

Notice of variation with introductory note

Environmental Permitting (England & Wales) Regulations 2010

Biffa Waste Services Limited

Westmill Waste Management Facility
Westmill Road
Ware
Hertfordshire
SG12 0ES

Variation application number

EPR/DP3431PC/V006

Permit number

EPR/DP3431PC

Westmill Waste Management Facility

Permit number EPR/DP3431PC

Introductory note

This introductory note does not form a part of the notice

The following notice gives notice of the variation of an environmental permit.

This variation amends the existing landfill permit to add a Soil Treatment Facility which will treat hazardous and non-hazardous wastes for recovery. The Facility will treat waste through the use of biopiles by means of biological remediation which shall involve incorporating micro-organism cultures and small amounts of green waste material into the biopiles to assist the remediation process. Wastes will be stored and treated on an impermeable surface with sealed drainage and the site infrastructure will include active emissions mitigation including a biofilter and dust suppression sprays in line with best available techniques.

The purpose of the Soil Treatment Facility is to produce non-hazardous waste soil material which is suitable for use in landfill restoration. Hazardous and non-hazardous waste soils which have been effectively treated, appropriately blended and meet the criteria for non-hazardous waste soils and land restoration criteria will be sent for use above the landfill cap as restoration material. All wastes produced by the Soil Treatment Facility for recovery will be coded under EWC code 19 13 02 which will be the only waste sent to the adjacent landfill for final restoration.

Residual wastes which do not meet the criteria for restoration of the landfill will be used within the landfill for daily cover or if the waste does not meet non-hazardous landfill criteria it will be sent off site for appropriate disposal.

The variation will allow the Soil Treatment Facility to use some of the landfill infrastructure namely the leachate treatment plant and management systems including the surface water management system. It will also amend the permit to allow the crushing and screening of aggregates as a directly associated activity to treat components in the waste which are not suitable for restoration, either removing them or reducing them to a smaller grade.

This variation also amends the permit to update the schedule 1 references within the permitted activities table S1.2 and amend monitoring and reporting conditions in order to bring the permit in line with the requirements of the Industrial Emissions Directive (IED) regulations.

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 BK1988ID (Reference EPR/BK1988ID/A001)	Duly made 15/01/01	
Response to request for information 01	18/07/01	
Response to request for information 02	03/12/01	
Response to request for information 03	03/12/01	
Response to request for information 04	25/03/02	
Permit determined BK1988ID	07/04/03	
Permit transferred to Biffa Waste Services Ltd DP3431PC	26/05/04	Permit transferred to Biffa Waste Services Ltd (formerly permit reference BK1988ID)
Environment Agency Variation EA/EPR/DP3431PC/V002 (PP3333KY)	08/04/09	
Agency initiated variation EPR/DP3431PC/V003	18/03/10	
EPR/DP3431PC/V003 Determined (MP3835TW)	23/07/10	
Application EPR/DP3431PC/V004 Consolidation and substantial Variation	19/04/09	Consolidation of EPR/DP3431PC and EPR/GP3991NU
Additional Information Received	21/01/10	
Additional information Received – Odour Management Plan	03/06/10	
Additional Information – Response to Schedule 5 Notice	05/06/10	
Additional Information Response to Schedule 5 Notice	30/07/10	
Variation determined Consolidated permit number EPR/DP3431PC/V004 (VP3833KZ)	25/02/11	
Application EPR/DP3431PC/V006	Duly made 10/09/12	Application to vary the permit to include the Soil Treatment Facility

Status log of the permit

Description	Date	Comments
		to process wastes for use on the landfill.
Additional information response to Schedule 5 Notice EPR/DP3431PC/V006	22/10/12	Insertion of waste code 19 13 02. Confirmed amount of green waste accepted and stored at the site for use in biopiles process. Confirmed dust suppressions methods.
Variation Application EPR/DP3431PC/V007	Duly made 25/10/12	Variation to add an additional landfill gas engine. Please note this variation was issued before applications V005 and V006.
Additional information EPR/DP3431PC/V006	20/11/12	Impermeable surface engineering.
Additional information EPR/DP3431PC/V006	30/11/12	Confirmation of insertion of pre operation condition for testing and characterising of wastes for use as daily cover. Confirmation of site specific risk assessment pre-operational condition for soil deposit on landfill.
Variation determined EPR/DP3431PC/V007 (TP3539ZK)	18/04/13	Varied permit issued. EPR/DP3431PC/V007
Additional information EPR/DP3431PC/V006	03/02/2014	Confirmed specific acceptance criteria for waste codes 19 03 06*, 19 03 07. Confirmed removal of waste codes 19 02 06, 19 03 05, 19 02 05*, 19 03 04*.
Variation determined EPR/DP3431PC (Billing ref: HP3237CF)	DRAFT	Variation to add soil treatment facility. Note this variation was issued before application V005.

End of introductory note

Notice of variation

Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies

Permit number
EPR/DP3431PC

issued to:
Biffa Waste Services Limited (“the operator”)

whose registered office is

Coronation Road
Cressex Business Park
Cressex
High Wycombe
Buckinghamshire
HP12 3TZ

company registration number **00946107**

to operate regulated facilities at

Westmill Waste Management Facility
Westmill Road
Ware
Hertfordshire
SG12 0ES

to the extent set out in the schedules.

The notice shall take effect from **DRAFT**

Name	Date
DRAFT	DRAFT

Authorised on behalf of the Environment Agency

Schedule 1 – conditions to be deleted

None.

Schedule 2 – conditions to be amended

The following conditions are amended as a result of the application made by the operator:

Condition 1.3.1 has been amended to include part (c) of the condition.

1.3.1 For the following activities referenced in schedule 1, table S1.1 A1 to A10, the operator shall:

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

Condition 2.2.3 has been amended to refer to the correct activities in table S1.1.

2.2.2 The activities A1 and A2 authorised under Table S1.1 shall not extend beyond the site, being the land shown edged in yellow on the site plan at schedule 7 to this permit.

2.2.3 The activities A15 and A16 authorised under Table S1.1 shall not extend beyond the site boundary being the land shown edged in blue on the site plan at schedule 7 to this permit.

Condition 2.5.1 has been amended to refer to the table 1.4B

2.5.1 The operations specified in schedule 1 tables S1.4 and 1.4B shall not commence until the measures specified in that table have been completed.

Condition 2.7.2 has been amended to refer to the green boundary on the site plan and to refer to the acceptance of wastes from the Soil Treatment Facility for restoration.

2.7.2 Wastes shall only be accepted for restoration within the area edged in green on the site plan attached to schedule 7 of this permit if;

- a) they are listed in schedule 2, Table S2.2; and
- b) they are inert waste or wastes received from the Soil Treatment Facility and satisfy the criteria for restoration; and
- c) they are not liquid waste (including waste waters [but excluding sludge and excluding liquid waste accepted at a permitted leachate treatment activity]).

Condition 3.5.1 has been amended to refer to process monitoring and soil biopile 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 table S3.1 and S3.9;
- b) Point source emissions specified in table S3.2, S3.3 and S3.4;
- c) Groundwater specified in table S3.5 and S3.11;
- d) Landfill gas specified in tables S3.6, S3.7 and S3.8;
- e) Surface water specified in table S3.10;
- f) Process monitoring specified in Table S3.12; and
- g) Soil biopile monitoring specified in Table S3.13.

Condition 4.2.2 has been amended to refer to the performance parameters specified in table S4.3.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) 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 there to;
- (b) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- (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 behavior 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;

Conditions 4.3.1 and 4.3.2 have been amended to reflect the changes to the conditions under the Industrial Emissions Directive (IED).

- 4.3.1 (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately:
- (i) inform 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) In the event 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) In the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

Condition 4.3.4 has been amended to include reporting on the death of an operator and changes in an operator's name.

- 4.3.4 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.

Table S1.1 as referenced in condition 2.1.1 is amended to insert the listed activities S5.3 A(1)(a)(vi), S5.3 A(1)(a)(iii), S5.6 A(1)(a) and S5.4 A(1)(b)(i); to add directly associated activities for the crushing and screening of waste, to allow the use of the Leachate Treatment Plant by the Soil Treatment Facility and to allow restoration materials to be used within the green boundary on the site plan.

Table S1.1 Activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	S5.2 A(1)(a): The disposal of waste in a landfill.	Landfill for non-hazardous waste (D5 – Specially engineered landfill)	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.7, as an integral part of landfilling. Waste shall only be deposited within the area edged in yellow on the site plan in schedule 7 of this permit.
A2	S5.3 A(1)(a)(i): Leachate treatment.	Treatment of landfill and on-site soil treatment facility leachate in a facility with a capacity greater than 50 tonnes per day (D8 - biological treatment of waste)	Treatment of landfill and on-site soil treatment facility leachate in a facility with a capacity greater than 50 tonnes/day (D8 - biological treatment of waste).
A3	S5.3 A(1)(a)(vi): Recovery of hazardous waste with a capacity exceeding 10 tonnes per day.	Ex-situ bioremediation of hazardous waste soil. R5: Recycling/reclamation of inorganic materials other than metals and metal compounds.	All treatment must take place on an impermeable surface with sealed drainage. The biopile gas extraction system must be operational during treatment. Hazardous wastes treated on site will only be used for recovery within the green boundary outlined in schedule 7 of the permit. Waste soils only as per Table S2.4.
A4	S5.3 A(1)(a)(iii): Recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving blending or mixing.	Blending or mixing of hazardous waste soils. R5: Recycling/reclamation of inorganic materials other than metals and metal compounds.	All treatment must take place on an impermeable surface with sealed drainage. The blending and mixing of hazardous waste is only permitted provided it is in line with approved blending and mixing methodology as set out in pre-operational condition PO3 of table S1.4. Waste only as per tables 2.4.

Table S1.1 Activities

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A5	S5.6 A(1)(a): Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes.	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). D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection on the site where it is produced).	All storage must take place on an impermeable surface with sealed drainage. Waste only as per tables 2.4.
A6	S5.4 A(1)(b)(i): Recovery of non-hazardous waste soils with a capacity exceeding 75 tonnes per day involving biological treatment.	Ex-situ biological treatment consisting of bioremediation of non-hazardous waste soils. R5: Recycling/reclamation of other inorganic compounds.	All treatment and storage must take place on an impermeable surface with sealed drainage. The biopile gas extraction system must be operational during treatment. Non-hazardous wastes treated on site will only be used for recovery within the green boundary outlined in schedule 7 of the permit. Wastes soils only as per Table S2.5.
Directly Associated Activity			
A7	Gas utilisation	Utilisation of landfill gas for energy recovery in an appliance with a rated thermal input of >3 MW and <50 MW (R1 – Use principally as a fuel to generate energy).	Landfill gas arising from the landfill.
A8	Landfill gas flaring	Flaring of landfill gas for disposal in an appliance.	Landfill gas arising from the landfill.
A9	Water discharges to controlled waters	Discharges of site drainage from the landfill and soil treatment facility.	From surface water management system to point of entry to controlled waters.
A10	Leachate discharge to foul sewer	Discharge of leachate from the landfill and soil treatment facility.	From leachate treatment plant to point of entry to sewer.
A11	Screening of waste	Screening of waste to remove any materials which are not suitable for use in restoration or treatment.	All treatment must take place on an impermeable surface with sealed drainage. Wastes treated on site will only be used for recovery within the green boundary or disposal within the yellow boundary outlined in schedule 7 of the permit.

Table S1.1 Activities

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A12	Crushing of aggregate.	Crushing of aggregate from the screening of soils to produce materials suitable for restoration or treatment.	Wastes treated on site will only be used for recovery within the green boundary or disposal within the yellow boundary outlined in schedule 7 of the permit.
A13	Blending or mixing of non-hazardous waste soils.	R5: Recycling/reclamation of inorganic materials other than metals and metal compounds.	All treatment must take place on an impermeable surface with sealed drainage. The blending and mixing of non-hazardous waste is only permitted provided it is in line with approved blending and mixing methodology as set out in pre-operational condition PO3 of table S1.4. Waste only as per tables 2.5.
A14	Temporary storage of non-hazardous waste pending recovery.	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).	All storage must take place on an impermeable surface with sealed drainage. Waste only as per tables 2.5.
Activity Reference	Description of Activities for Waste Operations	Limits of Activity	
A15	D1: Deposit into or onto land.	Management and monitoring or emissions from the closed landfill being the area edged in blue on the site plan schedule 7 of this permit.	
A16	D5: Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc).	Management and monitoring of emissions from the closed landfill being the area edged in blue on the site plan in schedule 7 of this permit.	
A17	R10: Land treatment resulting in benefit to agriculture or ecological improvement.	Use of waste soils (specified within Table S2.2) to provide restoration soils above the landfill cap in the area edged in green on the site plan in schedule 7 of this permit.	

Table S1.2 as referenced by condition 2.3.1 has been amended to include new operating techniques.

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	Response to section B2.1 given in Appendix C of the application.	18/12/00
Westmill II Working Plan	Leachate Management System, Sections 2.4, 2.5, 5.6, 5.7 of the working plan A.6 dated April 2003	04/04/03
Westmill II Working Plan	Landfill gas management system, Sections 2.7, 5.1, 5.2, 5.3, 5.4, 5.5 (Excluding Units and Accuracies in Section 5.2.1) of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Surface water Management System, Sections 2.9, 5.9 (Excluding Normal Reporting Limits and Units in section 5.9.2) of the working plan A. 6 dated April 2003	04/04/03

Table S1.2 Operating techniques		
Description	Parts	Date Received
Westmill II Working Plan	Waste handling and storage, Sections 4.11, 4.12 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Waste discharge and placement, Sections 4.12, 4.14.3 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Daily and intermediate cover, Sections 4.14.1, 4.14.2 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Prevention and control of dusts and bioaerosols, Sections 6.4, 6.5 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Prevention and control of odour, Sections 6.2, 6.3 of the working plan A. 6 dated April 2003, subject to the requirements of Schedule 1, Table S1.4, Pre-operational condition 2	04/04/03
Westmill II Working Plan	Prevention and control of birds, vermin and insects, pests and scavengers, Section 6.8 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Prevention and Control of windblown materials, including litter, Section 6.6 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Prevention and control of dirt, mud and debris on roads, Section 6.9 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Energy efficiency, Appendix U of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Accident prevention and control, Section 4.2, Appendix Q, Appendix R of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Fire prevention and control, Section 4.10 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Unauthorised access prevention and control, Sections 3.5, 4.3, 4.4, 4.5 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Noise, Section 6.7 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Hydrogeological Risk Assessment, Appendix F (Ref 00523300.503/A.1) of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Waste recovery and disposal, Appendix V of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Raw materials (including water), Section 2.6, 2.10, 4.9, Appendix N of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Conceptual and detailed engineering design Section 2.3 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Installation and maintenance of final capping, Section 2.8 of the working plan A. 6 dated April 2003	04/04/03
Westmill II Working Plan	Contaminant Loading Protocol, Appendix Z of the working plan A. 6 dated April 2003	04/04/03
Westmill I Closure Report dated February 2006	Section 2.0 Environment Management system Overview Section 3,0 Site Infrastructure	February 2006
Westmill I Landfill Site Closure Plan V2 dated April 2010	Section 2.2 Environment Management Systems Overview Section 3.1 Site Infrastructure Section 4.0 Leachate Management Section 5.0 Groundwater Management Section 6.0 Surface Water Management Section 7.0 Landfill Gas Management Section 8.0 Restoration , Maintenance and Stability	21/04/10

Table S1.2 Operating techniques		
Description	Parts	Date Received
Additional information supplied, Westmill I Landfill, site closure plan	Responses to question 1, Perimeter Sloped Response to question 2, Capping and safety factor Response to question 7, Capping data and safety factor, Response to question 8, safety factor on southern slope Response to question 9, analysis and stability of northern slope. Response to question 10, short, medium and long-term stability of waste mass Response to question 11, leachate monitoring, Response to question 12, Leachate monitoring Response to question 13, Groundwater monitoring Response to question 14, Groundwater monitoring Response to question 15, Surface water monitoring Response to question 16, Gas monitoring Response to question 17 informing the agency	21/04/10
Application EPR/DP3431PC/V004	Hydrogeological Risk Assessment, Section 3.2, subject to the requirements of Schedule 1, Table S1.3, Improvement condition 1 Stability Risk Assessment, Sections 2.0 and 3.0 Landfill Gas Risk Assessment, Section 4.0	April 2009
Application EPR/DP3431PC/V004	H1 Assessment, Table A1 – Odour Risk Assessment and Management Plan, Subject to the requirement of schedule 1, Table S1.3, Improvement Condition 2 H1 Assessment, Table A2 – Noise Risk Assessment and Management Plan H1 Assessment Table A3 – Fugitive Risk Assessment and Management Plan H1 Assessment Table A4 – Accidents Risk Assessment and Management Plan	April 2009
Further Information Received EPR/DP3431PC/V004	1 st Response to the Agency, Sections 2 and 4	January 2010
Schedule 5 Notice EPR/DP3431PC/V004 dated 2 July 2010	Response to question 1, 2, 3, 4 and 5	30/07/10
Variation Application EPR/DP3431PC/V006	Section 3, Table 3 Technical standards, Part C3 of the application form. Document reference 407.00034.0046/BATOT (June 2012). Appendix BATOT1SSI/913/07 Waste Acceptance Procedure SRC - Section 5.0 SRF Output Sampling Methodology.	10/09/12

Table S1.2 Operating techniques		
Description	Parts	Date Received
Schedule 5 request for further information	Confirmed batch management to control cross contamination. Confirmation all waste received will meet criteria for restoration on acceptance to the site with regards to non organic contaminants that cannot be treated by the biopile bioremediation process. Confirmation that where possible site equipment will be located into areas below ground levels or behind biopiles to screen noise. Confirmed site has appropriate waste tracking system. Confirmed amount of green waste accepted and stored at the site for use in biopile process. Confirmed dust suppressions methods for aggregate screening and crushing activity. Supplied revised site plan drawing number 02, WK236301.	22/10/12
Application EPR/DP3431PC/V007	Third tier atmospheric dispersion modelling carried out to assess impacts of increasing the capacity of Westmill Landfill Gas Generation Station to 3.195MW, dated September 2012	25/10/12
	Noise Assessment Westmill Landfill Site dated September 2012	25/10/12
	Third tier atmospheric dispersion modelling carried out to assess impacts of increasing the capacity of Westmill Landfill Gas Generation Station to 3.168 MW, dated April 2013	15/04/13
Additional information	Confirmation of impermeable surface engineering. Revised engineering drawing of impermeable surface drawing number 007, GCL layout.	20/11/12
Additional information	Operator confirmed update of permit conditions in line with the Industrial Emissions Directive.	26/02/2013
Additional information	Confirmed that waste codes 19 03 06*, 19 03 07 will only be accepted at the site if prior to solidification they did not possess a hazardous property derived from dangerous substances other than oil derived hydrocarbons and were solidified by a permitted process using non-reacting binders such as clay.	03/01/2014 and 04/03/2014
Additional information	Confirmed that waste codes 19 02 05* and 19 02 06 will only be accepted at the site in the form of road sweeping residues and gully suckings that have been processed prior to delivery.	05/02/2014

Improvement conditions 12 and 13 have been added to Table S1.3 to ensure the operator demonstrates that they are carrying out appropriate monitoring of the emissions from the biofilter.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
12	The operator shall submit to the Environment Agency for approval written details of the specific operating parameters for the biofilter and the optimal operating condition ranges which will be maintained.	3 months from commencement of operation of the Soil Treatment Facility.
13	The operator shall submit a written monitoring programme to the Environment Agency for approval. The monitoring programme shall contain proposals for;	3 months from commencement of operation of the Soil

	<ul style="list-style-type: none"> Monitoring volatile organic compounds and odour emissions from the biofilter Monitoring biofilter operating parameters <p>The operator shall provide details of monitoring methods, monitoring frequency and dates for the implementation of any individual measures.</p>	Treatment Facility.
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Table S1.5B as referenced by condition 2.7.10 has been amended to correct the table reference.

Table S1.5B Annual waste Input limits to the area edged in green on the site plan in Schedule 7 of this permit	
Category	Limit Tonnes/Year
Inert waste for restoration	Unlimited
Inert Waste for engineering landfill infrastructure	Unlimited

Table S2.2 as reference by condition 2.7.2 is amended to add the waste code 19 13 02 as a waste acceptable for use in restoration of the landfill.

Table S2.2 Permitted waste types and quantities for providing restoration soils to the area edged in green on the site plan in schedule 7 of this permit	
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 02	wastes from mineral metalliferous excavation
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 01	concrete, bricks, tiles and ceramics
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics
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
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 13	wastes from soil and groundwater remediation
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 02	garden and park wastes (including cemetery waste)
20 02 02	soil and stones

Table S3.2 as reference in condition 3.5.1 has been amended to list the biofilter as a point source emission.

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
LFGE 1 and LFGE 2 Plan SS4, Landfill Gas Management Infrastructure, dated 26/02/09	Oxides of Nitrogen	Gas utilisation plant	650 mg/m3	Hourly mean	Annually	BS EN 14792
	CO		1500 mg/m3	Hourly mean	Annually	BS EN 15058
	Total VOCs		1750 mg/m3	Hourly mean	Annually	BS: 13526: 2002
	NMVOc's		150 mg/m3	Hourly mean	Annually	BS EN 13649: 2002
LFGF 1 and LFGF 2 Plan SS4, Landfill Gas Management Infrastructure, dated 26/02/09	Oxides of Nitrogen	Landfill Gas Flare	150 mg/m3	Hourly mean	Annually	ISO 10849
	CO		100 mg/m3	Hourly mean	Annually	ISO 12039
	Total VOCs		10 mg/m3	Hourly mean	Annually	BS EN 12619 or BS EN 13526
	NMVOcs		5 mg/m3	Hourly mean	Annually	BS EN 13649
	Operational Temperature		>1000°C	Hourly mean	Weekly while flare operational	
Biofilter as reference in drawing 03 reference WK236400	As per those agreed as part of improvement conditions 13	Biofilter	As per those agreed as part of improvement conditions 13	As per those agreed as part of improvement conditions 13	As per those agreed as part of improvement conditions 13	As per those agreed as part of improvement conditions 13

Footnote: Annual monitoring is only required when flares operate in excess of 10% of the time, taken on an annual assessment period.

Table S4.1 as referenced in condition 4.2.3 has been amended to include reporting of organic contamination monitoring in soil batches and for reporting of process monitoring.

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Leachate levels As required by condition 3.5.1	W2/C1LW1, W2/C1LM2 , W2/C1LM3, W2/C2LW1, W2/C2LM2, W2/C2LM3, W2/C3LW1, W2/C3LM2, W2/C3LM3, W2/C4LW1, W2/C4LM2, W2/C4LM3, W2/C4BLW1, W2/C5LW1, W1/C0LWN, W1/C0LWS, W1/C1LWNB, W2/C1LW1, W2/C1LM2, W2/C1LM3, W2/C2LW1, W2/C2LM2, W2/C2LM3, W2/C3LW1, W2/C3LM2, W2/C3LM3, W2/C4LW1, W2/C4LM2, W2/C4LM3, W2C4BLW1, W2/C5LW1. On plan Westmill Landfill Site, Monitoring Infrastructure, dated 06/05/2008	Every 3 months	1 January
Emissions to air Parameters as required by condition 3.5.1	LFGE1, LFGE2, LFGE3 LFGF1, LFGF2, Biofilter	Every 12 months	1 January
Emissions to water Parameters as required by condition 3.5.1	W2/SW1	Every 3 months	1 January
Emissions to sewer, effluent treatment plant, etc. Parameters as required by condition 3.5.1	Leachate Treatment Plant	Every 3 months	1 January
Groundwater Parameters as required by condition 3.5.1	W2/NW1, W2/NW2, W2/NW3, W2/NW4, W1/MM4, W2/NW5, W2/NW6, W1/MM7, W2/NW10	Every 3 Months	1 January
Landfill gas lateral migration Parameters as required by condition 3.5.1	NG1, NG2, NG3, NG4, NG5, NG6, NG7, NG8, NG9, NG10, NG11, NG12, NG13, NG14, NG15, NG16, NG17, W1/GM01, W1/GM02, W1/GM03, W1/GM04, W1/GM05, W1/GM06, W1/GM07, W1/GM08, W1/GM09, W1/GM10, W1/GM11, W1/GM12, W1/GM13, W1/GM14, W1/GM15, W1/GM16, W1/GM17, W1/GM18	Every 3 months	1 January
Landfill gas surface emissions Parameters as required by condition 3.5.1	Permanently capped zone, temporary capped zone	Every 12 months	1 January

Table S4.3 as referenced in condition 4.2.2 has been amended to include the reporting of water usage.

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Energy usage	Annually	MWh
Water usage	Annually	tonnes

Table S4.4 referenced in condition 4.2.2 has been amended to include reporting forms for energy usage, water usage and process monitoring requirements.

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	DD/MM/YY
Air	Form Air 1 or other reporting format to be agreed in writing with the Environment Agency	DD/MM/YY
Controlled water	Form Water 1 or other reporting format to be agreed in writing with the Environment Agency	DD/MM/YY
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Environment Agency	DD/MM/YY
Sewer	Form Sewer 1 or other reporting format to be agreed in writing with the Environment Agency	DD/MM/YY
Landfill gas	Form LFG 1 or other reporting format to be agreed in writing with the Environment Agency	DD/MM/YY
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Waste Return	Waste Return Form RATS2E	DD/MM/YY
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Environment Agency	DD/MM/YY
Processing monitoring	Reporting format to be agreed in writing with the Agency	DD/MM/YY

Schedule 3 – conditions to be added

The following conditions are added as a result of the application made by the operator.

1.4 Efficient use of raw materials

1.4.1 For the following activities referenced in schedule 1, table S1.1 A1 to A10 the operator shall:

- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- (b) maintain records of raw materials and water used in the activities;
- (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any further appropriate measures identified by a review.

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

1.5.1 The operator shall take appropriate measures to ensure that:

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

1.5.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2.1.2 For the following activities referenced in schedule 1, Table S1.1 A3 to A6, waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2.4 The activities A3 to A6 and A11 to A14 authorised under Table S1.1 shall not extend beyond the site, being the land shown edged in red on the site plan at schedule 7 to this permit.

2.3.2 Any raw materials or fuels listed in schedule 2 table S2.3 shall conform to the specifications set out in that table.

2.3.3 Waste shall only be accepted under activities A3 to A6 and A11 to A14 if:

- (a) it is of a type and quantity listed in schedule 2 tables S2.4, and S2.5 and
- (b) it conforms to the description in the documentation supplied by the producer and holder.

2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

- (a) the nature of the process producing the waste;
- (b) the composition of the waste;
- (c) the handling requirements of the waste;

- (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

Hazardous waste storage and treatment

- 2.3.6 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.
- 3.1.9 For the following activities referenced in schedule 1, Table S1.1 A3 to A6, periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.
- 4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

Table S1.4B as reference by condition 2.5.1 has been added to include pre-operational conditions.

Table S1.4B Pre-operational measures	
Reference	Pre – operational measures
1	At least 2 weeks prior to operation of the Soil Treatment Facility, the operator shall submit to the Environment Agency a report including a quantitative risk assessment for written approval demonstrating that the leachate treatment plant serving the landfill has the ability and capacity to effectively treat leachate from the Soil Treatment Facility.
2	At least 2 weeks prior to operation of the Soil Treatment Facility, the operator shall submit a review of the site's odour monitoring and management plan specifically related to the Soil Treatment Facility to the Environment Agency for written approval.
3	Prior to operation of the bioremediation process, the operator shall submit a methodology for the blending and mixing of wastes to the Environment Agency for written approval. The mixing and blending of hazardous and non-hazardous waste shall not commence until the Environment Agency has approved the methodology.
4	At least 2 weeks prior to sending any waste for landfill restoration, the operator shall submit a site specific risk assessment to the Environment Agency which demonstrates that treated waste will not impact on the local groundwater. Waste shall not be deposited at the site for restoration until the risk assessment has been agreed by the Environment Agency in writing.
5	At least 2 weeks prior to sending any residual waste for use as daily cover, the operator shall submit a report to the Environment Agency which demonstrates that the treated soils are acceptable to deposit at the landfill. Waste shall not be used for daily cover until the report has been agreed by the Environment Agency in writing.

Table S1.4B Pre-operational measures	
Reference	Pre – operational measures
6	<p>The operator shall submit a Validation Report to the Environment Agency as soon as practicable following the construction of site infrastructure. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall include a comprehensive record of the construction and must include, where relevant:</p> <ul style="list-style-type: none"> • Details of any changed to the approved design and justification for those changes; • “As-built” plans and sections of the works; • Records of any problems or non-compliance and the solution applied; • Any other site specific information considered relevant to proving the integrity of the construction; • Validation by a qualified person that all of the construction has been carried out in accordance with the construction proposals. <p>A review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions.</p>
7	<p>The operator shall review all risk assessments, management systems and procedure for wastes being accepted, treated and stored at the soil treatment facility.</p> <p>This review shall ensure that appropriate measures are taken when accepting, handling and storing the wastes, ensuring that all emissions are prevented, in line with Environment Agency guidance SGN 5.06. The Operator shall write to the Environment Agency to confirm that this review has been undertaken prior to the acceptance of waste at the soil treatment facility.</p>
8	<p>At least 2 weeks prior to operation of the Soil Treatment Facility the operator shall submit to the Environment Agency for written approval a gas risk assessment which investigates the potential for gas from Westmill 1 to migrate towards the soil treatment facility.</p> <p>The assessment shall also review the need for gas management infrastructure at the site and submit proposals. For example:</p> <ul style="list-style-type: none"> • Installation of collections wells in the areas beneath or surrounding the soil treatment facility • Installation of collection infrastructure within the Westmill 1 to capture gas venting towards the landfill. <p>Once approved the operator’s proposals shall be implemented at the site within a timescale agreed with the Environment Agency</p>

Table S2.3 as referenced in condition 2.3.2 has been added to the permit to list the raw materials to be used at the Soil Treatment Facility and their annual tonnage.

Table S2.3 Raw materials and fuels	
Raw materials and fuel description	Limit Tonnes/Year
Additives (bacterial growth and promotion)	50

Table S2.4 as referenced in condition 2.7.12 has been inserted to list the hazardous wastes which can be accepted for treatment under activity A3 at the Soil Treatment Facility for recovery.

Table S2.4 Permitted waste types and quantities for soil treatment (operation A3)	
Maximum quantity	The total quantity of waste types in this table that can be accepted at the site shall be less than 30,000 tonnes per year Exclusions - No liquid waste
Waste code	Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 05	drilling muds and other drilling wastes
01 05 05*	oil-containing drilling muds and wastes
01 05 06*	drilling muds and other drilling wastes containing dangerous substances
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03*	soil and stones containing dangerous substances
17 05 05*	dredging spoil containing dangerous substances
17 05 07*	track ballast 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 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 05*	sludges from physico/chemical treatment containing dangerous substances
19 03	stabilised/solidified wastes
19 03 06*	waste marked as hazardous, solidified
19 13	wastes from soil and groundwater remediation
19 13 01*	solid wastes from soil remediation containing dangerous substances
19 13 03*	sludges from soil remediation containing dangerous substances

Table S2.5 as referenced in condition 2.7.12 has been inserted to list the non hazardous wastes which can be accepted for treatment under activity A7 at the Soil Treatment Facility for recovery.

Table S2.5 Permitted waste types and quantities	
Maximum quantity	The total quantity of waste types in the this table that can be accepted at the site shall be less than 30,000 tonnes per year of non hazardous waste and 1,500 tonnes per year of non-hazardous biodegradable waste, including garden and park wastes (including cemetery waste), wood from separately collection fractions of municipal waste and wood from the mechanical treatment of waste. Exclusions - No liquid waste
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 09	waste sand and clays
01 05	drilling muds and other drilling wastes
01 05 04	freshwater drilling muds and wastes
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 08	track ballast other than those mentioned in 17 05 07
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 03	waste marked as hazardous, solidified
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 05	wastes from aerobic treatment of solid wastes
19 05 03	off-specification compost
19 08	wastes from waste water treatment plants not otherwise specified
19 08 01	screenings
19 08 02	waste from desanding
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 07	wood other than that mentioned in 19 12 06
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 01	separately collected fractions (except 15 01)
20 01 38	wood other than that mentioned in 20 01 37
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
20 03	other municipal wastes
20 03 03	street cleaning residues

Table S3.12 as referenced in condition 3.5.1 has been added to the permit to monitor the parameters for the biofilter to determine its effectiveness.

Table S3.12 Process monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
A1 – biofilter as shown on Drawing 03 (soil repair centre – drainage and site infrastructure)	Temperature	As per frequencies agreed as part of improvement conditions 13	As per monitoring standard agreed as part of Improvement conditions 13	Biofilter shall be checked and maintained to ensure appropriate temperature and moisture content on a daily basis. Monitoring equipment shall be available on-site and used as required to ensure compliance with this permit.
	Moisture content			
	Flow rate			
	Nutrient levels			
	Contaminant elimination			

Table S3.13 as referenced in condition 3.5.1 has been added to require the monitoring of soil batches once treated to determinate the level of contamination meets required standards for restoration.

Table S3.13 Other Monitoring requirements – contaminated soil

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Soil biopiles	Total Petroleum Hydrocarbons (TPH) Polycyclic Aromatic Hydrocarbons (PAH's) Pentachlorophenol (PCP) Note 1 Total Volatile Organic Compounds (VOC's) Phenols pH	Each completed batch of treated soil shall be sampled	-	Laboratory must be accredited to EN ISO/IEC ISO17025:2000 for the analysis specified Samples to be obtained using standard sampling procedures as per BS 812

Note 1: Only if PCP contaminated soils are received for treatment

The following descriptions have been added to schedule 6 to clarify terminology introduced to the permit as a result of this variation.

Schedule 6 interpretation

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

“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.

“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 SI 2010 No. 675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

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

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

“hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 No. 894, the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138), the List of Wastes (England) Regulations 2005 No. 895 and the List of Wastes (Wales) Regulations 2005 No. 1820 (W.148).

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

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions.

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

“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.

“STF” means Soil Treatment Facility

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

“year” means calendar year ending 31 December.

Schedule 4 – amended plan

Amended plan attached.

The site plan as referenced in condition 2.2 has been amended to include Westmill II in the deposits of restoration materials and indicate the Soil Treatment Facility location.

