

# Notice of variation with introductory note

## The Environmental Permitting (England & Wales) Regulations 2010

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Biffa Waste Services Limited  
Westmill Waste Management Facility  
Westmill Road  
Ware  
Hertfordshire  
SG12 0ES

### **Variation application number**

EPR/DP3431PC/V011

### **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.

The operator has applied for the following changes to the permit:

- Adds an additional leachate treatment plant that will accept leachate and other effluents from Westmill Landfill and other off-site sources;
- Adds wastes for treatment within the new leachate treatment plant;
- Allows the installation of carbon gas filters for the landfill gas engines;
- Allows temporary changes to the Soil Recovery Plant to allow a phased introduction of operations. The operator has confirmed that leachates from hazardous and non hazardous wastes will be kept separate during the phasing; and
- Authorises the acceptance and treatment of street cleaning residues under waste code 20 03 03. The street cleaning residues will be dewatered before being treated in the Soil Recovery Plant. The dewatered effluent will be treated within the Westmill Leachate Treatment Plant).

The schedules specify the changes made to the original 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 BK1988ID (EPR/BK1988ID/A001)	Duly made 15/01/01	Non-Hazardous Landfill Application from RMC Environmental Services.
Permit determined BK1988ID (EPR/BK1988ID/A001)	07/04/03	Permit issued. EPR/BK1988ID/A001
Transfer DP3431PC/T001	26/05/04	Permit Transfer to Biffa Waste Services Ltd (formerly permit reference BK1988ID) Transferred permit issued. EPR/DP3431PC/T001
Variation EPR/DP3431PC/V002 (PP3333KY)	Duly made 08/04/09	Environment Agency Variation to amend odour condition.
Variation determined EPR/DP3431PC/V002 (PP3333KY)	08/04/09	Varied permit issued. EPR/DP3431PC/V002
Variation EPR/DP3431PC/V003	Duly made 18/03/10	Environment Agency Variation to update permit to new Non-Haz Landfill Template in line with EPR2010.

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Variation determined EPR/DP3431PC/V003 (MP3835TW)	23/07/10	Varied permit issued. EPR/DP3431PC/V003
Variation EPR/DP3431PC/V004	Duly made 19/04/09	Variation Application to Consolidate EPR/DP3431PC and EPR/GP3991NU and to allow a 3D boundary within the site.
Variation determined EPR/DP3431PC/V004 (VP3833KZ)	25/02/11	Varied permit issued. EPR/DP3431PC/V004
Variation EPR/DP3431PC/V005	Duly made 10/05/12	Variation Application to amend settlement profiles, increase leachate levels and add additional waste codes.
Variation EPR/DP3431PC/V006	Duly made 10/09/12	Variation Application to include the Soil Treatment Facility to process wastes for use for site restoration.
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 EPR/DP3431PC/V007	Duly made 25/10/12	Variation Application to add an additional landfill gas engine, note this variation has been issued before V005 and V006
Additional information EPR/DP3431PC/V005	06/11/12	Revised Odour Impact Assessment.
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 soil deposit site specific risk assessment pre-operational condition.
Variation EPR/DP3431PC/V007 (TP3539ZK)	Determined 18/04/13	Varied permit issued. EPR/DP3431PC/V007
Additional information EPR/DP3431PC/V006	03/02/14	Confirmed specific soil treatment facility 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*.
Additional information EPR/DP3431PC/V005	07/02/14	Confirmation of odour modelling A and A1 and A3 scenario implementation Confirmation of settlement profile settlement management.
Variation determined EPR/DP3431PC/V006 (HP3237CF)	02/07/14	Varied permit issued. EPR/DP3431PC/V006
Variation EPR/DP3431PC/V008	Duly made 15/09/14	Variation Application to add 2 additional landfill gas engines and a pre-treatment system for landfill gas.
Variation EPR/DP3431PC/V009	Duly made	Environment Agency Variation to fix an error to

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
(Billing REF: MP3334WK)	17/11/14	the 'limits of specified activity' set in Table S1.1 for leachate.
Variation determined EPR/DP3431PC/V008 (Billing ref: PP3330WL)	17/11/14	Varied permit issued. EPR/DP3431PC/V008
Variation determined EPR/DP3431PC/V005 (Billing Ref: XP3734CG)	24/11/14	Varied permit issued. EPR/DP3431PC/V005
Environment Agency Landfill Sector Review 2015 Permit reviewed Variation determined EPR/DP3431PC/V010 Permit EPR/DP3431PC (Billing ref: WP3739AN)	01/06/15	Varied and consolidated permit issued in modern condition format.
Variation EPR/DP3431PC/V011	Duly made 09/04/15	Variation Application to add an additional Leachate Treatment Plant.
Schedule 5 request dated 05/05/2015	18/05/15	Tanker bay design and operation, crash barriers and below ground pipes.
Schedule 5 request dated 28/05/2015	03/06/15	Secondary containment designs for storage of NaOH.
Schedule 5 request dated 11/06/2015	12/06/15	Secondary containment designs for raw leachate tanks.
Additional information EPR/DP3431PC/V011	21/10/15	Updated and consolidated operating techniques.
Variation determined EPR/DP3431PC/V011 (Billing ref: TP3534WR)	27/11/15	Varied permit issued.

End of introductory note

# Notice of variation

## The 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**

**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 27/11/2015

Name	Date
Mike Jenkins	27/11/2015

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:

- 1.3.1 For the following activities referenced in schedule 1, table S1.1 (A1 to A18). 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.
- 1.4.1 For the following activities referenced in schedule 1, table S1.1 (A1 to A18). The operator shall:
- (d) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
  - (e) maintain records of raw materials and water used in the activities;
  - (f) 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
  - (g) 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 A7), waste authorised by this permit shall be clearly distinguished from any other waste on the site.
- 2.2.2 The activities A1, A2 and A3 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 A19 and A20 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.
- 2.2.4 The activities A4 to A6 and A13 to A17 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.
- 2.7.3 For the activities referenced in schedule 1, table S1.1 (A3 to A7 and A13 to A17), waste shall only be accepted for treatment if:
- (a) it is of a type and quantity listed in schedule 2, tables S2.2, S2.3 and S2.6; and
  - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 3.1.6 For the following activities referenced in schedule 1, table S1.1 (A2 to A7 and A13 to A17), periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on systematic appraisal of the risk of contamination.

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

- (a) Leachate specified in tables S3.1, S3.10;
- (b) Point source emissions specified in tables S3.2, S3.3 and S3.6;
- (c) Groundwater specified in tables S3.4 and S3.8;
- (d) Landfill gas specified in tables S3.5, S3.7 and S3.9;
- (e) Surface water specified in table S3.11;
- (f) The biofilter process monitoring specified in table S3.12; and
- (g) The soil biopiles specified in table S3.13.
- (h) SBR and MSP Process monitoring requirements S3.14

Table S1.1 as referenced by condition 2.1.1 has been amended to add an additional leachate treatment activity.

<b>Table S1.1 Activities</b>				
<b>Activity reference</b>	<b>WFD Annex I and II operations (where applicable)</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
<b>Listed Activities</b>				
A1	D5 – Specially engineered landfill R10 – Land treatment resulting in benefit to agriculture or ecology	Section 5.2 A(1)(a): The disposal of waste in a landfill.	Landfill for non-hazardous waste and landfill restoration.	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in condition 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	D9 – Physico-chemical treatment of waste	S5.4 A(1)(a)(ii): Physico-chemical treatment of non-hazardous waste	Treatment of site derived landfill and soil treatment facility leachate in a methane stripping facility with a capacity greater than 50 tonnes per day.	Leachate generated onsite from the landfill and soil treatment facility.  Leachate types and quantities as specified in Table S2.6
A3	D8 – Biological treatment of waste	S5.4 A(1)(a)(i) Biological treatment of non-hazardous waste	Treatment of site derived landfill leachate, off-site leachate and soil treatment facility leachate in Sequence Batch Reactor tanks with a capacity greater than 50 tonnes per day.	Leachate generated onsite from the landfill and soil treatment facility, and off-site sources. Leachate types and quantities as specified in Table S2.6



<b>Table S1.1 Activities</b>				
<b>Activity reference</b>	<b>WFD Annex I and II operations (where applicable)</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
A4	R5 – Recycling/reclamation of inorganic materials other than metals and metal compounds.	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.	<p>All treatment must take place on an impermeable surface with sealed drainage.</p> <p>The biopile gas extraction system must be operational during treatment.</p> <p>Hazardous wastes treated onsite will only be used for recovery within the green boundary outlined in schedule 7 of the permit.</p> <p>Waste soils only as specified in Table S2.2.</p>
A5	R5 – Recycling/reclamation of inorganic materials other than metals and metal compounds.	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.	<p>All treatment must take place on an impermeable surface with sealed drainage.</p> <p>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.</p> <p>Waste soils as specified tables S2.2.</p>

<b>Table S1.1 Activities</b>				
<b>Activity reference</b>	<b>WFD Annex I and II operations (where applicable)</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
A6	<p>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).</p> <p>D15 – Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection on the site where it is produced).</p>	S5.6 A(1)(a): Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes.	Temporary storage of hazardous waste.	<p>All storage must take place on an impermeable surface with sealed drainage.</p> <p>Waste only as specified in Table S2.2.</p>
A7	R5 – Recycling/reclamation of other inorganic compounds.	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.	<p>All treatment and storage must take place on an impermeable surface with sealed drainage.</p> <p>The biopile gas extraction system must be operational during treatment.</p> <p>Non-hazardous wastes treated on site will only be used for recovery within the green boundary outlined in schedule 7 of the permit.</p> <p>Wastes soils only as specified in Table S2.3.</p>
<b>Directly Associated Activities</b>				
A8	Landfill gas pre-treatment		Pre-treatment of landfill gas in PpTex Siloxane Removal System and Carbon Absorption Filters	Landfill gas arising from the landfill.

<b>Table S1.1 Activities</b>				
<b>Activity reference</b>	<b>WFD Annex I and II operations (where applicable)</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
A9	R1 – use principally as a fuel to generate energy		Utilisation of landfill gas for energy recovery in an appliance with a rated thermal input < 50MW.	Utilisation of landfill gas arising from the landfill.
A10	Landfill gas flaring		Flaring of landfill gas for disposal in an appliance.	Landfill gas arising from the landfill.
A11	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.
A12	Leachate discharge to foul sewer		Discharge of treated leachate and treated process waters from the landfill, offsite sources and soil treatment facility.	From leachate treatment plant to point of entry to sewer.
A13	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.
A14	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.

<b>Table S1.1 Activities</b>				
<b>Activity reference</b>	<b>WFD Annex I and II operations (where applicable)</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
A15	R5 - Dewatering of road sweepings prior to treatment under activity A7		Dewatering of street cleaning residues to produce materials suitable for restoration or treatment.	All treatment must take place on an impermeable surface with sealed drainage.
A16	R5 – Recycling/reclamation of inorganic materials other than metals and metal compounds.		Blending or mixing of non-hazardous waste soils	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 S2.3.
A17	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).		Temporary storage of non-hazardous waste pending recovery.	All storage must take place on an impermeable surface with sealed drainage.  Waste only as specified in Table S2.3.
A18	Leachate management		Management of leachate and process waters including, storage and off site tankering.	Leachate arising from the landfill, offsite sources and the soil treatment facility.
<b>Waste Operations</b>				
A19	D1: Deposit into or onto land.		Management and monitoring or emissions from the closed landfill.	The area edged in blue on the site plan schedule 7 of this permit.

<b>Table S1.1 Activities</b>				
<b>Activity reference</b>	<b>WFD Annex I and II operations (where applicable)</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
A20	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.	The area edged in blue on the site plan in schedule 7 of this permit.
A21	R10: Land treatment resulting in benefit to agriculture or ecological improvement.		Use of waste soils (specified within Table S2.4) to provide restoration soils above the landfill cap in the area edged in green on the site plan in schedule 7 of this permit.	Waste soils specified in Table S2.4.

Table S1.2 as referenced by condition 2.3.1 has been amended to allow for an additional leachate treatment plant, carbon filters in the landfill gas engines, phasing of the soil facility and an additional waste code for the soil facility.

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
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
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

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
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 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	21/04/2010
Additional information supplied, Westmill I Landfill, site closure	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	21/04/2010
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	April 2009

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
	Landfill Gas Risk Assessment, Section 4.0	
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 <sup>st</sup> 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 July 2010
Variation Application EPR/DP3431PC/V005	Document reference 407.00034.00435/NTS in response to Question 5c Non Technical Summary part C2 of the application form.  Document reference 407.00034.00435/H1 in response to Question 6 H1 Environment Risk Assessment Part C2 of the application form.  Section 3, Table 3 Technical standards, Part C3 of the application form.	28/03/12
Variation Application EPR/DP3431PC/V005	Document reference 402-0034-00435/ESID dated March 2012 Environmental Setting and Design.  Response to Question 1 of appendix 7, part C3 of the application form.  ESID Appendix 2 Settlement Modelling and Remedial Material 18 April 2011.	28/03/12
Variation Application EPR/DP3431PC/V005	Document Reference 407-00034-00435/HRA March 2012  Hydrological risk assessment Reference in response to Question 2 of appendix 7, part C3 of the application form.  Document Reference 407-00034-00435/SRA March 2012  Stability Risk assessment in response to Question 3 of appendix 7, part C3 of the application form.  Document reference 403.00847.00002/LFGRA March 2012, Landfill Gas Risk Assessment Reference in response to Question 4 of appendix 7, part C3 of the application form.	10/05/12
Variation Application EPR/DP3431PC/V005	Document Reference 407-00034-00435 drawing Number ESID3 Restoration Scheme reference WK234400 February 2012.  Post Settlement Profile for Westmill Landfill computer ref WK034200 Drawing number 2 dated 03.03.11.	10/05/12
Variation Application EPR/DP3431PC/V006	Section 3, Table 3 Technical standards, Part C3 of the application form.	10/09/12



<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
	Document reference 407.00034.0046/BATOT (June 2012). Appendix BATOT1SSI/913/07 Waste Acceptance Procedure SRC - Section 5.0 SRF Output Sampling Methodology.	
Schedule 5 request for further information response EPR/DP3431PC/V006	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
Additional information EPR/DP3431PC/V005	Updated version of Drawing ESID 2 Document Reference 407-00034-00435 computer reference WK234301 Site layout and proposed Pre- settlement contours February 2012  Drawing and cross sections of inert restoration profiles computer reference WK236700	29/10/12
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 EPR/DP3431PC/V005	Odour Impact Assessment for revised pre-settlement profiles. Ref: 407.00034.00435_OIAv3 Scenarios A1 and A3	06/11/12
Additional information EPR/DP3431PC/V006	Confirmation of impermeable surface engineering. Revised engineering drawing of impermeable surface drawing number 007, GCL layout.	20/11/12
Schedule 5 Notice request for further information response EPR/DP3431PC/V005	Response to question 1,2 Confirmed leachate level will only be raised to 2 metres where the appropriate infrastructure is in place to contain leachate with freeboard to prevent overspill. Submitted cell design drawings (see below) confirming cells 5,6 and 7 had suitable bunds for	28/11/12

Table S1.2 Operating techniques		
Description	Parts	Date Received
	<p>containing 2 metre leachate levels in each cell</p> <p>Drawing V-BIF-WEST-C7N-LMS-01 January 2012-12-17</p> <p>Drawing C1202-12 dated 21 September 2012</p> <p>Drawing C1108-7 dated 24 October 2011</p> <p>Drawing C1108-6 dated 20 September 2011</p> <p>Drawing 072004 dated 9<sup>th</sup> July 2008</p> <p>Drawing 072001 dated 21 May 2008</p>	
Additional information EPR/DP3431PC/V006	Operator confirmed update of permit conditions in line with the Industrial Emissions Directive.	26/02/13
Additional information (operators response to a draft schedule 5) EPR/DP3431PC/V005	<p>Request for information response confirmed operating techniques for managing revised pre settlement levels to maintain appropriate settlement profiles</p> <p>Operator confirmed maintaining leachate management beyond 30 years to manage leachate source term until it declines.</p>	29/10/13
Additional information EPR/DP3431PC/V006	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.	03/04/14 & 04/03/14
Additional information EPR/DP3431PC/V006	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.	07/02/14
Additional information EPR/DP3431PC/V005	Email confirming implementation of odour management scenario A1 and A3.	07/03/14
Additional information EPR/DP3431PC/V005	Email confirming the low odour waste types for acceptance as part of scenario A1.	02/04/14
Additional information EPR/DP3431PC/V005	Confirmation of wastes streams to be accepted under waste code 20 03 01 as low odour wastes.	08/04/14
Application EPR/DP3431PC/V008	Section 1.1 - Site management	23/07/14
	Appendix 2 – Air Dispersion modelling	23/07/14
	Response dated 15 September 2014 to Not duly-made letter	15/09/14
Application EPR/DP3431PC/V011	<p>Section 3, Table 3 Technical standards, Part C3 of the application form.</p> <p>SRC Operating Techniques Addendum Ref: 402-0034-00527/BATOT/Addendum (dated February 2015)</p> <ul style="list-style-type: none"> <li>• Phasing of the soil treatment facility</li> <li>• Street cleaning dewatering</li> </ul> <p>Landfill Gas Pre-Treatment Operating Techniques</p>	09/04/15

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
	Addendum Ref: 402-0034-00527/BATOT/Addendum (dated February 2015) <ul style="list-style-type: none"> <li>• Use of carbon filters in Gas Utilisation Plant</li> </ul>	
Additional information EPR/DP3431PC/V011	Not Duly Made response Revised H1 risk assessment	09/04/15
Additional information Schedule 5 Notice sent 05/05/2015 EPR/DP3431PC/V011	Responses to questions 1 – tanker parking area design 2 – tanker discharge attendance 5 – tank crash barriers 6 – underground pipes	18/05/15
Additional information Schedule 5 Notice sent 28/05/2015 EPR/DP3431PC/V011	Responses to questions 1- Containment of NaOH tank	03/06/15
Additional information Schedule 5 Notice sent 11/06/2015 EPR/DP3431PC/V011	Response to all questions detailing design specification for raw leachate tanks and secondary containment.	12/06/15
Additional information	SBR Leachate treatment plant and MSP Leachate treatment plant site location plans and sewer connections Leachate treatment Plant Operating Techniques (ref 402.00034.00527/BATOT_V6 October 2015) Site Layout Plan (ref C10713-01) Caustic tank and bunding design (ref D30561/P89702/101+02) NaOH Tank and Bund with Polypropylene shell containment (ref D30561/P89702/101+02) Horizontal raw leachate tanks secondary containment design (ref WK070500) SBR bund connection pipe work (ref WK239100) SBR tank de-sludge arrangement (ref WK23920)	21/10/15

Table S2.2 as reference by condition 2.7.3 has been amended to reference the correct activity numbers (Activities A4, A5, A6)

<b>Table S2.2 Permitted waste types accepted for treatment (Activities A4, A5, A6)</b>	
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
<b>Waste code</b>	<b>Description</b>
<b>01</b>	<b>WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS</b>
01 05	<b>drilling muds and other drilling wastes</b>
01 05 05*	oil-containing drilling muds and wastes
01 05 06*	drilling muds and other drilling wastes containing dangerous substances
<b>17</b>	<b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)</b>
17 05	<b>soil (including excavated soil from contaminated sites), stones and dredging spoil</b>
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
<b>19</b>	<b>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</b>
<b>19 02</b>	<b>wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)</b>
19 02 05*	sludges from physico/chemical treatment containing dangerous substances
<b>19 03</b>	<b>stabilised/solidified wastes</b>
19 03 06*	waste marked as hazardous, solidified
<b>19 13</b>	<b>wastes from soil and groundwater remediation</b>
19 13 01*	solid wastes from soil remediation containing dangerous substances
19 13 03*	sludges from soil remediation containing dangerous substances

Table S2.3 as reference by condition 2.7.3 has been amended to reference the correct activity numbers (Activities A7, A16, A17)

<b>Table S2.3 Permitted waste types accepted for treatment (Activities A7, A16, A17)</b>	
<b>Maximum quantity</b>	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 of non hazardous waste and 1500 tonnes per year of non-hazardous biodegradable waste, including garden and park wastes (including cemetery waste), wood and separately collected fractions of municipal waste and wood from the mechanical treatment of waste.  Exclusions - No liquid waste
<b>Waste code</b>	<b>Description</b>
<b>01</b>	<b>WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS</b>
<b>01 04</b>	wastes from physical and chemical processing of non-metalliferous minerals
01 04 09	waste sand and clays
<b>01 05</b>	drilling muds and other drilling wastes
01 05 04	freshwater drilling muds and wastes
<b>17</b>	<b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)</b>
<b>17 05</b>	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
<b>19</b>	<b>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</b>
<b>19 02</b>	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
<b>19 03</b>	waste marked as hazardous, solidified
19 03 07	solidified wastes other than those mentioned in 19 03 06
<b>19 05</b>	wastes from aerobic treatment of solid wastes
19 05 03	off-specification compost
<b>19 08</b>	wastes from waste water treatment plants not otherwise specified
19 08 01	screenings
19 08 02	waste from desanding
<b>19 12</b>	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
<b>19 13</b>	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
<b>20</b>	<b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL</b>

<b>Table S2.3 Permitted waste types accepted for treatment (Activities A7, A16, A17)</b>	
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 of non hazardous waste and 1500 tonnes per year of non-hazardous biodegradable waste, including garden and park wastes (including cemetery waste), wood and separately collected fractions of municipal waste and wood from the mechanical treatment of waste.  Exclusions - No liquid waste
<b>Waste code</b>	<b>Description</b>
<b>AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS</b>	
<b>20 01</b>	separately collected fractions (except 15 01)
20 01 38	wood other than that mentioned in 20 01 37
<b>20 02</b>	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
<b>20 03</b>	other municipal wastes
20 03 03	street cleaning residues

Table 3.4 as referenced by condition 3.5.1 has been amended to remove a repeated reference to monitoring points W2/NW1, W2/NW2, W2/NW3, W2NW4 and remove reference to W2/NW1 and W2/NW2 as they are no longer accessible.

<b>Table S3.4 Groundwater – emission limits and monitoring requirements</b>					
<b>Monitoring point reference</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference Period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
W2/NW3, W2/NW4, W2/NW5, W2/NW10 Onsite plan HRA1b, dated 10/03/2009	Ammoniacal-Nitrogen	0.39 mg/l	Spot Sample	Quarterly	In accordance with Environment Agency document LFTGN 02 September 2004 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water. Horizontal Guidance Note H1 – Environmental Risk Assessment for permits, Annex J3, version 2.1, Dec 2011) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Chloride	100 mg/l			
	Cadmium <sup>(1)</sup>	0.0015 (mg/l)			
	Nickel	0.025 mg/l			
	Mecoprop	To be set upon completion of improvement condition 11			
	Toluene				
	Xylene				
Phenol					
W1/WM4	Ammoniacal-Nitrogen	0.39 mg/l	Spot Sample	Quarterly	In accordance with Environment Agency document LFTGN 02 September 2004 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water. Horizontal Guidance Note H1 – Environmental Risk Assessment for permits, Annex J3, version 2.1, Dec 2011) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Chloride	100 mg/l			
	Cadmium <sup>(1)</sup>	0.0015 mg/l			
	Nickel	0.025 mg/l			
W2/NW6 On site plan HRA1b, dated 10/03/2009	Ammoniacal-Nitrogen	0.39 mg/l	Spot Sample	Quarterly	In accordance with Environment Agency document LFTGN 02 September 2004 'Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water. Horizontal Guidance Note H1 – Environmental Risk Assessment for permits, Annex J3, version 2.1, Dec 2011) or such other subsequent guidance as may be agreed in writing with the Environment Agency.
	Chloride	150 mg/l			
	Cadmium <sup>(1)</sup>	0.0015 mg/l			
	Nickel	0.025 mg/l			
	Mecoprop	To be set			

**Table S3.4 Groundwater – emission limits and monitoring requirements**

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
	Toluene	upon completion of improvement condition 11			
	M/P-Xylene				
	Phenol				
W2/WM7	Ammoniacal-Nitrogen	0.39 mg/l	Spot Sample	Quarterly	
	Chloride	150 mg/l			
	Cadmium <sup>(1)</sup>	0.0015 mg/l			
	Nickel	0.025 mg/l			

(1) - The limits specified take account of the agreed background concentrations as detailed in Westmill II Working Plan, dated April 2003



### Schedule 3 – conditions to be added

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

Table S2.6 as referenced by condition 2.3.5 has been added to allow the importation of liquids for the leachate treatment plant.

<b>Table S2.6 Permitted waste types for treatment in the SBR Treatment Plant</b>	
<b>Waste code</b>	<b>Description</b>
<b>19</b>	<b>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</b>
<b>19 06</b>	<b>wastes from anaerobic treatment of waste</b>
19 16 03	liquor from anaerobic treatment of municipal waste
19 06 05	liquor from anaerobic treatment of animal and vegetable waste
<b>19 07</b>	<b>landfill leachate</b>
19 07 03	landfill leachate other than those mentioned in 19 07 02

Table S3.6 as referenced by condition 3.1.2 has been amended to update the emissions to sewer.

<b>Table S3.6 Point source emissions to sewer – emission limits and monitoring requirements</b>						
<b>Emission point Ref. &amp; Location</b>	<b>Parameter</b>	<b>Source</b>	<b>Limit (incl unit)</b>	<b>Reference Period</b>	<b>Monitoring Frequency</b>	<b>Monitoring Standard or Method</b>
Leachate Treatment Plant constructed in year 2000	None set	None set	None set	None set	None set	None set

Table S3.14 as referenced by condition 3.5.1 has been added to impose process monitoring requirements for both the Sequence Batch Reactor and Methane Stripping Leachate treatment plants

<b>Table 3.14 Process Monitoring of SBR and MSP</b>					
<b>Emission point Ref. &amp; Location</b>	<b>Parameter</b>	<b>Source</b>	<b>Reference Period</b>	<b>Monitoring Frequency</b>	<b>Monitoring Standard or Method</b>
SBR Tank 1 (Leachate from off-site)	Volume	Leachate and process water from Westmill Landfill, the Westmill Soil Recovery Facility and from off-site sources	Continuous	Twice per week	Field Test
	Ammonia		Spot sample		
SBR Tank 2 (Leachate and process water from Westmill Landfill and the Soil Recovery Facility)	Nitrate	Leachate and process water from Westmill Landfill, the Westmill Soil Recovery Facility and from off-site sources		Weekly	Field Test
	Nitrite				
	pH				
	Sulphate				
	COD				
	BOD				
	Alkalinity (as CaCO <sub>3</sub> )				
	Suspended Solids				
	Ammoniacal Nitrogen				
	Total Phosphorus				
	Phenol				
	Cyanide (Total)				
	Cyanide (Free)				
	Silver (Total)				
	Silver (Dissolved)				
	Chromium				
	Copper				
	Lead				
	Zinc				
	Nickel				
Dissolved Methane					
Cadmium					
1, 2 Dichloroethane					
Mercury					
PAHs					
Diuron					
Methane Stripping Plant	Volume	Leachate and process water from Westmill Landfill and		Weekly	Field Test
	Ammonia				
	Nitrate				
	Nitrite				
	pH				
	Sulphate				

	COD	Westmill Soil Recovery Facility			
	BOD				
	Alkalinity (as CaCO3)				
	Suspended Solids				
	Ammoniacal Nitrogen				
	Total Phosphorus				
	Phenol				
	Cyanide (Total)				
	Cyanide (Free)				
	Silver (Total)				
	Silver (Dissolved)				
	Chromium				
	Copper				
	Lead				
	Zinc				
	Nickel				
	Dissolved Methane				
	Cadmium				
	1, 2 Dichloroethane				
	Mercury				
	PAHs				
	Diuron				