Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Cemex UK Cement Limited

Barrington Works Landfill
Barrington Works
Haslingfield Road
Barrington
Cambridgeshire
CB22 7RQ

Variation application number

EPR/BV1461IV/V012

Permit number

EPR/BV1461IV

Barrington Works Landfill
Permit number EPR/BV1461IV

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. Only the variations specified in schedule 1 are subject to a right of appeal.

This variation is to extend the permit boundary to increase the area of waste deposit by approximately 33 hectares to allow an increase in the amount of inert waste to be imported by rail by 7.5 million cubic metres. The landfill area will increase to approximately 47 hectares. The landfill is centred at National Grid reference 539337, 251315. Filling will take place at a maximum rate os 1.3 million tonnes per year.

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 EPR/BV1461IV/A001	Received 09/06/03	
Permit determined EPR/BV1461IV	13/04/04	Permit issued to Rugby Limited.
Change of Company Name from Rugby Limited to Cemex UK Cement Limited	22/07/05	
Variation Determined EPR/BV1461IV/V002 (Billing Reference: JP3037LA)	05/07/07	Variation to update the permit template
Variation Application EPR/BV1461IV/V003	Received 30/07/07	
Variation Determined EPR/BV1461IV (Billing Reference: YP3036UV)	19/12/07	Variation to update the non-hazardous limits
Variation Application EPR/BV1461IV/V004	Duly made 05/02/10	
Variation determined EPR/BV1461IV (Billing Reference: TP3233TK)	20/12/10	Variation to allow construction and demolition waste.
Variation Application EPR/BV1461IV/V005	Duly Made 14/08/12	Application to extend site boundary to incorporate leachate holding tanks.
Variation determined EPR/BV1461IV (Billing Reference: PP3733ZD)	16/10/12	
Variation Application EPR/BV1461IV/V006	Duly Made 31/03/14	Application to restrict incoming waste to inert only, incorporate a railway extension for waste handling, increase annual throughput from 700,000 tonnes to 1.3

Status log of the permit		
Description	**Date**	**Comments**
		million tonnes per annum and to transfer two discharge consents from EPR/BK0973IK to this permit.
Request for Information sent	27/02/14	Responses received 07/03/14 & 10/03/14
Variation determined EPR/BV1461IV (Billing Reference: LP3433VX)	20/06/14	
Agency Variation determined EPR/BV1461IV/V0127 (Billing ref: EP3439RG)	08/03/16	Varied and consolidated permit issued in modern condition format. Environment Agency Landfill Sector Review 2015
Variation Application EPR/BV1461IV/V012008	Duly made 24/05/16	Application to vary the permit to amend monitoring requirements.
Additional information	Duly made 24/05/16	Remove revised CO_2 limits from the application, provided evidence for revised monitoring locations and limits, justification for surface water determinands and confirmed correction of table referencing.
Additional information	17/08/16	Request to remove MEPP referencing from tables S3.5 and S3.8.
Variation determined EPR/BV1461IV (Billing reference: RP3233DN)	22/08/16	Varied permit issued.
Part surrender application EPR/BV1461IV/V012	Duly made 09/04/18	Application to surrender an unused part of the permitted area.
Part surrender determined EPR/BV1461IV (Billing Reference: DP3631JH)	17/04/18	Part surrender complete.
Part surrender application EPR/BV1461IV/V012	Duly made 13/11/18	Application to surrender an unused part of the permitted area.
Part surrender determined EPR/BV1461IV (Billing reference: QP3032QD)	17/01/19	Part surrender complete.
Application EPR/BV1461IV/V012 (variation and consolidation)	Duly made 31/05/19	Application to vary the permit to amend TDS WAC criteria within the Duty of Care testing programme; amend surface water monitoring locations; and extend the permit boundary. A request to add waste code 19 12 09 to the permitted waste types was submitted during the determination.
Additional information received	28/06/19	Information about the surface water monitoring point locations.
Additional information received	12/08/19	Schedule 5 Notice response including information about the TDS assessment criteria, source of the waste streams 17 05 04 and 19 12 09 and submission of revised Waste Acceptance and Control Procedures.

Status log of the permit		
Description	**Date**	**Comments**
Additional information received	08/10/19	Submission of revised Waste Acceptance and Control Procedures.
Variation determined EPR/BV1461IV (Billing reference RP3637QR)	22/10/19	Varied permit issued.
Application EPR/BV1461IV/V012	Duly made 28/07/20	Application for variation to extend the site for the deposit of inert waste.
Permit determined EPR/BV1461IV (Billing reference: JP3707BR)	10/03/21	Permit issued to Cemex UK Cement 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/BV1461IV

Issued to

Cemex UK Cement Limited ("the operator")

whose registered office is

Cemex House
Evreux Way
Rugby
Warwickshire
CV21 2DT

company registration number 00475212

to operate a regulated facility at

Barrington Works Landfill
Barrington Works
Haslingfield Road
Barrington
Cambridgeshire
CB22 7RQ

to the extent set out in the schedules.

The notice shall take effect from 10/03/2021

Name	Date
Philip Lamb	**10/03/2021**

Authorised on behalf of the Environment Agency

Schedule 1

The following conditions were varied as a result of an Environment Agency initiated variation:

Condition 2.6.7 – updated condition wording to refer to ‘the regulated facility’ rather than the landfill.

Condition 2.9.1 for landfill gas management added as not in current permit

Table S1.3 as refered to by condition 2.4.1, amended to remove improvement condition 1 requiring restoration plan as this is already covered by condition 2.6.2.

Table S3.5 as referred to by condition 3.6.1 is amended to remove the monitoring requirement for Total Oxidied Notrogen.

Table S3.7 as referred to by condition 3.6.1 is amended to update monitoring standard or method column.

Schedule 6 – the reference to the Waste Framework Directive is updated.

The following conditions were varied as a result of the application made by the operator:

Condition 1.3.1 amended to add pre-fix.

Condition 2.6.1 amended to relect inert waste input only.

Table S1.1 as referred to by condition 2.1.1, amended to add waste operation D1 for the disposal of inert waste and to amend the limits of specified operation column to leachate from cell 1.

Table S1.2 as referred to by condition 2.3.1, updated to add the most up to date operating techniques .

Table S1.3 as referred to by condition 2.4.1, updated to add improvement conditions 1C1a and IC1b, 1C2 and 1C3.

Table S1.4 as referred to by condition 2.6.7, annual waste input limit for inert wate amended and for restoration waste limit amended to refer to condition 2.6.2.

Table S2.1 amended to reflect the inert wastes agreed as part of this variation.

Tablle S2.1A added to show previously permitted wastes at the site.

Table S2.2 amended to refer to condition 2.6.2.

Table S3.2 as referred to by condition 3.6.1, amended to refer to updated surface water monitoring points.

Table S3.3 as referred to by condition 3.6.1, amended to refer to updated ground water monitoring points

Table S3.4A as referred to by condition 3.6.1, amended from table S3.4 to refer to updated landfill gas monitoring points and compliance limits for methane only.

Table S3.4B as referred to by condition 3.6.1, added to refer to include carbon dioxide as an action limit for perimeter landfill gas monitoring boreholes.

Table S3.6 as referred to by condition 3.6.1, amended monitoring point description wording

Table S3.8 as referred to by condition 3.6.1, amended to add the groundwater monitoring parameters as detailed in table S3.5.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate docum

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/BV1461IV

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Cemex UK Cement Limited ("the operator"),

whose **registered office is**

Cemex House
Evreux Way
Rugby
Warwickshire
CV21 2DT

company registration number 00475212

to operate an installation at

Barrington Works Landfill
Barrington Works
Haslingfield Road
Barrington
Cambridgeshire
CB22 7RQ

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

Name	Date
Philip Lamb	**10/03/2021**

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 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 shall be as set out in the Agreement made between the CEMEX UK Operations Limited and the Environment Agency dated 29th September 2008 as varied by a Deed of Variation dated 31st January 2011 (as varied by further Deeds of Variation from time to time). The operator shall accordingly ensure that the Permit is and remains throughout its subsistence a Permit to which the Deed relates and the operator shall produce evidence of such provision whenever required by the Environment Agency.

1.2.1 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 For the following activities referenced in schedule 1, table S1.1 (A1) 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").

2.2 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 Landfill Engineering

2.5.1 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.

2.5.2 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.

2.5.3 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.

2.5.4 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.

2.5.5 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.

2.5.6 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.

2.5.7 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.

2.5.8 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.5.5 and 2.5.6 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.

2.5.9 For the purposes of conditions 2.5.1, 2.5.2, 2.5.4 and 2.5.5, 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.

2.5.10 Where the Environment Agency has required further information under condition 2.5.9(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.

2.6 Waste acceptance

2.6.1 Wastes shall only be accepted for disposal if:

(a) they are listed in schedule 2, table S2.1; and

(b) they are inert waste; and

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

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

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

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

(g) they are wastes which have been treated, except for wastes for which treatment is not technically feasible.

2.6.2 Waste shall only be accepted for restoration where:

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

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

2.6.3 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.

2.6.4 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.

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

2.6.6 The total quantity of waste that shall be disposed in the landfill shall be limited by the levels shown on drawing B1454/BAR116/CM/05.

2.6.7 The quantity of waste that is disposed or recovered at the regulated facility in any year shall not exceed the limits in schedule 1, table S1.4.

2.6.8 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 restoration 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 Leachate levels

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

2.8 Closure and aftercare

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

2.9 Landfill gas management

2.9.1 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.

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.

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

3.1.4 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.

3.2 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.

3.3 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 Pests

3.5.1 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.

3.5.2 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.

3.6 Monitoring

3.6.1 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 S3.7;

(b) Point source emissions specified in table S3.2;

(c) Groundwater specified in tables S3.3 and S3.5;

(d) Landfill gas specified in tables S3.4 and S3.6;

(e) Surface water specified in table S3.8.

3.6.2 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.

3.6.3 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.

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

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

4.2 Reporting

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

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

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

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

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

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

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

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

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

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

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 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.

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

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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	Section 5.2 Part A(1)(a), The disposal of waste in a landfill.	Landfill for non-hazardous waste	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.6, as an integral part of landfilling.
Directly Associated Activities				
A2	N/A	N	Temporary storage of waste (leachate)	Leachate arising from the landfill – cell 1.
A3	D6 – release to water body except seas/ oceans	-	Discharges of site drainage from the landfill.	From surface water management system to point of entry to controlled waters.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	The response to questions 1.2, 2.2, 2.3, 2.4 and 3.1 in part B of the Application Form and given in a) IPPC Application – Barrington Cement Works Landfill Site LS116 – Hydrogeological Risk Assessment (May 2003) b) IPPC Application – Barrington Cement Works Landfill Site – Stability Risk Assessment (May 2003) c) IPPC Application – Barrington Cement Works Landfill Site – Landfill Risk Assessments – ref B1454Z 03/MAW/D4553 d) IPPC Application – Barrington Cement Works Landfill Site – Gas, Groundwater, Leachate and Surface Water Management and Monitoring re B1454 03/NB/D4599 Of the application excluding the response to the application given in the following sections – a) IPPC Application – Barrington Cement Works Landfill Site LS24 – Hydrogeological Risk Assessment (May 2003) b) IPPC Application – Barrington Cement Works Landfill Site – Stability Risk Assessment (May 2003) – all references to LS24 c) IPPC Application – Barrington Cement Works Landfill Site LS24 – Landfill Risk Assessments - ref B1454Z 03/MAW/D4553 – all references to LS24 IPPC Application – Barrington Cement Works Landfill Site – Gas, Groundwater, Leachate and Surface Water Management and Monitoring ref B1454 03/NB/D4599 – all references to LS24.	09/06/03
Additional Information Supplied by email	The information provided supplements the responses given in part B of the Application Form in “Leachate management report for LS116 Dec 2003 by MJCA”, “Gas risk assessment Nov 2003 by MJCA” and Addendum Report Hydrogeological RA for LS116 (to include Cd and Hg) excluding the responses to the application given in the following sections – Table 4 of the Addendum Report. Hydrogeological RA for LS116 (to include Cd and Hg).	23/12/03
Additional Information submitted as result of improvement conditions	Meteorological Monitoring Plan – Ref DH/CAI Closure and Aftercare Plan. Outline Design for Back Drainage.	30/09/04 30/04/05 29/01/05
Application	Application to vary environmental permit and supporting information: a) BTN Volume 1 – Barrington Landfill variation to BV1461 BTN HRA Volume 2 - Hydrogeological Risk Assessment Report.	05/02/10
Additional Information Supplied by email	Response to schedule 5 request. Response to e-mail request for further information.	22/06/10

		10/08/10
Application for variation EPR/BV1461IV/V006	Application to vary environmental permit and supporting information. BTN-REP-001 – Barrington Landfill variation to BV1461IV.	31/01/14
Additional information supplied by email	Response to e-mail requests for further information sent 27/02/2014 & 11/03/2014.	07/03/14 & 10/03/14
Application EPR/BV1461IV/V012	All Supporting Information Documents referenced in response to Part C2 and C3 of the Application Form.	24/05/16
Application EPR/BV1461IV/V011 Additional information submitted as a response to Schedule 5 Notice dated 18/07/19	Responses to questions 1 a), b) and c) of the Schedule 5 Notice submitted via e-mail on 12/08/19.	12/08/19
Additional information submitted as a request for further information	Waste Acceptance and Control Procedures – Barrington Works Landfill – Variation to Permit BV1461 Rev E, 7th October 2019 submitted via email on 08/10/19.	08/10/19
Submitted as part of application EPR/BV1461IV/V012	Supporting information report BTN-REP-003 dated 27 Feb 2020 which contains: Appendix A - Accidents and their consequences assessment (Risk assessment and mitigation measures);	28/07/20
	Barrington ESSD BTN-REP-002 Rev A including: Appendix M – Environmental Risk Assessment (Amenity including risk management measures).	28/07/20
	Barrington Works Landfill Variation to EPR/BV1461IV Landfill Gas Risk Assessment BTN-REP-004 Rev A 17 July 2020. Also contains landfill gas management plan	28/07/20
	Environmental Monitoring Plan Report Reference: 6879R17Rev1, Waste Acceptance Criteria (WAC), Landfill Gas Action Plan	28/07/20
	Response to request for information - letters 1 and 2 (ref: 242727-00) including Concept Surface Water Draning Scheme (Drawing 16-C018-BARR-025); Flood Risk Assessment and Surface Water Management Strategy. Excluding updated FP expenditure plan	28/07/20
	Hydrogeological Risk Assessment, HRA_6879R16 Rev1 Barrington 15 HRA, 6879R16 Rev2 Barrington 15 HRA	28/07/20
	Stability Risk Assessment Supplementary Report draft BTN-REP-005-Rev A	28/07/20

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1a	The operator shall submit a written report to the Environment Agency for technical assessment and approval. The report shall include proposals and updated in-waste gas monitoring plan for the installation of additional in-waste landfill monitoring boreholes in the landfill extension area in accordance with our Environment Agency guidance: LFTGN03 'Management of Landfill Gas'. In-waste landfill gas monitoring boreholes are usually required at a frequency of 2 per hectare, please provide justification for frequency below this rate.	10/06/2021
IC1b	Following approval of IC1a above - the operator shall install the additional in-waste landfill gas monitoring boreholes in accordance with condition 2.5.5 – 2.5.10 and these shall be monitored in accordance with table S3.6.	Prior to closure of the site
IC2	The operator shall submit a written report to the Environment Agency for technical assessment and approval which proposes groundwater compliance limits for BH91/1A based on 12 months of consecutive monthly monitoring. Following approval the compliance limits shall be included in table S3.3. The current procedure at BH91/1A is to purge the well and then take a sample the following day if enough water has recharged the well. The operator will take a sample prior to bailing as well as post bailing for a period of 12 months. At the end of the 12-month period they will review the data and assess the difference in the pre and post purged results. On this basis they will be able to determine whether purging of this well should continue	Within 14 months from the date of issue of the variation notice.
IC3	The Operator shall submit a revised financial provision expenditure plan to the Environment Agency for approval which includes the additional in-waste landfill gas monitoring points to be installed in accordance with IC1a and IC1b above.	Within 6 months of approval of IC1a.

Table S1.4 Annual waste input limits	
Category	**Limit Tonnes/ Year**
Non-hazardous waste	0
Inert waste	1,300,000
Waste for restoration	To be agreed in accordance with the Restoration Plan approved under condition 2.6.2.

Schedule 2 – List of permitted waste

Table S2.1 Permitted inert waste types for disposal	
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 07	glass packaging
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 02	glass
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 04	soil and stones other than those mentioned in 17 05 03 (London Clay from Willesden, Cricklewood, Bow or Barking Euro rail depots -TDS leaching limit, 12,000mg/kg)
19	**Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use**
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 05	glass
19 12 09	minerals (for example sand, stones) (Only wastes generated from the screening of wastes listed in this table, including London Clay from Willesden, Cricklewood, Bow or Barking Euro rail depots - TDS leaching limit, 12,000mg/kg)
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**

Table S2.1 Permitted inert waste types for disposal	
Waste code	**Description**
20 01	**separately collected fractions (except 15 01)**
20 01 02	glass
20 02	**garden and park wastes (including cemetery waste)**
20 02 02	soil and stones

Table S2.1A Waste types previously permitted for disposal	
Waste code	**Description**
10 11	**Waste from manufacture of glass and glass products**
10 11 03	Waste glass-based fibrous materials
10 13	**Waste 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 06	Particulates and dust (except 10 13 12 and 10 13 13)
10 13 13	Solid wastes from gas treatment other than those mentioned in 10 13 12
	Packaging
15 01 07	Glass packaging
17 01	**Construction and demolition wastes – 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
17 02	**Wood, glass and plastic**
17 02 02	Glass

Table S2.1A Waste types previously permitted for disposal	
Waste code	**Description**
17 03	**Bituminous mixtures, coal tar and tarred products**
17 03 02	Bituminous mixtures other than those mentioned in 17 03 01
17 05	**Soil (including excavated soil from contaminated sites), stones and dredged spoil**
17 05 04	Soil and stones other than those mentioned in 17 05 03
17 05 08	Track ballast other than those mentioned in 17 05 07
19 12	**Waste from the mechanical treatment of waste**
19 12 05	Glass
20 01	**Municipal waste – separately collected fractions**
20 01 02	Glass
20 02	**Garden and park waste**
20 02 02	Soil and stones
20 03	**Municipal waste**
20 03 03	Street cleaning residues (road sweepings)

Table S2.2 Permitted waste types for restoration	
Waste code	**Description**
Agreed in accordance with the Restoration Plan approved under condition 2.6.2.	

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**
Operational Cells or Phases (Any cells or phases that do not have a final engineered cap agreed in accordance with the landfill engineering condition, 2.5)			
Leachate compliance and monitoring points LW & LE as shown on Site Plan in Schedule 7	3 m above base of cell, or 21 m AOD (whichever is lowest elevation)	Monthly	As specified in Environment Agency Guidance LFTGN02 (February 2003) or 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.
Non Operational Cells or Phases (Any cells or phases that have a final engineered cap agreed in accordance with the landfill engineering condition, 2.5)			
None	None	Quarterly	As specified in Environment Agency Guidance LFTGN02 (February 2003) or 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 water (other than sewer) – emission limits and monitoring requirements						
Emission point Ref. & Location	**Parameter**	**Source**	**Limit (incl unit)**	**Reference Period**	**Monitoring Frequency**	**Monitoring Standard or Method**
S26 (discharged from North Pit to the River Cam)	Suspended Solids	Sitedrainage and surface water discharge to River Cam / Rhee TL 39615032	25 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.
	pH Max		9 pH			
	pH Min		6.5 pH			
	Oil or grease		None visible			

Table S3.3 Groundwater – emission limits and monitoring requirements					
Monitoring point reference	**Parameter**	**Limit (including unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
BH6a as shown on Site Plan in Schedule 7	Ammoniacal Nitrogen	0.96 mg/l	Spot Sample	Quarterly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Chloride	60 mg/l			
	Nickel	0.01 mg/l			
	Potassium	19 mg/l			
	Sodium	95 mg/l			
	Sulphate	161 mg/l			
	Cadmium	0.00016 mg/l			
	pH	>6 ≤ 11			
	Chromium	0.48 mg/l			
BH91/2A as shown on Site Plan in Schedule 7	Ammoniacal Nitrogen	0.4 mg/l	Spot Sample	Quarterly	
	Chloride	40 mg/l			
	Nickel	0.01 mg/l			
	Potassium	6 mg/l			
	Sodium	20 mg/l			
	Sulphate	210 mg/l			
	Cadmium	0.00016 mg/l			
	pH	>6 ≤ 11			
	Chromium	0.48 mg/l			

Table S3.3 Groundwater – emission limits and monitoring requirements					
Monitoring point reference	**Parameter**	**Limit (including unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
BH91/1A as shown on Site Plan in Schedule 7	Ammoniacal Nitrogen	No interim limit Note 1	Spot sample	Quarterly	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Chloride	210 mg/l Note 1			
	Nickel	0.04 mg/l Note 1			
	Potassium	48 mg/l Note 1			
	Sodium	265 mg/l Note 1			
	Sulphate	No interim limit Note 1			
	Cadmium	0.16 mg/l Note 1			
	Chromium	0.48 mg/l Note 1			
	pH	>6<11 Note 1			
BH97/2 as shown on Site Plan in Schedule 7	Ammoniacal Nitrogen	0.1 mg/l	Spot sample	Quarterly	
	Chloride	39 mg/l			
	Nickel	0.033 mg/l			
	Potassium	7 mg/l			
	Sodium	16 mg/l			

Table S3.3 Groundwater – emission limits and monitoring requirements					
Monitoring point reference	**Parameter**	**Limit (including unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
	Sulphate	105 mg/l			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.
	Cadmium	0.00016 mg/l			
	pH	>6 ≤ 11			
	Chromium	0.48 mg/l			
BH97/3 as shown on Site Plan in Schedule 7	Ammoniacal Nitrogen	0.23 mg/l	Spot sample	Quarterly	
	Chloride	80 mg/l			
	Nickel	0.04 mg/l			
	Potassium	15 mg/l			
	Sodium	45 mg/l			
	Sulphate	468 mg/l			
	Cadmium	0.00016 mg/l			
	pH	>6 ≤ 11			
	Chromium	0.48 mg/l			
BH17/2 as shown on Site Plan in Schedule 7	Ammoniacal Nitrogen	0.2 mg/l	Spot sample	Quarterly	
	Chloride	51 mg/l			

Table S3.3 Groundwater – emission limits and monitoring requirements					
Monitoring point reference	**Parameter**	**Limit (including unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
	Nickel	0.006 mg/l			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.
	Potassium	15 mg/l			
	Sodium	33 mg/l			
	Sulphate	363 mg/l			
	Cadmium	0.00016 mg/l			
	pH	>6 ≤ 11			
	Chromium	0.48 mg/l			
Note 1 – Limits are interim until agreed in accordance with IC2, table S1.2.					

Table S3.4A Landfill gas: off-site/ perimeter monitoring – Compliance limit and monitoring requirements				
Monitoring point Ref. /description	**Parameter**	**Limit (including units) ***	**Monitoring frequency**	**Monitoring standard or method**
BH91/1A BH91/2A BH17/2 BH6A BH97/2 as shown on the site plan included in Schedule 7 of this permit	Methane	1 %v/v	Quarterly	As per LFTGN03 (version 2, June 2014) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Record whether the ground is: waterlogged frozen snow covered
	Carbon Dioxide	no limit		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential Pressure	no limit		
	Temperature	no limit		
	Meteorological data	no limit		
* - The limits specified take account of the agreed background concentrations as detailed in Report RC/BQ/JHP/2423/01 dated November 2003				

Table S3.4B Landfill gas: off-site/ perimeter monitoring – Action levels and monitoring requirements				
Monitoring point Ref. /description	**Parameter**	**Action level (including units)**	**Monitoring frequency**	**Monitoring standard or method**
BH91/1A BH91/2A BH17/2 BH6A BH97/2 as shown on the site plan included in Schedule 7 of this permit	Carbon Dioxide	2.6 %v/v	Quarterly	As per LFTGN03 (version 2, June 2014) or such other subsequent guidance as may be agreed in writing with the Environment Agency. Record whether the ground is: waterlogged frozen snow covered

Table S3.5 Groundwater – other monitoring requirements			
Monitoring Point Ref. /Description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**
BH91/1A, BH91/2A, BH17/1, BH17/2, BH97/2, BH97/3, BH6A as shown on the site plan included in Schedule 7 of this permit	Water level, Depth To base (mAOD)	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
	pH, EC, temperature, total alkalinity, ammoniacal nitrogen, chloride, magnesium, potassium, sulphate, calcium, sodium, manganese, total oxidised nitrogen	Quarterly	
	cadmium, chromium, copper, lead, nickel, iron, arsenic, zinc	Annually	
	Hazardous substances	Annually for first six years of operation then every two years	

Table S3.6 Landfill gas – other monitoring requirements				
Monitoring Point Ref. /Description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
In waste gas monitoring boreholes or sealed leachate wells or sacrificial gas extraction system	Methane Carbon Dioxide Oxygen Carbon Monoxide Differential pressure Atmospheric pressure	Monthly until gas extraction commences	Calibrated handheld monitoring instrument	For cells or phases which have no active gas extraction. Gas extraction system shall be installed and extraction commenced once monitoring shows onset of methane production in waste at a rate that can be sustainably extracted. Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring.
	Hydrogen sulphide	Quarterly	Calibrated handheld monitoring instrument or Tedlar Bag sample in accordance with LFTGN04 (v3, March 2010) or other such subsequent guidance as may be agreed in writing with the Environment Agency or a method agreed with the Environment Agency.	For cells or phases which have no active gas extraction. Once gas extraction has commenced in a particular cell or phase, there is no longer a requirement to carry out this monitoring. Concentrations of hydrogen sulphide shall be assessed in accordance with the gas and odour management plans

Table S3.7 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)**				
LE and LW as shown on Site Plan in Schedule 7	Ammoniacal Nitrogen, Arsenic, BOD, Cadmium, Calcium, Chloride, Chromium, COD, Copper, Electrical Conductivity, Iron, Lead, Magnesium, Manganese, Nickel, pH, Potassium, Sodium, Total Alkalinity, Total Sulphates, Zinc	Quarterly	At leachate extraction points as listed in table S3.1 unless otherwise agreed in writing through an MEPP. As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk), or such other subsequent guidance as may be agreed in writing with the Environment Agency	None
	Hazardous substances	Annually		
	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**				
LE and LW as shown on Site Plan in Schedule 7	Ammoniacal Nitrogen, Arsenic, BOD, Cadmium, Calcium, Chloride, Chromium, COD, Copper, Electrical Conductivity, Iron, Lead, Magnesium, Manganese, Nickel, pH, Potassium, Sodium, Total Alkalinity, Total Sulphates, Zinc	Annually	At leachate extraction points as listed in table S3.1 unless otherwise agreed in writing through an MEPP. As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk), or such other subsequent guidance as may be agreed in writing with the Environment Agency	None
	Hazardous substances	Once every four years		

Table S3.7 Leachate – other monitoring requirements				
Monitoring point reference or description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
LE and LW as shown on Site Plan in Schedule 7	Depth to base (mAOD)	Annually		

Table S3.8 Surface water – other monitoring requirements				
Monitoring Point Ref. /Description	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
S26, S27, S28 as shown on Site Plan in Schedule 7	Ammoniacal Nitrogen Chloride Electrical conductivity pH Suspended solids Visual Oil and Grease	Monthly	Spot sample	As specified in Environment Agency Guidance LFTGN02 'Monitoring of Landfill Leachate, Groundwater and Surface Water' (February 2003), risk assessments for your environmental permit (www.gov.uk) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	total alkalinity, magnesium, potassium, Total sulphates, calcium, sodium, manganese	Quarterly		
	Chromium, Copper, Iron, Lead, Nickel, Sodium, Zinc, Cadmium, Arsenic.	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

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data		
Parameter	**Reporting period**	**Period ends**
Leachate and/ or groundwater level As specified by schedule 3, table S3.1	Every 3 months	31 March, 30 June, 30 September, 31 December
Point source emission to water (other than sewer) As specified by schedule 3, table S3.3	Every 3 months	31 March, 30 June, 30 September, 31 December
Emission to groundwater As specified by schedule 3, table S3.4	Every 3 months	31 March, 30 June, 30 September, 31 December
Landfill gas in external monitoring boreholes As specified by schedule 3, table S3.5	Every 3 months	31 March, 30 June, 30 September, 31 December
Other groundwater monitoring As specified by schedule 3, table S3.9	Every 3 months	31 March, 30 June, 30 September, 31 December
Other Landfill gas monitoring As specified by schedule 3, table S3.10	Every 3 months	31 March, 30 June, 30 September, 31 December
Other leachate monitoring As specified by schedule 3, table S3.11	Every 12 months	31 December
Other surface water monitoring As specified by schedule 3, table S3.12	Every 12 months	31 December
Meteorological data Landfill Directive, annex III, section 2	Every 12 months	31 December

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

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

Table S4.3 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	03/03/16
Controlled water	Form Water 1 or other reporting format to be agreed in writing with the Environment Agency	03/03/16
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Environment Agency	03/03/16
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with the Environment Agency	03/03/16
Waste Return	E-waste Return Form	-
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Environment Agency	03/03/16

Schedule 5 – Notification

This page outlines the information that the operator must provide.

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

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

Part A

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

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

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

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

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

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

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

Part B to be supplied as soon as practicable

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

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“annually” means once every year.

“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.

“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 limit.

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

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

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

"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.

“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’.

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

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

Where the following terms appear in the waste code list in Table S2.1 they have the meaning given below:

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

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

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

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

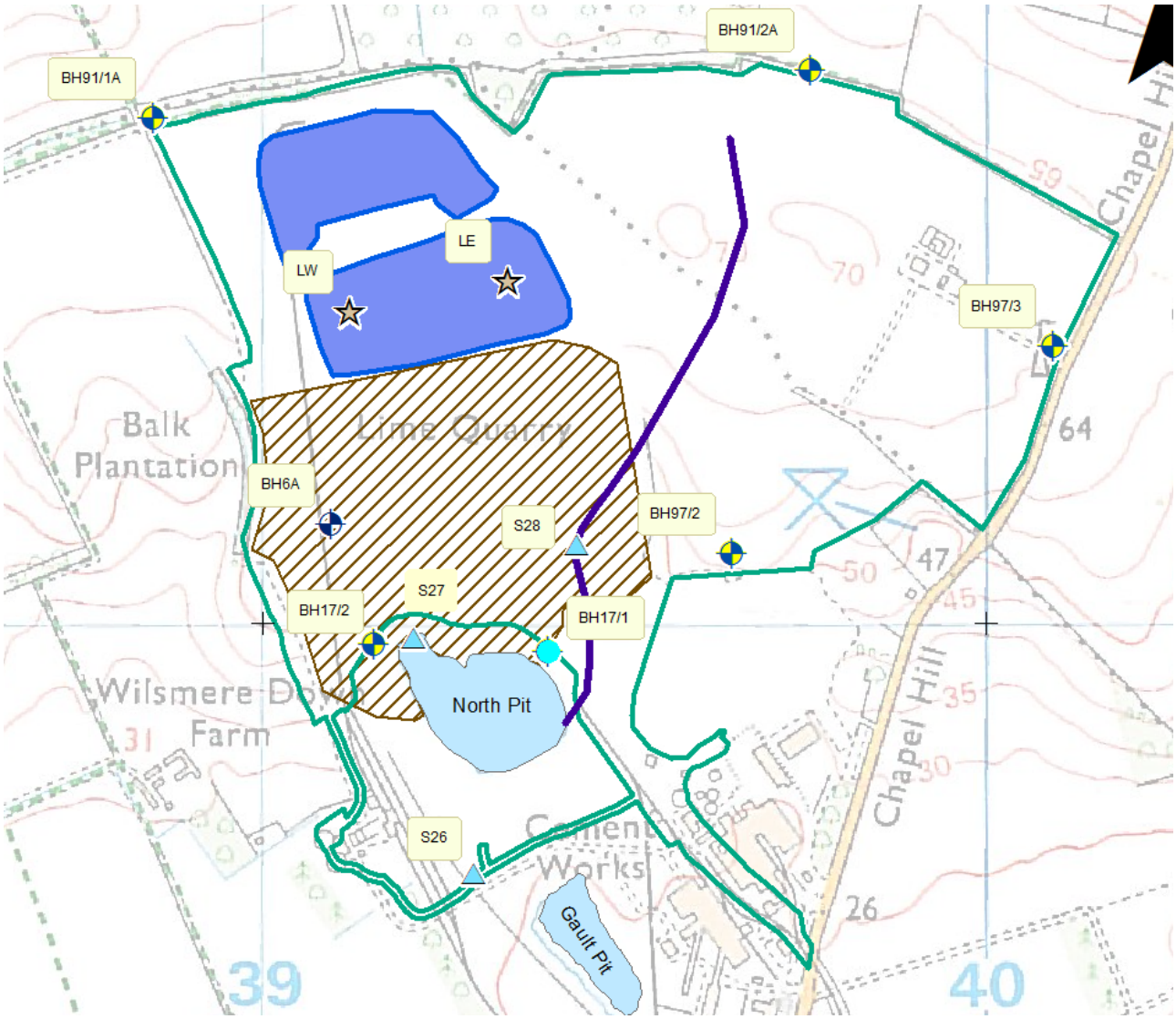
'transition metals' means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified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

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

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

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

Schedule 7 – Site plan



END OF PERMIT