 01 04	waste plastics (except packaging)
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

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
02 02 01	sludges from washing and cleaning
02 02 02	animal-tissue waste
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation
02 03 02	wastes from preserving agents
02 03 03	wastes from solvent extraction
02 03 04	materials unsuitable for consumption or processing
02 03 05	sludges from on-site effluent treatment
02 04	wastes from sugar processing
02 04 01	soil from cleaning and washing beet
02 04 02	off-specification calcium carbonate
02 04 03	sludges from on-site effluent treatment
02 05	wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
02 06	wastes from the baking and confectionery industry
02 06 01	materials unsuitable for consumption or processing
02 06 02	wastes from preserving agents
02 06 03	sludges from on-site effluent treatment
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	wastes from spirits distillation
02 07 03	wastes from chemical treatment
02 07 04	materials unsuitable for consumption or processing
02 07 05	sludges from on-site effluent treatment
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork
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 05	de-inking sludges from paper recycling
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
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 15	wastes from finishing other than those mentioned in 04 02 14
04 02 17	dyestuffs and pigments other than those mentioned in 04 02 16
04 02 20	sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
05	Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal
05 01	wastes from petroleum refining
05 01 10	sludges from on-site effluent treatment other than those mentioned in 05 01 09
05 01 13	boiler feedwater sludges
05 01 14	wastes from cooling columns
05 01 16	sulphur-containing wastes from petroleum desulphurisation
05 01 17	bitumen
05 06	wastes from the pyrolytic treatment of coal
05 06 04	waste from cooling columns
05 07	wastes from natural gas purification and transportation
05 07 02	wastes containing sulphur
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

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
06 06	wastes from the MFSU of sulphur chemicals, sulphur chemical processes and desulphurisation processes
06 06 03	wastes containing sulphides other than those mentioned in 06 06 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	waste containing silicones other than those mentioned in 07 02 16
07 03	wastes from the MFSU of organic dyes and pigments (except 06 11)
07 03 12	sludges from on-site effluent treatment other than those mentioned in 07 03 11
07 04	wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides
07 04 12	sludges from on-site effluent treatment other than those mentioned in 07 04 11
07 05	wastes from the MFSU of pharmaceuticals
07 05 12	sludges from on-site effluent treatment other than those mentioned in 07 05 11
07 05 14	solid wastes other than those mentioned in 07 05 13
07 06	wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics
07 06 12	sludges from on-site effluent treatment other than those mentioned in 07 06 11
07 07	wastes from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 12	sludges from on-site effluent treatment other than those mentioned in 07 07 11
08	Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks
08 01	wastes from MFSU and removal of paint and varnish
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

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
08 02	wastes from MFSU of other coatings (including ceramic materials)
08 02 01	waste coating powders
08 03	wastes from MFSU of printing inks
08 03 13	waste ink other than those mentioned in 08 03 12
08 03 15	ink sludges other than those mentioned in 08 03 14
08 03 18	waste printing toner other than those mentioned in 08 03 17
08 04	wastes from MFSU of adhesives and sealants (including water proofing products)
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09
08 04 12	adhesive and sealant sludges other than those mentioned in 08 04 11
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 07	calcium-based reaction wastes from flue-gas desulphurisation in sludge 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 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 12	wastes from cooling-water treatment other than those mentioned in 10 02 11
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

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
10 03	wastes from aluminium thermal metallurgy
10 03 02	anode scraps
10 03 05	waste alumina
10 03 16	skimmings other than those mentioned in 10 03 15
10 03 18	carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17
10 03 20	flue-gas dust other than those mentioned in 10 03 19
10 03 22	other particulates and dust (including ball-mill dust) other than those mentioned in 10 03 21
10 03 24	solid wastes from gas treatment other than those mentioned in 10 03 23
10 03 26	sludges and filter cakes from gas treatment other than those mentioned in 10 03 25
10 03 28	wastes from cooling-water treatment other than those mentioned in 10 03 27
10 03 30	wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29
10 04	wastes from lead thermal metallurgy
10 04 10	wastes from cooling-water treatment other than those mentioned in 10 04 09
10 05	wastes from zinc thermal metallurgy
10 05 01	slags from primary and secondary production
10 05 04	other particulates and dust
10 05 09	wastes from cooling-water treatment other than those mentioned in 10 05 08
10 05 11	dross and skimmings other than those mentioned in 10 05 10
10 06	wastes from copper thermal metallurgy
10 06 01	slags from primary and secondary production
10 06 02	dross and skimmings from primary and secondary production
10 06 04	other particulates and dust
10 06 10	wastes from cooling-water treatment other than those mentioned in 10 06 09
10 07	wastes from silver, gold and platinum thermal metallurgy
10 07 01	slags from primary and secondary production
10 07 02	dross and skimmings from primary and secondary production
10 07 03	solid wastes from gas treatment
10 07 04	other particulates and dust
10 07 05	sludges and filter cakes from gas treatment
10 07 08	wastes from cooling-water treatment other than those mentioned in 10 07 07
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

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
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 09 16	waste crack-indicating agent other than those mentioned in 10 09 15
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 10 16	waste crack-indicating agent other than those mentioned in 10 10 15
10 11	wastes from manufacture of glass and glass products
10 11 03	waste glass-based fibrous materials
10 11 05	particulates and dust
10 11 10	waste preparation mixture before thermal processing, other than those mentioned in 10 11 09
10 11 12	waste glass other than those mentioned in 10 11 11
10 11 14	glass-polishing and -grinding sludge other than those mentioned in 10 11 13
10 11 16	solid wastes from flue-gas treatment other than those mentioned in 10 11 15
10 11 18	sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 11 20	solid wastes from on-site effluent treatment other than those mentioned in 10 11 19
10 12	wastes from manufacture of ceramic goods, bricks, tiles and construction products
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

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 12 10	solid wastes from gas treatment other than those mentioned in 10 12 09
10 12 12	wastes from glazing other than those mentioned in 10 12 11
10 12 13	sludge from on-site effluent treatment
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 01	waste preparation mixture before thermal processing
10 13 04	wastes from calcination and hydration of lime
10 13 06	particulates and dust (except 10 13 12 and 10 13 13)
10 13 10	wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
10 13 11	wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10
10 13 13	solid wastes from gas treatment other than those mentioned in 10 13 12
10 13 14	waste concrete and concrete sludge
11	Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy
11 01	wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)
11 01 10	sludges and filter cakes other than those mentioned in 11 01 09
11 01 14	degreasing wastes other than those mentioned in 11 01 13
11 02	wastes from non-ferrous hydrometallurgical processes
11 02 03	wastes from the production of anodes for aqueous electrolytical processes
11 02 06	wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
11 05	wastes from hot galvanising processes
11 05 01	hard zinc
11 05 02	zinc ash
12	Wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 01	ferrous metal filings and turnings
12 01 02	ferrous metal dust and particles
12 01 03	non-ferrous metal filings and turnings
12 01 04	non-ferrous metal dust and particles
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
12 01 21	spent grinding bodies and grinding materials other than those mentioned in 12 01 20

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
15 02	absorbents, filter materials, wiping cloths and protective clothing
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	Wastes not otherwise specified in the list
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 03	end-of-life tyres only in accordance with condition 2.7.1(c)
16 01 12	brake pads other than those mentioned in 16 01 11
16 01 17	ferrous metal
16 01 18	non-ferrous metal
16 01 19	plastic
16 01 20	glass
16 02	wastes from electrical and electronic equipment
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15
16 03	off-specification batches and unused products
16 03 04	inorganic wastes other than those mentioned in 16 03 03
16 03 06	organic wastes other than those mentioned in 16 03 05
16 08	spent catalysts
16 08 01	spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
16 08 03	spent catalysts containing transition metals or transition metal compounds not otherwise specified
16 11	waste linings and refractories
16 11 02	carbon-based linings and refractories from metallurgical processes others than those mentioned in 16 11 01
16 11 04	other linings and refractories from metallurgical processes other than those mentioned in 16 11 03

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
16 11 06	linings and refractories from non-metallurgical processes others than those mentioned in 16 11 05
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 01	concrete, bricks, tiles and ceramics
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	wood, glass and plastic
17 02 01	wood
17 02 02	glass
17 02 03	plastic
17 03	bituminous mixtures, coal tar and tarred products
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 04	metals (including their alloys)
17 04 01	copper, bronze, brass
17 04 02	aluminium
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals
17 04 11	cables other than those mentioned in 17 04 10
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	insulation materials and asbestos-containing construction materials
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 09	other construction and demolition wastes
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
18	Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)
18 01	wastes from natal care, diagnosis, treatment or prevention of disease in humans
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

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
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 wastes¹
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 S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
19 08 12	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 09	wastes from the preparation of water intended for human consumption or water for industrial use
19 09 01	solid waste from primary filtration and screenings
19 09 02	sludges from water clarification
19 09 03	sludges from decarbonation
19 09 04	spent activated carbon
19 09 05	saturated or spent ion exchange resins
19 09 06	solutions and sludges from regeneration of ion exchangers
19 10	wastes from shredding of metal-containing wastes
19 10 01	iron and steel waste
19 10 02	non-ferrous waste
19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03
19 10 06	other fractions other than those mentioned in 19 10 05
19 11	wastes from oil regeneration
19 11 06	sludges from on-site effluent treatment other than those mentioned in 19 11 05
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard
19 12 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 05	glass
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 09	minerals (for example sand, stones)
19 12 10	combustible waste (refuse derived fuel)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
19 13	wastes from soil and groundwater remediation
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
19 13 06	sludges from groundwater remediation other than those mentioned in 19 13 05
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

Table S2.1 Permitted waste types for disposal at a landfill for non-hazardous waste	
Waste code	Description
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 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 40	metals
20 01 41	wastes from chimney sweeping
20 01 99	other fractions not otherwise specified (comprising only of non-clinical human and animal offensive/hygiene waste (not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease) which is not subject to special requirements in order to prevent infection
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
20 02 02	soil and stones
20 02 03	other non-biodegradable wastes
20 03	other municipal wastes
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 04	septic tank sludge
20 03 06	waste from sewage cleaning
20 03 07	bulky waste

Table S2.2 Permitted waste types accepted for soil treatment process	
Maximum quantity	The total quantity of waste treated at the site shall not exceed 50,000 tonnes per year
Waste code	Description
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 03	Bituminous mixtures – coal tar and tarred products
17 03 01*	bituminous mixtures containing coal tars
17 03 03*	coal tar and tarred products
17 05	Soil (including excavated soil from contaminated sites) - stones and dredging spoil

Table S2.2 Permitted waste types accepted for soil treatment process	
Maximum quantity	The total quantity of waste treated at the site shall not exceed 50,000 tonnes per year
Waste code	Description
17 05 03*	soil and stones containing dangerous substances
17 05 04	soil and stones not containing dangerous substances
17 05 05*	dredging spoil containing dangerous substances
17 05 06	dredging spoil not containing dangerous substances
17 05 07*	track ballast containing dangerous substances
17 05 08	track ballast not containing dangerous substances
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 20	soil and stones

Table S2.3 Permitted waste types for restoration	
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
10	Wastes from thermal processes
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 14	waste concrete and concrete sludge
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, brick, tiles and ceramics other than those mentioned in 17 01 06

Table S2.3 Permitted waste types for restoration	
Waste code	Description
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03
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
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 06	digestate from anaerobic treatment of animal and vegetable 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 stable non-reactive hazardous waste cell which includes gypsum waste	
Waste code	Description
04	Wastes from the leather, fur and textile industries
04 02	Textile industry
04 02 19*	sludges from on-site effluent treatment containing dangerous substances
05	Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal
05 01	wastes from petroleum refining
05 01 06*	oily sludges from maintenance operations of plant or equipment
05 01 09*	sludges from on-site effluent treatment containing dangerous substances
06	Wastes from inorganic chemical processes
06 02	Wastes from the MFSU of bases

Table S2.4 Permitted waste types for disposal in the stable non-reactive hazardous waste cell which includes gypsum waste

Waste code	Description
06 02 01*	calcium hydroxide
06 05	Sludges from on-site effluent treatment
06 05 02*	sludges from on-site effluent treatment containing dangerous substances
07	Wastes from organic chemical process
07 01	Manufacture - formulation - supply and use of basic organic chemicals
07 01 10*	other filter cakes and spent absorbents
07 01 11*	sludges from on-site effluent treatment containing dangerous substances
07 02	Manufacture - formulation - supply and use of plastics - synthetic rubber and man-made fibres
07 02 10*	other filter cakes and spent absorbents
07 02 14*	sludges from on-site effluent treatment containing dangerous substances
07 02 16*	wastes containing silicones
07 03	Manufacture - formulation - supply and use of organic dyes and pigments (except 06 11)
07 03 10*	other filter cakes and spent absorbents
07 05	Manufacture - formulation - supply and use of pharmaceuticals
07 05 13*	solid wastes containing dangerous substances
07 06	Manufacture - formulation - supply and use of fats - grease - soaps - detergents - disinfectants and cosmetics
07 06 10*	other filter cakes and spent absorbents
07 07	Manufacture - formulation - supply and use of fine chemicals and chemical products not otherwise specified
07 07 11*	sludges from on-site effluent treatment containing dangerous substances
08	Wastes from manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks
08 01	Manufacture - formulation - supply and use and removal of paint and varnish
08 01 11*	wastes from paint and varnish containing organic solvents or other dangerous substances
08 01 13*	sludges from paint or varnish containing organic solvents or other dangerous substances
08 01 17*	wastes from paint and varnish containing organic solvents or other dangerous substances
08 03	Manufacture - formulation - supply and use of printing inks
08 03 14*	ink sludges containing dangerous substances
08 04	Manufacture - formulation - supply and use of adhesives and sealants (including waterproofing products)
08 04 09*	waste adhesives and sealants containing organic solvents and other dangerous substances
08 04 11*	adhesives and sealants sludges containing organic solvents and other dangerous substances
10	Wastes from thermal processes
10 01	Power stations and other combustion plants (except 19)

Table S2.4 Permitted waste types for disposal in the stable non-reactive hazardous waste cell which includes gypsum waste	
Waste code	Description
10 01 14*	bottom ash, slag, and boiler dust from co-incineration containing dangerous substances
10 01 16*	fly ash from co-incineration containing dangerous substances
10 01 20*	sludges from on-site effluent treatment containing dangerous substances
10 02	Iron and steel industry
10 02 07*	solid waste from gas treatment containing dangerous substances
10 02 13*	sludges and filter cake from gas treatment containing dangerous substances
10 08	Other non-ferrous thermal metallurgy
10 08 15*	flue –gas dust containing other dangerous substances
10 08 17*	sludges and filter cakes from flue gas treatment containing dangerous substances
10 09	Casting of ferrous pieces
10 09 05*	casting cores and moulds which have not undergone pouring containing dangerous substances
10 09 07*	casting cores and moulds which have undergone pouring containing dangerous substances
10 09 09*	flue gas dust containing dangerous substances
10 09 11*	other particulates containing dangerous substances
10 09 13*	waste binders containing dangerous substances
10 10	Casting of non-ferrous pieces
10 10 05 *	casting cores and moulds which have not undergone pouring containing dangerous substances
10 10 07*	casting cores and moulds which have undergone pouring containing dangerous substances
10 10 09*	flue – gas dust containing dangerous substances
10 10 11*	other particulates containing dangerous substances
10 11	Manufacture of glass and glass products
10 11 09*	waste preparation mixture before thermal processing, containing dangerous substances
10 11 11*	waste glass in small particles and glass powder containing heavy metals (for example from cathode ray tubes)
10 11 19*	solid waste from in site effluent treatment containing dangerous substances
11	Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy
11 01	Chemical surface treatment and coating of metals and other materials (for example galvanic processes - zinc coating processes - pickling processes - etching - phosphating - alkaline degreasing - anodising)
11 01 08*	phosphatising sludges
11 01 09*	sludges and filter cakes containing dangerous substances
11 01 98*	other waste containing dangerous substances
12	Wastes from the 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

Table S2.4 Permitted waste types for disposal in the stable non-reactive hazardous waste cell which includes gypsum waste	
Waste code	Description
12 01 14*	machining sludges containing dangerous substances
12 01 16*	waste blasting material containing dangerous substances
12 01 20*	spent grinding bodies and grinding materials containing dangerous substances
15	Waste packaging; absorbents, wiping clothes, filter materials and protective clothing not otherwise specified
15 01	Packaging (including separately collected municipal packaging waste)
15 01 10*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances
15 02	Absorbents - filter materials - wiping cloths and protective clothing
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances
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 21*	hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14
16 02	Electrical and electronic equipment
16 02 13*	discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12
16 02 15*	hazardous components removed from discarded equipment
16 03	Off-specification batches and unused products
16 03 03 *	inorganic waste containing dangerous substances
16 11	Waste linings and refractories
16 11 01*	carbon based linings and refractories from metallurgical processes containing dangerous substances
16 11 03*	other linings and refractories from metallurgical processes containing dangerous substances
16 11 05*	linings and refractories from non –metallurgical processes containing dangerous substances
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 01	Concrete - bricks - tiles and ceramics
17 01 06*	mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances
17 04	Metals (including their alloys)
17 04 09*	metal waste contaminated with dangerous substances
17 05	Soil (including excavated soil from contaminated sites) - stones and dredging spoil
17 05 03*	soil and stones containing dangerous substances
17 05 05*	dredging spoil containing dangerous substances
17 05 07*	track ballast containing dangerous substances

Table S2.4 Permitted waste types for disposal in the stable non-reactive hazardous waste cell which includes gypsum waste	
Waste code	Description
17 06	Insulation materials and asbestos-containing construction materials
17 06 03*	other insulation materials consisting of or containing dangerous substances
17 08	Gypsum-based construction material
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01
17 09	Other construction and demolition wastes
17 09 03*	other construction and demolition wastes (including mixed waste) containing dangerous substances
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	Incineration or pyrolysis of waste
19 01 11*	bottom ash and slag containing dangerous substances
19 01 13*	fly ash containing dangerous substances
19 01 17*	pyrolysis wastes containing dangerous substances
19 02	Physico/chemical treatments of waste (including dechromatation - decyanidation - neutralisation)
19 02 04*	premixed wastes composed of at least one hazardous waste
19 02 05*	sludges from physico/chemical treatment containing dangerous substances
19 02 11*	other wastes containing dangerous substances
19 03	Stabilised/solidified wastes
19 03 04*	wastes marked as hazardous, partly stabilised
19 03 06*	wastes marked as hazardous, solidified
19 04	Vitrified waste and wastes from vitrification
19 04 02*	fly ash and other flue-gas treatment wastes
19 04 03*	non vitrified solid phase
19 08	Waste water treatment plants not otherwise specified
19 08 11*	sludges containing dangerous substances from biological treatment of industrial waste water
19 08 13*	sludges containing dangerous substances from other treatment of industrial waste water
19 10	Shredding of metal-containing wastes
19 10 03*	fluff –light fraction and dust containing dangerous substances
19 10 05*	other fractions containing dangerous substances
19 11	Oil regeneration
19 11 05*	sludges from on site effluent treatment containing dangerous substances
19 12	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 dangerous substances
19 13	Soil and groundwater remediation
19 13 01*	solid wastes from soil remediation containing dangerous substances

Table S2.4 Permitted waste types for disposal in the stable non-reactive hazardous waste cell which includes gypsum waste	
Waste code	Description
19 13 03*	sludges from soil remediation containing dangerous substances
19 13 05*	sludges from groundwater remediation containing dangerous substances
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 27*	paint, inks adhesives and resins containing dangerous substances
20 01 35*	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components

Table S2.5 Permitted waste types accepted for treatment	
Maximum quantity	The total quantity of off-site leachate treated at the site shall not exceed 25,500 tonnes per year
Waste code	Description
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 07	landfill leachate
19 07 03	landfill leachate other than those mentioned in 19 07 02

Schedule 3 – Emissions and monitoring

Table S3.1 Leachate level limits and monitoring requirements			
Monitoring point reference/ Description	Limit	Monitoring frequency	Monitoring standard and method
<p>Leachate Compliance Points:</p> <p>HQLC1a HQMP1c HQLC2a HQMP2c HQLC3 HQMP3b HQLC4 HQMP4c HQLC5a HQMP5a HQMP5b HQLC6 HQMP6a HQMP6b HQLC7 HQMP7a HQMP7b HQLC8 HQMP8a HQMP8b HQLC9 HQMP9a HQMP9b HQLC10 HQMP10a HQMP10b HQLC11 HQMP11a HQMP11b HQLCHazA2 HQMPHazA</p> <p>As detailed on drawing HQL119a dated 15/08/17 and as updated following submission of a revised plan to complete improvement programme IP2.</p>	2m above cell base	Monthly	As specified in Environment Agency Guidance LFTGN02 (February 2003), such other subsequent guidance as may be agreed in writing with the Environment Agency or as otherwise agreed with the Agency as part of a leachate monitoring plan.

Table S3.1 Leachate level limits and monitoring requirements			
Monitoring point reference/ Description	Limit	Monitoring frequency	Monitoring standard and method
Non Operational Cells or Phases (Any cells or phases that have a final engineered cap agreed in accordance with the landfill engineering condition, 2.6)			
-	-	Quarterly	As specified in Environment Agency Guidance LFTGN02 (February 2003), such other subsequent guidance as may be agreed in writing with the Environment Agency or as otherwise agreed with the Agency as part of a leachate monitoring plan.

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
LFGE1 and LFGE2 on drawing HIM/017 v3 dated 26/02/14	Oxides of Nitrogen	Gas utilisation plant	500 mg/m ³	Hourly mean	Annually	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	CO		1400 mg/m ³			
	Total VOCs		1000 mg/m ³			
Landfill Gas Flare	Oxides of Nitrogen	Landfill Gas Flares	150 mg/m ³	Hourly mean	Annually	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency. Monitoring is unnecessary where the flare is active for <10% of the year.
	CO		50 mg/m ³			
	Total VOCs		10 mg/m ³			

Table S3.3 Groundwater – emission limits and monitoring requirements

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
Groundwater underdrain GWUD SR8 and GWUD SR9 as shown on drawing HQL119a dated 15/08/17	Ammoniacal nitrogen – N	0.5 mg/l	Spot sample	Monthly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Chloride	250 mg/l			
	Phenol	0.5 ug/l			
	Toluene	4.0 ug/l			
	pH	-			
	Mecoprop	-			
Groundwater monitoring boreholes GW30, GW36 and GW48 as shown on drawing HQL119a dated 15/08/17	Ammoniacal nitrogen - N	-	Spot sample	Quarterly	
	Chloride	-			
	Phenol	-			
	Toluene	-			
	pH	-			
	Mecoprop	-			
GW60 as shown on drawing HQL119a dated 15/08/17	Ammoniacal nitrogen – N	0.5 mg/l	Spot sample	Quarterly	
	Chloride	250 mg/l			
	Phenol	0.5 ug/l			
	Toluene	4.0 ug/l			
	pH	-			
	Mecoprop	-			

Table S3.3 Groundwater – emission limits and monitoring requirements					
Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
GW11F, GW20F, GW70A and GW64 as shown on drawing HQL119a dated 15/08/17	Note 1	Note 1	Note 1	Note 1	Note 1
Note 1 – parameters, limits and monitoring to be agreed following completion of improvement programme IP3.					

Table S3.4 Landfill gas in external monitoring boreholes – limits and monitoring requirements				
Monitoring point Ref. /description	Parameter	Limit (%v/v)	Monitoring frequency	Monitoring standard or method
HQGMP 30a	Methane	1.0	Monthly	As per LFTGN03 (September 2004) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Record whether the ground is: waterlogged frozen snow covered
	Carbon Dioxide	* -		
HQGMP 31	Methane	1.1		
	Carbon Dioxide	1.8		
HQGMP 32D	Methane	1.0		
	Carbon Dioxide	6.2		
HQGMP 32S	Methane	1.0		
	Carbon Dioxide	7.2		
HQGMP 33D	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 33S	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 34	Methane	1.2		
	Carbon Dioxide	4.8		

Table S3.4 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (%v/v)	Monitoring frequency	Monitoring standard or method	
HQGMP 35	Methane	1.0			
	Carbon Dioxide	2.2			
HQGMP 37	Methane	1.8			
	Carbon Dioxide	5.5			
HQGMP 38	Methane	1.0			
	Carbon Dioxide	1.7			
HQGMP 39	Methane	23.8			
	Carbon Dioxide	8.3			
	VOC	-			Twice yearly
HQGMP 40	Methane	1.1			Monthly
	Carbon Dioxide	8.1			
HQGMP 41	Methane	1.1			
	Carbon Dioxide	14.8			
HQGMP 42A	Methane	2.0			
	Carbon Dioxide	12.4			
HQGMP 43	Methane	1.3			
	Carbon Dioxide	10.7			
HQGMP 44	Methane	2.5			
	Carbon Dioxide	3.0			
HQGMP 45	Methane	8.0			
	Carbon Dioxide	4.9			
	VOC	-	Twice yearly		
HQGMP 46	Methane	1.1	Monthly		
	Carbon Dioxide	7.0			

Table S3.4 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (%v/v)	Monitoring frequency	Monitoring standard or method
HQGMP 46A	Methane	1.3		
	Carbon Dioxide	6.7		
HQGMP 47	Methane	1.1		
	Carbon Dioxide	8.9		
HQGMP 49	Methane	1.0		
	Carbon Dioxide	4.4		
HQGMP 50	Methane	1.0		
	Carbon Dioxide	4.5		
HQGMP 51	Methane	1.0		
	Carbon Dioxide	4.6		
HQGMP 52	Methane	1.2		
	Carbon Dioxide	6.9		
HQGMP 53	Methane	1.0		
	Carbon Dioxide	16.4		
HQGMP 55A	Methane	1.0		
	Carbon Dioxide	14.8		
HQGMP 56	Methane	1.1		
	Carbon Dioxide	10.1		
HQGMP 57	Methane	1.1		
	Carbon Dioxide	8.5		
HQGMP 58a	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 59a	Methane	1.0		
	Carbon Dioxide	* -		

Table S3.4 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (%v/v)	Monitoring frequency	Monitoring standard or method	
HQGMP 61D	Methane	2.2	Twice yearly		
	Carbon Dioxide	12.6			
	VOC	-			
HQGMP 61S	Methane	1.0	Monthly		
	Carbon Dioxide	7.8			
HQGMP 62D	Methane	1.0			
	Carbon Dioxide	10.1			
HQGMP 62S	Methane	1.0			
	Carbon Dioxide	11.0			
HQGMP 63a	Methane	1.0			
	Carbon Dioxide	* -			
HQGMP 64a	Methane	1.0			
	Carbon Dioxide	* -			
HQGMP 65D	Methane	5.8			Twice yearly
	Carbon Dioxide	18.8			
	VOC	-			
HQGMP 65S	Methane	4.4		Monthly	
	Carbon Dioxide	17.0			
	VOC	-	Twice yearly		
HQGMP 66Da	Methane	1.0	Monthly		
	Carbon Dioxide	* -			
HQGMP 66Sa	Methane	1.0			
	Carbon Dioxide	* -			
HQGMP 67Da	Methane	1.0			

Table S3.4 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (%v/v)	Monitoring frequency	Monitoring standard or method
	Carbon Dioxide	* -		
HQGMP 67Sa	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 68	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 69	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 70	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 71	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 72	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 73	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 74	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 75	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 76	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 77	Methane	1.0		
	Carbon Dioxide	* -		
HQGMP 78	Methane	1.0		

Table S3.4 Landfill gas in external monitoring boreholes – limits and monitoring requirements				
Monitoring point Ref. /description	Parameter	Limit (%v/v)	Monitoring frequency	Monitoring standard or method
	Carbon Dioxide	* -		
All external landfill gas monitoring boreholes	Oxygen	-		
	Atmospheric pressure	-		
	Differential pressure	-		
* Limit to be set in accordance with improvement programme IP5				

Table S3.5 Point source emissions to sewer – emission limits and monitoring requirements						
Emission point Ref. & Location	Parameter	Source	Limit (including unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Trade Effluent Discharge Point as shown on drawing HQL119a dated 15/08/17	Note 2	Discharge from Leachate Treatment Plant	Note 2	Note 2	Note 2	Note 2
SW Discharge Point to Severn Trent Water storm sewer as shown on drawing HQL119a dated 15/08/17	-	Controlled discharge from surface water pond	-	-	-	-
Note 2 – parameters, limits and monitoring to be agreed following completion of improvement programmes IP6 and IP7.						

Table S3.6 Landfill gas emissions from capped surfaces – monitoring requirements

Monitoring point Ref. /description	Parameter	Monitoring frequency	Monitoring Standard or method
Permanently capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Temporarily capped zone	Methane concentration	Every 12 months	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Whole site	Total Methane emission	As agreed with the Environment Agency	As per LFTGN 07 (v2 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
Uncapped areas	Methane concentration	Every 12 months	As agreed with the Environment Agency based on the wording of revised LFTGN 07 or landfill sector guidance or such other subsequent guidance as may be agreed in writing with the Environment Agency.

Table S3.7 Groundwater – other monitoring requirements

Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method
Up gradient MEPP	Water level, Ammoniacal Nitrogen, Chloride, Electrical Conductivity, pH	Quarterly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Sodium, Total Alkalinity, Total Sulphates, Zinc	Annually	
	Hazardous substances	Annually for first six years of operation	

Down or cross gradient MEPP	Water level, Ammoniacal Nitrogen, Chloride, Electrical Conductivity, pH	Quarterly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Sodium, Total Alkalinity, Total Sulphates, Zinc	Annually	
	Hazardous substances	Annually for first six years of operation then every two years	After the initial 6 year monitoring period for hazardous substances, if the results of quarterly or annual monitoring suggest an increase in contamination, the operator shall also undertake a full leachate hazardous substances screen.
MEPP	Base of monitoring point (mAOD)	Annually	

Table S3.8 Landfill gas – other monitoring requirements				
Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
In waste gas monitoring boreholes or sealed leachate wells or sacrificial gas extraction system	Methane Carbon Dioxide Oxygen Carbon Monoxide Differential pressure Atmospheric pressure	Monthly until gas extraction commences	Calibrated handheld monitoring instrument.	For cells or phases which have no active gas extraction. Gas extraction system shall be installed and extraction commenced once monitoring shows onset of methane production in waste at a rate that can be sustainably extracted. Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring.

Table S3.8 Landfill gas – other monitoring requirements

Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
	Hydrogen Sulphide	Quarterly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 (version 3.0, 2010) or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	<p>For cells or phases which have no active gas extraction.</p> <p>Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring.</p> <p>Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans.</p>
Gas collection system at well control valve, manifolds and strategic points on gas system	Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Gas flow rate or suction % Balance Gas (calculated as the difference between the sum of measured gases and 100%)	Monthly or at such other frequency as may be agreed in writing with the Environment Agency.	Calibrated handheld monitoring instrument	<p>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.</p> <p>Where the concentration of carbon monoxide exceeds 100ppm then further investigation shall be undertaken.</p> <p>Record the ambient air temperature and whether the ground is: waterlogged frozen snow covered</p>
Gas collection system at well control valve	Hydrogen Sulphide	Six monthly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 (version 3.0, 2010) or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans

Table S3.8 Landfill gas – other monitoring requirements				
Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Output to flare or LFG Utilisation Compound	Trace gas	Annually	Trace gas analysis in accordance with LFTGN04 (version 3.0, 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency or a trace gas characterisation method agreed with the Environment Agency.	The concentration of trace gas components shall be assessed against the assumptions made in the Landfill gas risk assessment and dispersion modelling.
Output to flare or LFG Utilisation Compound	Methane Carbon Dioxide Oxygen Gas flow rate Suction % Balance Gas (calculated as the difference between the sum of measured gases and 100%)	Weekly		Where the oxygen concentration exceeds 5% or the % balance gas is greater than 20% an assessment of air ingress into the system shall be undertaken.
Landfill Gas Flare	Temperature	As per LFTGN05 (September 2004) or such other subsequent guidance as may be agreed in writing with the Environment Agency.	As per M2 or such other subsequent guidance as may be agreed in writing with the Environment Agency.	

Table S3.8 Landfill gas – other monitoring requirements				
Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
LFGE1 and LFGE2 on drawing HIM/017 v3 dated 26/02/14	NOx and CO	Quarterly	In accordance with Appendix C of LFTGN08, (version 2, 2010) or such other subsequent guidance as may be agreed in writing with the Environment Agency.	Where monitoring using hand-held, electrochemical equipment indicates an exceedance of the emissions standards specified in table S3.2, these shall be used as action levels and the operator shall investigate the cause and take appropriate measures to reduce emissions.

Table S3.9 Leachate – other monitoring requirements				
Monitoring point reference or description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Operational Cells or Phases (Any cell or phases that do not have a final engineered cap agreed in accordance with condition 2.6)				
MEPP	Ammoniacal Nitrogen, Arsenic, BOD, Cadmium, Calcium, Chloride, Chromium, COD, Copper, Electrical Conductivity, Iron, Lead, Magnesium, Manganese, Mecoprop, Nickel, pH, Phenol, Potassium, Sodium, Total Alkalinity, Toluene, Total Sulphates and Zinc	Quarterly	At leachate compliance points as listed in table S3.1. As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> , or such other subsequent guidance as may be agreed in writing with the Environment Agency.	None
MEPP	Hazardous substances	Annually		
MEPP	Depth to base (mAOD)	Annually		
Non Operational Cells or Phases (Any cell or phases that have a final engineered cap agreed in accordance with condition 2.6)				

Table S3.9 Leachate – other monitoring requirements				
Monitoring point reference or description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
MEPP	Ammoniacal Nitrogen, Arsenic, BOD, Cadmium, Calcium, Chloride, Chromium, COD, Copper, Electrical Conductivity, Iron, Lead, Magnesium, Manganese, Mecoprop, Nickel, pH, Phenol, Potassium, Sodium, Toluene, Total Alkalinity, Total Sulphates and Zinc	Annually	At leachate compliance points as listed in table S3.1. As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), <u>risk assessments for your environmental permit (www.gov.uk)</u> , or such other subsequent guidance as may be agreed in writing with the Environment Agency.	None
MEPP	Hazardous substances	Once every four years		
MEPP	Depth to base (mAOD)	Annually		

Table S3.10 Surface water – other monitoring requirements				
Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
MEPP	Ammoniacal Nitrogen Chloride Electrical conductivity pH Suspended solids Visual Oil and Grease	Quarterly	Spot sample	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency.

Table S3.11 Ambient air – other monitoring requirements				
Monitoring Point Ref. /Description	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
A full extent of the site boundary	Trace Flammable Gases	Monthly	FID	

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data		
Parameter	Reporting period	Period ends
Leachate level As specified by schedule 3, table S3.1	Every 3 months	31 March, 30 June, 30 September, 31 December
Point source emission to air As specified by schedule 3, table S3.2	Every 12 months	31 December
Emission to groundwater As specified by schedule 3, table S3.3	Every 3 months	31 March, 30 June, 30 September, 31 December
Landfill gas in external monitoring boreholes As specified by schedule 3, table S3.4	Every 3 months	31 March, 30 June, 30 September, 31 December
Point source emission to sewer, effluent treatment plant, tankering or other off site transfer As specified by schedule 3, table S3.5	Every 3 months	31 March, 30 June, 30 September, 31 December
Emission of landfill gas from capped surfaces As specified by schedule 3, table S3.6	Every 12 months	31 December
Other groundwater monitoring As specified by schedule 3, table S3.7	Every 3 months	31 March, 30 June, 30 September, 31 December
Other Landfill gas monitoring As specified by schedule 3, table S3.8	Every 3 months	31 March, 30 June, 30 September, 31 December
Trace gas monitoring	Every 12 months	31 December
Other leachate monitoring As specified by schedule 3, table S3.9	Every 12 months	31 December
Other surface water monitoring As specified by schedule 3, table S3.10	Every 12 months	31 December
Meteorological data Landfill Directive, annex III, section 2	Every 12 months	31 December
Other ambient air monitoring As specified by Schedule 3, table S3.11	Every 12 months	31 December

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

Table S4.2: Annual production/treatment	
Leachate: Disposed of off site; Disposed of to any onsite effluent treatment plant; Recirculated into the waste mass; Accepted from offsite for treatment at any onsite effluent treatment plant.	Cubic metres/year
Landfill gas: combustion in flares; combustion in gas engines; Other methods of gas utilisation. Average methane content entering the landfill gas utilisation or treatment compound (based on the annual average of Table S3.9 monitoring) Methane generation rate (50%ile from a representative model)	Normalised cubic metres/year % methane v/v m ³ /hr

Table S4.3 Performance Parameters			
Parameter	Frequency of assessment	Annual total	Unit
Energy used (including for leachate treatment)	Annually		MWh of electricity or natural gas

Table S4.4 Reporting Forms		
Media/parameter	Reporting Format	Date of Form
Leachate	Form leachate 1 or other reporting format to be agreed in writing with the Environment Agency	15/01/2018
Air	Form Air 1 or other reporting format to be agreed in writing with the Environment Agency	15/01/2018
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Environment Agency	15/01/2018
Sewer	Form Sewer 1 or other reporting format to be agreed in writing with the Environment Agency	15/01/2018
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with the Environment Agency	15/01/2018
Particulate matter	Form Particulate 1 or other reporting format to be agreed in writing with the Environment Agency	15/01/2018
Waste Return	E-waste Return Form	-
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Environment Agency	-

Schedule 5 – Notification

This page outlines the information that the operator must provide.

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

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

Part A

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

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

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

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

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

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

Part B to be supplied as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“annually” means once every year.

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

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

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

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

“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.

“D” means a disposal operation provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“emissions to land” includes emissions to groundwater.

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

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

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

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

“Hazardous property” has the meaning in Annex III of the Waste Framework Directive.

“Hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

“hazardous substances” as defined by the Environmental Permitting (England and Wales) Regulations 2016, SI 2016 No.1154, schedule 22 and listed in our Hydrogeological Risk Assessment guidance.

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

“landfill Infrastructure” means any specified element of the:

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

within the site.

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

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

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

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

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

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

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

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

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

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

for the new cell.

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

“pests” means birds, vermin and insects.

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

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

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

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

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

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

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

“waste code” - See “List of Wastes”.

“WFD” means Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste [and repealing certain Directives] – the Waste Framework Directive.

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

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

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

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

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

Article 2(a) says that ‘PCBs’ means:

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

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

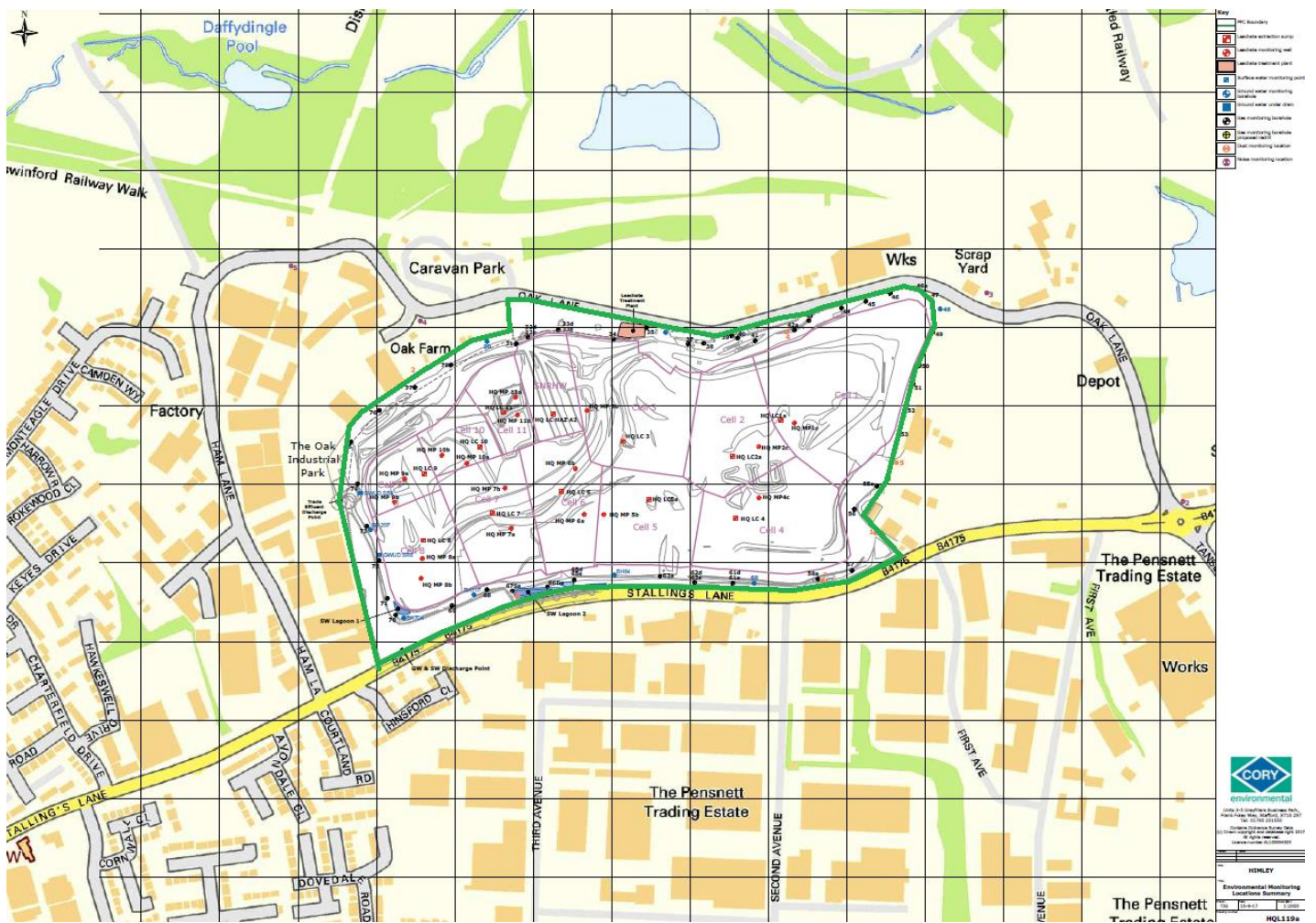
“stabilisation” means processes which change the hazardousness of the constituents in the waste and transform hazardous waste into non-hazardous waste;

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

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

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

Schedule 7 – Site plan



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