

Permit

Pollution Prevention and Control
Regulations 2000
Landfill Regulations 2002



**ASiantaeth YR
AMGYLCHEDD
ENVIRONMENT
AGENCY**

Permit

Permit number
BU7766

The Environment Agency (the Agency) in exercise of its powers under Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations (SI 2000 No 1973), and Regulation 6 of the Landfill (England and Wales) Regulations (S.I.2002 No.1559) hereby authorises

Sundorne Products (Llanidloes) Ltd ("the Operator"),

whose Registered Office (or principal place of business) is

**Park Avenue
Aberystwyth
Ceredigion
SY23 1PG**

Company registration number 3353423

to operate an installation at


**Bryn Posteg Landfill
Tylwch Road
Llanidloes
Powys
SY18 6JJ**

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

The landfill authorised by this Permit is for the disposal of non-hazardous waste.

Signed

Date

 Moss	15 June 2004
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Mr C. Moss

Authorised to sign on behalf of the Agency

Conditions

1 General

1.1 Permitted Activities

- 1.1.1 The Operator is authorised to carry out the activities and/or the associated activities specified in Table 1.1.1.

Table 1.1.1

Activity listed in Schedule 1 of the PPC Regulations / Associated Activity	Description of specified activity	Limits of specified activity
Section 5.2(a), The disposal of waste in a landfill.	Landfill for non-hazardous waste (landfill classification under the Landfill Regulations (2002))	Receipt, handling, storage and disposal of non-hazardous wastes, consisting of the types and quantities specified in condition 2.1.2, as an integral part of landfilling.
Leachate management	Storage and treatment of leachate pre-discharge	Leachate arising from the Permitted landfill
Landfill gas management	Flaring and/or utilisation of landfill gas for energy recovery	Landfill gas arising from the Permitted landfill
Leachate discharges to foul sewers	Discharge of leachate from the landfill.	From leachate management system to point of entry to sewer
Surface Water discharges to controlled waters	Discharge of site drainage from the landfill.	From surface water management system to point of entry to controlled waters

- 1.1.2 Where waste on site is subjected to activities that are exempt from control under the Waste Management Licensing Regulations 1994 then the wastes controlled under condition 1.1.1, above, shall be clearly identified and kept separate from such exempt waste activities and a record shall be kept of where such exempt activities are conducted.

1.2 Site

- 1.2.1 The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the land shown edged in red on the Site Plan at Schedule 5 to this Permit, excluding the area hatched brown identified as 'MRF Composting'.

1.3 Overarching Management Condition

- 1.3.1 Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain a management system, organisational structure and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit.

1.4 Improvement Programme

- 1.4.1 The Operator shall complete the improvements specified in Table 1.4.1 by the date specified in that table, and shall send written notification of the date of completion of each requirement to the Agency within 14 days of the completion of each such requirement.

Table 1.4.1: Improvement programme requirements

Reference	Requirement	Date
1.4.1.01	Submit an aftercare and restoration plan for the existing phases to the Agency for approval.	Within 12 months of the issue of the permit.
1.4.1.02	Following submission of the plan required by improvement programme requirement 1.4.1.01, the operator shall undertake any measures approved in writing by the Agency to the time-scales indicated in the approval. A notification of completion shall be reported to the Agency following full implementation of the measures.	To a date to be specified by the Agency.
1.4.1.03	Submit a report on potential environmental improvements to the leachate management system to the Agency for approval. The report shall assess the costs and benefits of alternative techniques that may provide environmental improvement and should justify, against BAT criteria where potential improvements are not planned. Where improvements are planned the report should include a timetable for their implementation.	Within 12 months of the issue of the permit.
1.4.1.04	Following submission of the report required by improvement programme requirement 1.4.1.03, the operator shall undertake any measures approved in writing by the Agency to the time-scales indicated in the approval. A notification of completion shall be reported to the Agency following full implementation of the measures.	To a date to be specified by the Agency.

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Reference	Requirement	Date
1.4.1.05	Submit a report detailing the results of odour modelling at the installation. Modelling should be undertaken using software capable of generating the 98 th percentile hourly averages and the results should be compared to an indicative odour criterion of 1.5ou/m ³ . Where modelling indicates that further odour management techniques are required at the installation to prevent odour from emissions from the installation a timetable for the implementation of these additional techniques shall be included within the report.	Within 3 months of the issue of the permit.
1.4.1.06	Following submission of the report required by improvement programme requirement 1.4.1.05, the operator shall undertake any measures approved in writing by the Agency to the time-scales indicated in the approval. A notification of completion shall be reported to the Agency following full implementation of the measures.	To a date to be specified by the Agency.
1.4.1.07	Derive and submit to the Agency for approval: (a) site specific completion criteria for both leachate and landfill gas; (b) a landfill aftercare period based on the time taken to achieve the completion criteria identified by (a) above; and (c) a revised financial provision expenditure plan which includes provision for the aftercare period proposed in (b) above.	Submissions detailed in (a) to (c) within 4 months from the date of issue of the permit.
1.4.1.08	Following submission of the information under improvement programme requirement 1.4.1.07, the operator shall enter into an agreement with the Agency which reflects the revised financial provision expenditure plan to provide financial provision for meeting its obligations under this permit throughout its subsistence. This agreement is to be in replacement for the agreement dated 15 June 2004.	Within 12 months of the date of issue of this permit.
1.4.1.09	Submit the details of the monitoring methods listed as to be agreed with the Agency within Tables 2.2.2, 2.2.5 and 2.2.8 of the permit.	Within 1 month of the date of the permit.
1.4.1.10	Following submission of the information required by improvement programme condition 1.4.1.09, the operator shall undertake any measures approved in writing by the Agency to the time-scales indicated in the approval. A notification of completion shall be reported to the Agency following full implementation of the measures.	To a date to be specified by the Agency.

- 1.4.2 Where the Operator fails to comply with any requirement by the date specified in Table 1.4.1 it shall send written notification of such failure to the Agency within 14 days of such date.

1.5 Minor Operational Changes

- 1.5.1 The Operator shall seek the Agency's written agreement to any minor operational changes under condition 2.1.1 of this Permit by sending to the Agency: written notice of the details of the proposed change including an assessment of its possible effects (including waste production) on risks to the environment from the Permitted Installation; any relevant supporting assessments and drawings; and the proposed implementation date.
- 1.5.2 Any such change shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended.
- 1.5.3 When the qualification "unless otherwise agreed in writing" is used elsewhere in this Permit, the Operator shall seek such agreement by sending to the Agency written notice of the details of the proposed method(s) or techniques.
- 1.5.4 Any such method(s) or techniques shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation using that method or technique, and relevant provisions in the Application shall be deemed to be amended.

1.6 Pre-Operational Conditions

- 1.6.1 The operator shall not commence waste disposal in any area of the Permitted Installation which has not been used for the disposal of waste prior to the issue of this permit unless:
- 1.6.1.1 prior to the commencement of construction of that area the operator has submitted to the Agency in writing the detailed design and the construction quality assurance (CQA) programme for the pre-operational engineering of the barriers, liners and leachate collection layer for that area and that it is confirmed in writing by the Agency that these are in conformance with the relevant specifications set out in section 2 of Part B of the Application; and
- 1.6.1.2 the operator has notified the Agency in writing of any changes in the detailed design and the CQA programme that are made during the construction, and within 5 working days of those changes having been made and that the Agency has agreed in writing that these are in conformance with the relevant specifications set out in Part B of the Application ; and
- 1.6.1.3 the pre-operational engineering and infrastructure of the barriers and liners and the leachate collection layer have been completed and validated in accordance with the documented CQA procedures, and
- 1.6.1.4 the operator has submitted the validation report in writing to the Agency; and

- 1.6.1.5 the Agency has inspected that area to ensure that it complies with the relevant conditions of the landfill permit, and has confirmed in writing that it has no objection to that area becoming operational.

1.7 Off-site Conditions

- 1.7.1 There are no off-site conditions.

2 Operating conditions

2.1 Landfilling Controls

- 2.1.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Agency in accordance with conditions 1.5.1 and 1.5.2 of this Permit.

Table 2.1.1: Operating techniques

Description	Parts	Date Received
Application	The response to questions 1.2, 2.1, 2.2, 2.3, 2.4 and 2.5 in part B of the Application Form	22/04/03
Letter from Enviroarm Ltd detailing: surface water management	Section titled 'Engineering and Operational Management and Monitoring'	31/07/03
Letter from Enviroarm Ltd detailing: Waste acceptance, Leachate Management, Surface water Management, Groundwater Management, Dirt and Mud Management, Dust Management and Monitoring, Odour Management and Monitoring, Landfill Body Monitoring, Restoration and Aftercare, Odour risk Assessment, Particulate Matter Risk Assessment, Landfill Gas Risk Assessment and Waste Deposit and Emplacement, Unacceptable Waste Quarantine Area	All	05/09/03
Follow-up Letter from Enviroarm Ltd in connection with the initial letter of 05/09/03.	All	30/11/03
Follow-up Letter from Enviroarm Ltd in connection with the initial letter of 05/09/03	All	29/12/03
Letter from Enviroarm Ltd in connection with the Unacceptable Waste Quarantine Area.	All	05/01/04
Letter from Enviroarm Ltd in connection with the Unacceptable Waste Quarantine Area.	All	20/01/04
Follow-up Letter from Enviroarm Ltd in connection with the Unacceptable Waste Quarantine Area and revised surface water management plan.	All	27/02/04
Follow-up Letter from Enviroarm Ltd in connection with the initial letter of 05/09/03	All	11/03/03
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Letter from Enviroarm Ltd detailing mine shaft stability issues	All	01/10/03
Letter from Evans Logistics containing a response from Mouchel Parkman in connection with mineshaft issues	All	03/02/04
Letter from Enviroarm Ltd detailing issues in connection with the hydrogeological risk assessment	All	17/09/03
Follow-up Letter from Enviroarm Ltd detailing issues in connection with the hydrogeological risk assessment	All	27/10/03
Follow-up Letter from Enviroarm Ltd detailing issues in connection with the hydrogeological risk assessment containing a revised Land-Sim Model.	All	22/12/03
Follow-up Letter from Enviroarm Ltd detailing issues in connection with the hydrogeological risk assessment containing a revised Land-sim Model.	All	18/02/04
Clarification letter from Enviroarm Ltd in connection to their letter of the 18/02/04	All	23/02/04
Letter from Enviroarm Ltd detailing issues concerning mineralogy issues	All	01/10/03
Letter from Enviroarm Ltd enclosing the CQA Plan for the installation	All	20/01/04
Letter from Enviroarm Ltd clarifying a number of issues in the CQA plan	All	11/03/04
Addendum No.3 to the CQA plan	All	12/05/04
Letter from Enviroarm Ltd detailing amendments to waste types and acceptance criteria and non conformance procedures.	All	20/10/03
Letter from Egniol Ltd detailing amendments to leachate management plan together with a revised copy of the leachate management plan	All	15/12/03

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Letter from Egniol Ltd with further amendments to the leachate management plan and a revised copy of the leachate management plan (2 nd Revision).	All	05/01/04
Letter from Egniol amending the leachate head to a 1m control level	All	29/01/04
Fax from Egniol amending a number of tables within the leachate management plan.	All	11/03/04
Revised Leachate Management Plan	All	March 2004
E-mail from Egniol Ltd concerning the Landfill Gas risk Assessment	All	25/09/03
Letter from Egniol Ltd amending landfill gas risk assessment	All	04/11/03
Letter from Egniol Ltd amending the landfill management plan	All	08/01/04
Appendix 1 & 2 to the Odour Management Plan	All	16/04/04
Odour Management Plan	All	14/05/04
Appendix 3 to the Odour Management Plan	All	17/05/04

2.1.2 Wastes shall only be accepted for disposal on the site if :

2.1.2.1 they are as specified in table 2.1.2 below:

Table 2.1.2 : Wastes accepted for disposal

Waste Category or Type	Permitted or not Permitted
Hazardous	Not Permitted
Non-hazardous	Permitted Excluding any "xx.xx.99" codes unless otherwise agreed in writing by the Agency
Stable non-reactive hazardous	Not Permitted
Inert	Permitted Excluding any "xx.xx.99" codes unless otherwise agreed in writing by the Agency
Liquid wastes (including waste waters but excluding sludge).	Not permitted
Waste which in the conditions of landfill is explosive, corrosive, oxidising, highly flammable or flammable.	Not permitted
Hospital and other clinical infectious wastes from medical or veterinary establishments.	Not permitted
Chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown.	Not permitted
Whole used tyres (other than tyres used as engineering materials, bicycle tyres and tyres with an outside diameter of more than 1400mm.	Not permitted
Shredded used tyres (other than bicycle tyres and tyres with an outside diameter of more than 1400mm.	Permitted until 16 th July 2006.
Any waste which does not fulfil the relevant waste acceptance criteria.	Not permitted
Waste which has been diluted or mixed solely to meet the relevant waste acceptance criteria.	Not permitted
Wastes which have not been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment.	Not Permitted

And

- 2.1.2.2 they are in accordance with the list of waste types and quantities, as described in the application.

- 2.1.2.3 The operator of the landfill shall visually inspect the waste at the entrance to the landfill and at the point of the deposit and shall satisfy himself that it conforms to the description provided in the documentation submitted by the holder.
- 2.1.2.4 The operator shall ensure that if representative samples are taken for analysis, the operator shall retain the samples and results of any analysis for at least one month.
- 2.1.2.5 The operator on accepting each delivery of waste shall provide a written receipt to the person delivering it.
- 2.1.2.6 The operator shall ensure that the landfill is secured to prevent free access to the site and the gates of the landfill must be locked outside operating hours.

2.1.3 The total quantity of waste that shall be deposited in the landfill shall not exceed 2,365,000 tonnes.

2.1.4 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits and acceptance ratios in Table 2.1.3 below.

And in any case the total quantity deposited shall not exceed 75,000 tonnes

Table 2.1.3 Annual Waste Input Limits

Category	Limit Tonnes/ Year	Acceptance Ratios
Hazardous Waste	Not Permitted	Not Applicable
Non Hazardous Waste	70,000	None
Stable, non-reactive hazardous waste	Not Permitted	Not Applicable
Inert Waste	5,000	None

2.1.5 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, origin, date of delivery, the identity of the producer (or in the case of municipal waste, the collector) of any waste that is received for disposal or recovery at the Permitted Installation.

2.1.6 The Operator shall record the quantity of waste deposited within the landfill.

2.2 Emissions

2.2.1 Emissions to Air, (excluding Odour, Noise or Vibration) from Specified Points

- 2.2.1.1 This Part 2.2.1 of this Permit shall not apply to releases of odour, noise or vibration.
- 2.2.1.2 Emissions to air from the emission points in Table 2.2.1 shall only arise from the source(s) specified in that Table.

Table 2.2.1 : Emission points to air

Emission point reference or description	Source	Location of emission point
Landfill Gas Flare - LG.	Landfill gas flare	Point LG as detailed on site plan No. 1168.GPM.MN07
Landfill Gas Engine -LG	Landfill gas engine	Point LG as detailed on site plan No. 1168.GPM.MN07

- 2.2.1.3 The limits for emissions to air for the parameter(s) and emission point(s) set out in Table 2.2.2 shall not be exceeded.

Table 2.2.2 : Emission limits to air and monitoring

Emission point reference	Parameter	Limit (mg/m ³)	Monitoring frequency	Monitoring method
LG - flare	Oxides of Nitrogen (NOx)	38.52	1 st year – 6 monthly thereafter Annual	Chemiluminescence
LG - flare	Carbon Monoxide (CO)	32	Annual	Non- dispersive infra red analysis
LG - flare	Total Volatile Organic Compounds (VOC's)	2.63	Annual	Extractive sampling and FID analysis
LG - flare	Non Methane Volatile Organic Compounds (NMVOC's)	5	Annual	Extractive sampling onto sorbent, extraction by CS ₂ analysis by GC with appropriate detector
LG – Flare	SOx	17	1 st year – 6 monthly thereafter Annual	To be agreed with the Agency
LG – Flare	HCl	None	Annually	To be agreed with the Agency
LG – Flare	CO ₂	None	Annually	To be agreed with the Agency
LG – Flare	Polychlorinated dibenzodioxins & polychlorinated dibenzofurans	None	Annually	To be agreed with the Agency
LG - Engine	Oxides of Nitrogen (NOx)	441.18	1 st year – 6 monthly thereafter Annual	Extractive sampling and Chemiluminescence
LG - Engine	Carbon Monoxide (CO)	1500	Annual	Extractive sampling and Non- dispersive infra red analysis
LG - Engine	Total Volatile Organic Compounds (VOC's)	1750	Annual	Extractive sampling and FID analysis
LG - Engine	Non Methane Volatile Organic Compounds (NMVOC's)	150	Annual	Extractive sampling and Extractive sampling onto sorbent, extraction by CS ₂ analysis by GC with appropriate detector
LG – Engine	CO ₂	1448.7	Annually	To be agreed with the Agency
LG – Engine	SOx	None	1 st year – 6 monthly thereafter Annual	To be agreed with the Agency

LG – Engine	HCl	None	Annually	To be agreed with the Agency
LG – Engine	Polychlorinated dibenzodioxins & polychlorinated dibenzofurans	None	Annually	To be agreed with the Agency

2.2.2 Emissions to water (other than groundwater), from specified points

2.2.2.1 This Part 2.2.2 of this Permit shall not apply to releases of odour, noise or vibration or to releases to groundwater.

Emissions to Water (other than to Sewer)

2.2.2.2 Conditions 2.2.2.3-6 shall not apply to emissions to sewer.

2.2.2.3 Emissions to water from the emission point(s) specified in Table 2.2.4 shall only arise from the source(s) specified in that Table

Table 2.2.4: Emission point to water		
Emission Point Reference and/or location description	Source	Receiving Water
P1 on Drawing No. SWSP2.	Site drainage from the surface water management system	Bradnant
P2 on Drawing No. SWSP2.	Site drainage from the surface water management system	Afon Dulas

2.2.2.4 The limits for the emissions to water for the parameter(s) and emission point(s) set out in Table 2.2.5 shall not be exceeded.

Table 2.2.5 : Emission limits to water and monitoring

Emission/ Monitoring reference	Parameter	Limit (mg/l)	Monitoring frequency	Monitoring method
P1	Dissolved Oxygen	-	Quarterly	To be agreed in writing with the Agency
P1	Ammoniacal Nitrogen (mg/l)	0.25 mg/l	Monthly	To be agreed in writing with the Agency
P1	Suspended Solids	50	Monthly	To be agreed in writing with the Agency
P1	BOD	-	Monthly	To be agreed in writing with the Agency
P1	Water Flow	-	Monthly	To be agreed in writing with the Agency
P1	pH	-	Monthly	To be agreed in writing with the Agency
P1	Temperature	-	Quarterly	To be agreed in writing with the Agency
P1	Electrical Conductivity	-	Monthly	To be agreed in writing with the Agency
P1	Chloride	-	Monthly	To be agreed in writing with the Agency
P1	COD	-	Quarterly	To be agreed in writing with the Agency
P1	Hydrocarbons	5 mg/l	Monthly	To be agreed in writing with the Agency
P1	List I substances identified to be present within the leachate	Below limits of detection	6 monthly	To be agreed in writing with the Agency
P2	Dissolved Oxygen	-	Quarterly	To be agreed in writing with the Agency
P2	Ammoniacal Nitrogen (mg/l)	0.25 mg/l	Monthly	To be agreed in writing with the Agency
P2	Suspended Solids	50	Monthly	To be agreed in writing with the Agency
P2	BOD	-	Monthly	To be agreed in writing with the Agency
P2	Water Flow	-	Monthly	To be agreed in writing with the Agency
P2	pH	-	Monthly	To be agreed in writing with the Agency
P2	Temperature	-	Quarterly	To be agreed in writing with the Agency
P2	Electrical Conductivity	-	Monthly	To be agreed in writing with the Agency
P2	Chloride	-	Monthly	To be agreed in writing with the Agency
P2	COD	-	Quarterly	To be agreed in writing with the Agency
P2	Hydrocarbons	5 mg/l	Monthly	To be agreed in writing with the Agency
P2	List I substances identified to be present within the leachate	Below limits of detection	6 monthly	To be agreed in writing with the Agency

2.2.2.5 Where a substance is specified in Table 2.2.5 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration

2.2.2.6 No Condition applies.

Emissions to sewer

2.2.2.7 Emissions to sewer from the specified emission points in Table 2.2.7 shall only arise from the emission points specified in that Table.

Table 2.2.7 Emission points to sewer		
Emission point reference or description	Source	Sewerage undertaker
Point LD as detailed on site plan No. 1168.GPM.MN07	Leachate Effluent treatment plant	Severn Trent Water plc

2.2.2.8 The limits for the emissions to sewer for the parameter(s) and emission point(s) set out in Table 2.2.8 shall not be exceeded.

Table 2.2.8 : Emission limits and monitoring frequency to sewer				
Emission point reference	Substance	Limit	Monitoring frequency	Monitoring method
LD	Ammoniacal Nitrogen	150 mg/l	Monthly	To be agreed in writing with the Agency
LD	Suspended Solids	500mg/l	Monthly	To be agreed in writing with the Agency
LD	COD	1000mg/l	Monthly	To be agreed in writing with the Agency
LD	Sulphate	1000mg/l	Monthly	To be agreed in writing with the Agency
LD	Soluble CH ₄	0.14mg/l	Monthly	To be agreed in writing with the Agency
LD	Oils	nil	Monthly	To be agreed in writing with the Agency
LD	pH	6 -10	Monthly	To be agreed in writing with the Agency
LD	Temperature	Less than 43 °C	Monthly	To be agreed in writing with the Agency
LD	List I substances identified to be present within the leachate	-	6 monthly	To be agreed in writing with the Agency

2.2.2.9 Where a substance is specified in Table 2.2.8 but no limit is set for it, the concentration of such substance in emissions to sewer from the relevant emission point shall be no greater than the background concentration.

2.2.2.10 No condition applies.

2.2.3 Emissions to groundwater

2.2.3.1 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any substance in List I (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).

- 2.2.3.2 No emission from within the Permitted Installation shall give rise to the introduction into groundwater of any substance in List II (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)) so as to cause pollution (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).
- 2.2.3.3 For substances other than those in List I or II (as defined in the Groundwater Regulations 1998 (SI 1998 No.2746)), the Operator shall ensure that all appropriate measures are taken to prevent or where that is not practicable to reduce emissions to groundwater from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.
- 2.2.3.4 The Operator shall carry out monitoring of the parameters listed in Table 2.2.10, at the specified monitoring points and at least at the frequencies specified in that Table.
- 2.2.3.5 The trigger levels for emissions into groundwater for the parameter(s) and monitoring point(s) set out in Table 2.2.10 shall not be exceeded.

Table 2.2.10: Groundwater Monitoring Parameters and Trigger Levels

Parameters with frequency of monitoring	Monitoring Points as shown on Drawing No. 2 as detailed within the application Boreholes:- BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107
Parameters/Frequency	Trigger Level
Water Level (mAOD) Weekly	-
pH Monthly	-
Ammoniacal Nitrogen (mg/l) Quarterly	0.5
Cadmium (mg/l) Quarterly	0.0001
Chloride (mg/l) Quarterly	400.0
Nickel (mg/l) Quarterly	0.05
Toluene Quarterly	0.004
Xylene Quarterly	0.003
Zinc (mg/l) Quarterly	5.0
Ethylbenzene Quarterly	0.01
Mecoprop Quarterly	0.00004
2-4 D Quarterly	0.0001
Temperature (°C) Quarterly	-
Electrical conductivity Monthly	-
Dissolved oxygen Quarterly	-
Sulphate (mg/l) Monthly	-
Total alkalinity (mg/l) (as Ca CO ₃ at pH4.5)	-
PAH Quarterly	-
BTEX Annually	-
K (mg/l) Quarterly	-
Ca (mg/l) Quarterly	-

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Mg (mg/l) Quarterly	-
Fe (mg/l) Quarterly	-
Cr (mg/l) Quarterly	-
Cu (mg/l) Quarterly	-
Pb (mg/l) Quarterly	-
Bicarbonate HCO ₃ (mg/l) Quarterly	-
Nitrate (mg/l) Quarterly	-
Arsenic (mg/l) Quarterly	-
Cyanide (mg/l) Quarterly	-
Mercury (mg/l) Quarterly	-
Antimony (mg/l) Quarterly	-
Selenium (mg/l) Quarterly	-
Manganese (mg/l) Quarterly	-
Silver (mg/l) Quarterly	-
Phenol Quarterly	-
Na (mg/l) Quarterly	-
List I substances identified to be present within the leachate Annually	Method: Broadscan GCMS initially, followed by any substance detected then subsequently analysed for to determine it's concentration

2.2.3.6 Subject to the terms of this condition, the activities of disposal, or tipping for the purpose of disposal, of waste, that are authorised by this landfill permit shall cease 3½ years from date of issue of this Permit, unless by that date the operator has submitted to the Agency a written review of the Hydrogeological Risk Assessment submitted as part of the original Application for the permit.

The Risk Assessment review shall include a review of the responses in Section 1.2.1 to 1.2.10 of Part B of that original application. The written review shall show whether at the specified date, the level of risk to groundwater meets the terms of the Groundwater Regulations 1998.

Within six months of receipt of the written review the Agency shall reply in writing to the operator either confirming that the above requirements have been met and authorising continuation of disposal activities or that activities of disposal or tipping for the purpose of disposal of waste authorised by this permit shall cease until the operator can show that, the level of risk to groundwater meets the terms of the Groundwater Regulations 1998.

In the event that the continuation of activities is authorised in accordance with this condition beyond 4 years following the date of granting of this Permit, they shall cease on every fourth anniversary thereafter, unless, by each of those dates, the operator has submitted to the Agency a further written review of the Hydrogeological Risk Assessment which shows that, at the specified dates, the level of risk to groundwater meets the terms of the Groundwater Regulations.

The reviews submitted to the Agency shall include the results of any investigations and reviews carried out, and, in particular, reviews of the following aspects of the Hydrogeological Risk Assessment:

Recommendations of the essential technical precautions which must be taken, paying particular attention to the nature and concentration of the substances present in the matter being disposed of or tipped, the characteristics of the receiving environment and the proximity of the water catchment areas, in particular those for drinking, thermal and mineral water;

Recommendations of the technical precautions necessary:

- i In the case where groundwater is considered to be permanently unsuitable for other uses, to ensure that no substance in list I can reach other aquatic ecosystems or harm other ecosystems, to ensure that the presence of any list I substance once discharged into the groundwater will not impede exploitation of ground resources and to prevent pollution of groundwater by list II substances; and
- ii in the case where groundwater is not considered to be permanently unsuitable for other uses, to prevent any discharges into groundwater of substances in list I and to prevent any pollution of groundwater by substances in list II.

2.2.4 Fugitive emissions of substances to air

2.2.4.1 The Operator shall ensure that all appropriate measures are taken to prevent or where that is not practicable to reduce fugitive emissions of substances to air from the Permitted Installation in particular from:

- storage areas
- buildings
- pipes, valves and other transfer systems
- open surfaces, unfilled, operational and filled landfill surfaces

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.4.2 The Operator shall use all appropriate measures so as to prevent or where that is not practicable to reduce emissions of litter and dust from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

Aerial emissions of particulate matter

2.2.4.3 The Operator shall carry out monitoring of the parameters listed in Table 2.2.11 below, at the specified monitoring points and at least at the frequencies specified in that Table.

2.2.4.4 The limits for particulate matter emissions into air for the parameter(s) and monitoring point(s) set out in Table 2.2.11 shall not be exceeded.

Table 2.2.11 Dust emission limits into air			
Parameters, emission limit and frequency of monitoring	Monitoring Points as shown on Plan No. 1168.GPM.MN07		
	Monitoring point 1	Monitoring point 2	Monitoring point 3
Deposited Dust (BS1747) Units: ($\mu\text{g}/\text{m}^2/\text{day}$) Emission limit: 200 $\mu\text{g}/\text{m}^2/\text{day}$ Quarterly and when a new phase of the site is being constructed. When construction activities are taking place dust monitoring shall take place continuously.	Perimeter of installation adjacent to Valley View	Perimeter of installation adjacent to Pant, Rhoswen	Perimeter of installation adjacent to Penbryn-du

2.2.5 Fugitive emissions of substances to water and sewer

2.2.5.1 Subject to condition 2.2.5.2 below, the Operator shall ensure that all appropriate measures are taken to prevent or where that is not practicable to reduce fugitive emissions of substances to water (other than Groundwater) and sewer from the Permitted Installation in particular from:

- all structures under or over ground

- surfacing
- bunding
- storage areas

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

- 2.2.5.2 There shall be no release to water that would cause a breach of an EQS established by the UK Government to implement the Dangerous Substances Directive 76/464/EEC.

2.2.6 Odour

- 2.2.6.1 The Operator shall ensure that all appropriate measures are taken to prevent or where that is not practicable to reduce odorous emissions from the Permitted Installation, in particular by:

- controlling operational activities to minimise the generation of odour
- limiting the use of odorous materials
- restricting odorous activities
- controlling the storage conditions of odorous materials
- controlling processing parameters to minimise the generation of odours
- optimising the performance of abatement systems
- timely monitoring, inspection and maintenance
- employing, where appropriate, an odour management plan

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.7 Emissions to Land

- 2.2.7.1 This Part 2.2.7 of this Permit shall not apply to emissions to groundwater.
- 2.2.7.2 No emission from the Permitted installation shall be made to land.
- 2.2.7.3 The Operator shall notify the Agency, as soon as reasonably practicable, of any information concerning the state of the Site which affects or updates that provided to the Agency as part of the Site Report submitted with the application for this Permit.

2.3 Management (and Fit and Proper Person for Specified Waste Management Activities (SWMAs)).

- 2.3.1 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

Training

- 2.3.2 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.
- 2.3.3 All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to carry out their duties.
- 2.3.4 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep records of all relevant training.

Maintenance

- 2.3.5 All plant and equipment used in operating the Permitted Installation, the failure of which could lead to an adverse impact on the environment, shall be maintained in good operating condition.
- 2.3.6 The Operator shall maintain a record of relevant plant and equipment covered by condition 2.3.5 and for such plant and equipment:
- 2.3.6.1 a written or electronic maintenance programme; and
 - 2.3.6.2 records of its maintenance.

Incidents and Complaints

- 2.3.7 The Operator shall maintain and implement written procedures for:
- 2.3.7.1 taking prompt remedial action, investigating and reporting actual or potential non-compliance with operating procedures or emission limits and if such event occur;
 - 2.3.7.2 investigating incidents, (including any malfunction, breakdown or failure of plant, equipment or techniques, down time, any short term and long term remedial measures and near misses) and prompt implementation of appropriate actions; and
 - 2.3.7.3 ensuring that detailed records are made of all such actions and investigations.
- 2.3.7.4 The Operator shall record and investigate complaints concerning the Permitted Installation's effects or alleged effects on the environment. The record shall give the date and nature of complaint, time of complaint, name of complainant (if given), a summary of any investigation and the results of such investigation and any actions taken.

Fit and Proper Person.

- 2.3.8 Where Regulation 4 of the Regulations applies to a relevant activity/associated activity carried on at the Permitted Installation, as authorised under condition 1.1.1,
- 2.3.8.1 any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence shall be submitted to the Agency in writing within 5 working days of the change in management. Technically competent management and technical competence shall be as prescribed under Section 74 of the Environmental Protection Act 1990.
- 2.3.8.2 in the event of the Operator and/or any relevant person being convicted of any relevant offence and which is in addition to any already notified to the Agency, then full details shall be provided to the Agency within 14 days of conviction, whether or not the conviction is subsequently appealed. Such details shall include, in respect of each relevant person (as defined in section 74(7) of the Environmental Protection Act 1990 or any subsequent amendments to that section), the nature of the offence, the place and date of conviction, any sentence, and any fine or other penalty imposed; and
- 2.3.8.3 In the event that the Operator and/or any relevant person lodges an appeal against any such conviction, the Operator shall notify the Agency of this within 14 days of the lodging. The Operator shall notify the Agency of the results of that appeal, within 14 days of the appeal being decided; and
- 2.3.8.4 The Operator shall maintain financial provision for meeting the obligations under this permit throughout its subsistence, as set out in the agreement made between the Operator and the Agency dated 15 June 2004 or any agreed replacement for that agreement whether made under improvement programme requirement 1.4.1.08 or otherwise, and shall produce evidence of such provision whenever required to do so by the Agency.
- 2.3.8.5 The operator shall ensure that the charges it makes for the disposal of waste in the landfill covers all of the following
- (a) the costs of setting up and operating the landfill;
 - (b) the costs of the financial provision required by condition 2.3.9.4; and
 - (c) the estimated costs for the closure and after-care of the landfill site for a period of at least 30 years from its closure.

2.4 Efficient use of raw materials

2.4.1 The Operator shall

- 2.4.1.1** maintain the raw materials table or description submitted in response to Section 2.4 of the Application and in particular consider on a periodic basis whether there are suitable alternative materials to reduce environmental impact;
- 2.4.1.2** carry out periodic waste minimisation audits and water use efficiency audits. If such an audit has not been carried out in the 2 years prior to the issue of this Permit, then the first such audit shall take place within 2 years of its issue. The methodology used and an action plan for increasing the efficiency of the use of raw materials or water shall be submitted to the Agency within 2 months of completion of each such audit and a review of the audit and a description of progress made against the action plan shall be submitted to the Agency at least every 4 years thereafter; and
- 2.4.1.3** ensure that incoming water use is directly measured and recorded.

2.5 Waste Storage and Handling

No condition applies except as covered by the requirements in 2.2.1.1

2.6 Waste recovery or disposal

- 2.6.1** Waste produced at the Permitted Installation shall be recycled or recovered unless technically and/or economically impossible.
- 2.6.2** The Operator shall maintain and implement a system which ensures that a record is made of the quantity, composition, origin, destination (including whether this is a recovery or disposal operation) and where relevant removal date of any waste that is produced at the Permitted Installation.

2.7 Energy Efficiency

- 2.7.1** The Operator shall produce a report on the energy consumed at the Permitted Installation over the previous calendar year, by 31 January each year, providing the information listed in Table S4.1 at Schedule 4.
- 2.7.2** The Operator shall maintain and update annually an energy management system which shall include, in particular, the monitoring of energy flows and targeting of areas for improving energy efficiency.
- 2.7.3** The Operator shall design, maintain and operate the Permitted Installation so as to secure energy efficiency, taking into account relevant guidance including the Agency's Energy Efficiency Horizontal Guidance Note H2 as from time to time amended. Energy efficiency shall be secured in particular by:
 - ensuring that the appropriate operating and maintenance systems are in

- place;
- ensuring that all plant is adequately insulated to minimise energy loss or gain;
- ensuring that all appropriate containment methods, (e.g. seals and self-closing doors) are employed and maintained to minimise energy loss;
- employing appropriate basic controls, such as simple sensors and timers, to avoid unnecessary discharge of heated water or air;
- where building services constitute more than 5% of the total energy consumption of the installation, identifying and employing the appropriate energy efficiency techniques for building services, having regard in particular to the Building services part of the Agency's Energy Efficiency Horizontal Guidance Note H2; and
- maintaining and implementing an energy efficiency plan which identifies energy saving techniques that are applicable to the activities and their associated environmental benefit and prioritises them, having regard to the appraisal method in the Agency's Energy Efficiency Horizontal Guidance Note H2.

2.8 Accident prevention and control

- 2.8.1 The Operator shall maintain and implement when necessary the accident management plan submitted or described in response to Section 2.4.4 of the Application. The plan shall be reviewed at least every 2 years or as soon as practicable after an accident, whichever is the earlier, and the Agency notified of the results of the review within 2 months of its completion.

2.9 Noise and Vibration

- 2.9.1 The Permitted Installation shall be designed, operated and maintained so as to avoid reasonable cause for annoyance from noise or vibration, in particular by:
- equipment maintenance e.g. fans, pumps, motors, conveyors and mobile plant;
 - use and maintenance of appropriate attenuation e.g. silencers, barriers, enclosures;
 - timing and location of noisy activities and vehicle movements;
 - periodic checking of noise emissions, either qualitatively or quantitatively; and
 - maintenance of building fabric.

Provided always that the techniques used by the operator shall be no less effective than those described in the application, where relevant

- 2.9.2 Emergency generators/alarms/sirens/release valves shall only be tested between the hours of 10.00 and 17.00 Monday to Friday and not on any Public Holiday.

2.10 On Site Monitoring

2.10.1 The Operator shall maintain and implement an emissions monitoring programme which ensures that emissions are monitored from the specified points, for the parameters listed in and to the frequencies and methods described in Tables 2.2.2, 2.2.5, 2.2.8; 2.2.10 2.2.11 and Tables 2.10.1 and 2.10.2 unless otherwise agreed in writing, and that the results of such monitoring are assessed. The programme shall ensure that monitoring is carried out under an appropriate range of operating conditions.

Table 2.10.1 Landfill gas monitoring parameters and trigger levels

Emission point reference/description	Parameter	Trigger Level	Frequency
All peripheral landfill gas monitoring boreholes identified on drawing No.1168.GPM.MN01	Methane	1.0% v/v	Weekly
	Carbon Dioxide	1.5% v/v	Weekly
	Oxygen	-	Weekly
	Atmospheric Pressure	-	Continuous

Table 2.10.2 Leachate monitoring parameters and trigger level for leachate head

Monitoring point reference/description	Parameter	Frequency	
Existing: LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8 Proposed in future phases: One of RLMP9A (x2) One of RLMP9B (x2) One of RLMP9C (x2) One of RLMP9D (x2) As detailed in plan No. 1168.GPM.MN06C			
	Cadmium	6 monthly	
	Chromium	6 monthly	
	Copper	6 monthly	
	Zinc	6 monthly	
	Lead	6 monthly	
	Nickel	6 monthly	
	Cyanide	6 monthly	
	pH	Monthly	
	Full List I analysis	Annually	
Leachate levels shall be monitored at the abstraction point for all phases and two additional points within each new phase.		Trigger Level	Frequency
	Leachate Head (above the base of each cell)	1.0m	Monthly

2.10.2 No condition.

2.10.3 No condition.

- 2.10.4 The Operator shall notify the Agency at least 14 days in advance of undertaking monitoring and/ or spot sampling, where such notification has been requested in writing by the Agency.
- 2.10.5 The Operator shall maintain records of all monitoring taken or carried out (this includes records of the taking and analysis of samples instrument measurements (periodic and continual), calibrations, examinations, tests and surveys) and any assessment or evaluation made on the basis of such data.
- 2.10.6 There shall be provided:
 - 2.10.6.1 safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2 to this Permit, unless otherwise specified in that Schedule; and
 - 2.10.6.2 safe means of access to other sampling/monitoring points when required by the Agency.

2.11 Closure, Aftercare and Decommissioning

- 2.11.1 The Permitted Installation shall, subject to the conditions of this Permit, be managed and controlled as described in the documentation specified in Table 2.11.1, or as otherwise agreed in writing by the Agency.

Table 2.11.1: Closure, Aftercare and Decommissioning techniques

Description	Parts	Date Received
Application	The response to questions 2.5 in Part B of the application form	22/04/03

- 2.11.2 Where the above Table refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the later document(s) shall prevail to the extent of such conflict.
- 2.11.3 In respect of activities on the installation which are not Listed in Section 5.2 (a or b) of Part 1 of Schedule 1 of the PPC Regulations, the Operator shall maintain and operate the Permitted activities so as to prevent or minimise any pollution risk, including the generation of waste, on closure and decommissioning in particular by:
 - 2.11.3.1 attention to the design of new plant or equipment;
 - 2.11.3.2 the maintenance of a record of any events which have, or might have, impacted on the condition of the site along with any further investigation or remediation work carried out.; and
 - 2.11.3.3 the maintenance of a site closure plan to demonstrate that the installation can be decommissioned avoiding any pollution risk and returning the site of operation to a satisfactory state.
- 2.11.4 Notwithstanding condition 2.11.1 of this Permit, the Operator shall carry out a full review of the Site Closure Plan at least every 4 years.
- 2.11.5 The site closure plan shall be implemented on final cessation or decommissioning of the Permitted activities or part thereof.

- 2.11.6 The Operator shall give at least 30 days written notice to the Agency before implementing the site closure plan.

2.12 Multiple Operator installations

- 2.12.1 This is not a multi-Operator installation

2.13 Transfer to effluent treatment plant

- 2.13.1 Transfers to effluent treatment plant(s) shall occur only from the point(s) specified in Table 2.13.1 and transfers from those points shall arise only from the source(s) and shall be released only to the treatment plant(s) specified in that Table.

Table 2.13.1 Transfer point(s) to effluent treatment plant(s)		
Transfer point description/Identifier	Source	Effluent Treatment Plant
Existing Leachate Collection Sumps: LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8	} } }Leachate extraction point in }appropriate cells as detailed in }plan No. 1168.GPM.MN06C	} } }Leachate Treatment Plant }detailed on drawing no. }1168.GPM.MN07
Proposed Leachate Collection Sumps in future cells: LCP9A, LCP9B, LCP9C, LCP9D as detailed in plan No. 1168.GPM.MN06C	} } } }	} } } }

3 Records

- 3.1.1 The Operator shall ensure that all records required to be made by this Permit and any other records made by it in relation to the operation of the Permitted Installation shall:-
 - 3.1.1.1 be made available for inspection by the Agency at any reasonable time
 - 3.1.1.2 be supplied to the Agency on demand and without charge
 - 3.1.1.3 be legible
 - 3.1.1.4 be made as soon as reasonably practicable
 - 3.1.1.5 indicate any amendments which have been made and shall include the original record wherever possible; and
 - 3.1.1.6 be retained at the Permitted Installation, or other location agreed by the Agency in writing, for a minimum period of 4 years from the date when the records were made, unless otherwise agreed in writing.

4 Reporting

- 4.1.1 All reports and written and or oral notifications required by this Permit and notifications required by Regulation 16 of the PPC Regulations shall be made or sent to the Agency using the contact details notified in writing to the Operator by the Agency.
- 4.1.2 The Operator shall, unless otherwise agreed in writing, submit reports of the monitoring and assessment carried out under condition 2.10, as follows:
 - 4.1.2.1 in respect of the parameters and emission points specified in Table S2 to Schedule 2.
 - 4.1.2.2 for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
 - 4.1.2.3 giving the information from such results and assessments as may be required by the forms specified in those Tables; and
 - 4.1.2.4 to the Agency within 28 days of the end of the reporting period.
- 4.1.3 No Condition.
- 4.1.4 The Operator shall review fugitive emissions, having regard to the application of the most appropriate measures to prevent pollution, on an annual basis, or such other period as shall be agreed in writing by the Agency, and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them within 3 months of the end of such period.
- 4.1.5 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.
- 4.1.6 The Operator shall, within 6 months of receipt of written notice from the Agency, submit to the Agency a report assessing whether all appropriate preventive measures continue to be taken against pollution at the installation. The report shall consider any relevant published technical guidance current at the time of the notice which is either supplied with or referred to in the notice, and shall assess the costs and benefits of applying techniques described in that guidance, or otherwise identified by the Operator, that may provide environmental improvement
- 4.1.7 The Operator shall submit to the Agency an interpretation report of the monitoring results for landfill gas, leachate, surface and groundwater against the relevant emission limits, assessment limits, control and trigger levels specified in the permit on a three monthly basis, and shall submit a summary report to the Agency within one month of the end of each three month period.
- 4.1.8 The Operator shall review all monitoring data required by this permit on an annual basis and shall submit a summary report to the Agency to the agency within three months of the end of each year.

5 Notifications

- 5.1.1 The Operator shall notify the Agency **without delay** of:-
- 5.1.1.1 the detection of an emission of any substance which exceeds any limit or criterion in this Permit specified in relation to the substance;
- 5.1.1.2 the detection of any fugitive emission which has caused, is causing or may cause significant adverse environmental effect; unless the quantity emitted is so trivial that it would be incapable of causing significant adverse environmental effect;
- 5.1.1.3 the detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause significant pollution; and
- 5.1.1.4 any accident which has caused, is causing or has the potential to cause significant pollution.
- 5.1.1.5 the refusal or rejection of incoming waste.
- 5.1.2 The Operator shall submit written confirmation to the Agency of any notification under condition 5.1.1, by sending:-
- 5.1.2.1 the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
- 5.1.2.2 the more detailed information listed in Part B of that Schedule as soon as practicable thereafter; and such information shall be in accordance with that Schedule.
- 5.1.3 The Operator shall give prior written notification to the Agency of the following events and in the specified timescales
- 5.1.3.1 as soon as practicable prior to the permanent cessation of the landfill disposal operations,
- 5.1.3.2 as soon as practicable prior to the cessation of the operation of the landfill disposal operations, for a period likely to exceed 1 month
- 5.1.3.3 at least 14 days prior to the resumption of the landfill disposal operations after a cessation
- 5.1.4 The Operator shall notify the Agency, as soon as practicable, of any information concerning the state of the site which affects or updates that provided to the Agency as part of the Site Report submitted with the application for this Permit.
- 5.1.5 Operator shall notify the following matters to the Agency in writing within 14 days of their occurrence:
- 5.1.5.1 where the Operator is a registered company:
- any change in the Operator's trading name, registered name or registered office address;
 - any change to particulars of the Operator's ultimate holding company (including details of an ultimate holding company where an Operator has become a subsidiary)
 - any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up;
- 5.1.5.2 where the Operator is a corporate body other than a registered company:
- any change in the Operator's name or address;
 - any steps taken with a view to the dissolution of the Operator.
- 5.1.5.3 in any other case:
- the death of any of the named Operators (where the Operator consists of more than one named individual);
 - any change in the Operator's name(s) or address(es);

- 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 them being in a partnership, dissolving the partnership;
- 5.1.6 Where the Operator has entered into a Climate Change Agreement with the Government, the Operator shall notify the Agency within one month of:
- 5.1.6.1 a decision by the Secretary of State not to re-certify that Agreement
 - 5.1.6.2 a decision by either the Operator or the Secretary of State to terminate that agreement
 - 5.1.6.3 any subsequent decision by the Secretary of State to re-certify such an Agreement
- 5.1.7 Where the Operator has entered into a Direct Participant Agreement in the Emissions Trading Scheme which covers emissions relating to the energy consumption of the activities, the Operator shall notify the Agency within one month of:
- 5.1.7.1 a decision by the Operator to withdraw from or the Secretary of State to terminate that agreement
 - 5.1.7.2 a failure to comply with an annual target under that Agreement at the end of the trading compliance period

6 Interpretation

6.1.1 In this Permit, the following expressions shall have the following meanings:

"Application" means the application for this Permit, together with any response to a notice served under Schedule 4 to the PPC Regulations, and any other written information provided by the applicant for consideration of the determination of the permit and any operational change agreed under the conditions of this Permit.

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

- water supplied to the site; or
- where more than 50% of the water used at the site is directly abstracted from ground or surface water on site, the abstracted water; or
- where the Permitted Installation uses no significant amount of supplied or abstracted water, the precipitation onto the site.

"BAT" means best available techniques means the most effective and advanced stage of development of activities and their methods of operation which indicates the practical suitability of particular techniques to prevent and where that is not practicable to reduce emissions and the impact on the environment as a whole. For these purposes: *"available techniques"* means "those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the United Kingdom, as long as they are reasonably accessible to the operator"; *"best"* means "in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole" and *"techniques"* "includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned." In addition, Schedule 2 of the PPC Regulations has effect in relation to the determination of BAT. Note again, the possibility of excluding references to BAT.

"Fugitive emission" means an emission to air or water (including sewer) from the Permitted Installation which is not controlled by an emission or background concentration limit under conditions 2.2.1.3, 2.2.2.4, 2.2.2.5, 2.2.2.8 or 2.2.2.9 of this Permit

"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.

" $L_{Aeq,T}$ " means the equivalent continuous A-weighted sound pressure level in dB determined over time period, *T*

" $L_{A90,T}$ " means the A weighted sound pressure level in dB exceeded for 90% of the time period, *T*

" L_{AFmax} " means the maximum A weighted sound level measurement in dB measured with a fast time weighting

"The Landfill Regulations" means the Landfill (England and Wales) Regulations SI 2002 No. 1559 and words and expressions defined in the Landfill Regulations shall have the same meanings when used in this Permit, save to the extent that they are specifically defined in this Permit.

"Monitoring" includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

"Permitted Installation" means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

"PPC Regulations" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 (as amended) and words and expressions defined in the PPC Regulations shall have the same meanings when used in this Permit save to the extent they are specifically defined in this Permit

"Sewer" means sewer within the meaning of section 219(1) of the Water Industry Act 1991.

"Staff" includes employees, directors or other officers of the Operator, and any other person under the Operator's direct or indirect control, including contractors.

"Year" means calendar year ending 31 December.

- 6.1.2 Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.
- 6.1.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means;
 - 6.1.3.1 in relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
 - 6.1.3.2 in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.
- 6.1.4 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict.

Schedule 1 - Notification of abnormal emissions

This page outlines the information that the Operator must provide to satisfy conditions 5.1.1 and 5.1.2 of this Permit.

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

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

Part A

Permit Number	
Name of Operator	
Location of Installation	
Location of the emission	
Time and date of the emission	

Substance[s] emitted	Media	Best estimate of the quantity or the rate of emission	time during which the emission took place
	eg air		
	eg groundwater		

Measures taken, or intended to be taken, to stop the emission	
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Part B

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of *Sundome Products (Llanidloes) Ltd*]

Schedule 2 - Reporting of monitoring data

Parameters for which reports shall be made, in accordance with conditions 4.1.2 and 4.1.3 of this Permit, are listed below.

Table S2: Reporting of monitoring data

Parameter	Emission point	Reporting period	Period begins
Oxides of Nitrogen (NOx)	LG- Landfill Gas Flare and Landfill Gas Engine	1 st year – 6 monthly thereafter Annual	From date of issue of permit
Carbon Monoxide (CO)	LG- Landfill Gas Flare and Landfill Gas Engine	Annual	From date of issue of permit
Total Volatile Organic Compounds (VOC's)	LG- Landfill Gas Flare and Landfill Gas Engine	Annual	From date of issue of permit
Non Methane Volatile Organic Compounds (NMVOC's)	LG- Landfill Gas Flare and Landfill Gas Engine	Annual	From date of issue of permit
SOx	LG- Landfill Gas Flare and Landfill Gas Engine	1 st year – 6 monthly thereafter Annual	From date of issue of permit
HCl	LG- Landfill Gas Flare and Landfill Gas Engine	Annually	From date of issue of permit
CO ₂	LG- Landfill Gas Flare and Landfill Gas Engine	Annually	From date of issue of permit
Dioxins	LG- Landfill Gas Flare and Landfill Gas Engine	Annually	From date of issue of permit
Dissolved Oxygen	P1 & P2	Quarterly	From date of issue of permit
Ammoniacal Nitrogen (Mg/l)	P1 & P2	Monthly	From date of issue of permit
Suspended Solids	P1 & P2	Monthly	From date of issue of permit
BOD	P1 & P2	Monthly	From date of issue of permit
Water Flow	P1 & P2	Monthly	From date of issue of permit
pH	P1 & P2	Monthly	From date of issue of permit
Temperature	P1 & P2	Quarterly	From date of issue of permit
Electrical Conductivity	P1 & P2	Monthly	From date of issue of permit
Chloride	P1 & P2	Monthly	From date of issue of permit
COD	P1 & P2	Quarterly	From date of issue of permit
Hydrocarbons	P1 & P2	Monthly	From date of issue of permit
List I substances identified to be present within the leachate	P1 & P2	6 monthly	From date of issue of permit

Permit and introductory note: IPPC Regulations 2000/1973
Schedule 2 - Reporting of monitoring data

Ammoniacal Nitrogen	LD	Monthly	From date of issue of permit
Suspended Solids	LD	Monthly	From date of issue of permit
COD	LD	Monthly	From date of issue of permit
Sulphate	LD	Monthly	From date of issue of permit
Soluble CH ₄	LD	Monthly	From date of issue of permit
Oils	LD	Monthly	From date of issue of permit
pH	LD	Monthly	From date of issue of permit
Temperature	LD	Monthly	From date of issue of permit
List I substances identified to be present within the leachate	LD	6 monthly	From date of issue of permit
Water Level (mAOD)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Monthly	From date of issue of permit
pH	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Monthly	From date of issue of permit
Ammoniacal Nitrogen (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Cadmium (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Chloride (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Nickel (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Toluene	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Xylene	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Zinc (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Ethylbenzene	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Mecoprop	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
2-4 D	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Temperature (°C)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Electrical conductivity	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Monthly	From date of issue of permit

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Dissolved oxygen	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Sulphate (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Monthly	From date of issue of permit
Total alkalinity (mg/l) (as Ca CO ₃ at pH4.5)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
PAH	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
BTEX	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Annually	From date of issue of permit
Phenol	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Na (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
K (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Ca (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Mg (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Fe (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Cr (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Cu (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
Pb (mg/l)	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Quarterly	From date of issue of permit
List 1 substances identified to be present within the leachate	BH1/ 1999, BH2 A/03, BH4 A/03, BH6/ 03, BH8 /03, BH9 /03, BH10 /03, BH11 /03, BH107	Annually	From date of issue of permit
Deposited Dust (BS1747) Units: (µg/m ² /day)	Monitoring point 1, Monitoring point 2, Monitoring point 3	Quarterly and when a new phase of the site is being constructed	From date of issue of permit
Methane	All Peripheral Landfill Gas monitoring boreholes identified on drawing No. 1168.GPM.MN01	Weekly	From date of issue of permit

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Carbon Dioxide	All Peripheral Landfill Gas monitoring boreholes identified on drawing No. 1168.GPM.MN01	Weekly	From date of issue of permit
Oxygen	All Peripheral Landfill Gas monitoring boreholes identified on drawing No. 1168.GPM.MN01	Weekly	From date of issue of permit
Atmospheric Pressure	All Peripheral Landfill Gas monitoring boreholes identified on drawing No. 1168.GPM.MN01	Continuous	From date of issue of permit
Cadmium	LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8 One of RLMP9A (x2), One of RLMP9B (x2) One of RLMP9C (x2), One of RLMP9D (x2)	6 monthly	From date of issue of permit
Chromium	LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8 One of RLMP9A (x2), One of RLMP9B (x2) One of RLMP9C (x2), One of RLMP9D (x2)	6 monthly	From date of issue of permit
Copper	LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8 One of RLMP9A (x2), One of RLMP9B (x2) One of RLMP9C (x2), One of RLMP9D (x2)	6 monthly	From date of issue of permit
Zinc	LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8 One of RLMP9A (x2), One of RLMP9B (x2) One of RLMP9C (x2), One of RLMP9D (x2)	6 monthly	From date of issue of permit
Lead	LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8 One of RLMP9A (x2), One of RLMP9B (x2) One of RLMP9C (x2), One of RLMP9D (x2)	6 monthly	From date of issue of permit
Nickel	LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8 One of RLMP9A (x2), One of RLMP9B (x2) One of RLMP9C (x2), One of RLMP9D (x2)	6 monthly	From date of issue of permit
Cyanide	LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8 One of RLMP9A (x2), One of RLMP9B (x2) One of RLMP9C (x2), One of RLMP9D (x2)	6 monthly	From date of issue of permit
pH	LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8 One of RLMP9A (x2), One of RLMP9B (x2) One of RLMP9C (x2), One of RLMP9D (x2)	Monthly	From date of issue of permit
Leachate Head	Leachate levels shall be monitored at the abstraction point for all phases and two additional points within each new phase.	Monthly	From date of issue of permit
Full List I substances	LCP1, LCP2, LCP3, LCP6, LCP7 and LCP8 One of RLMP9A (x2), One of RLMP9B (x2) One of RLMP9C (x2), One of RLMP9D (x2)	Annually	From date of issue of permit

Schedule 3 - Forms to be used

Table S3:Reporting Forms		
Media/parameter	Form Number	
Air (Flare & Engine)	}	} Reporting format to be agreed in writing with the Agency.
Surface Water	}	
Foul Water	}	
Ground Water	}	
Dust	}	
Landfill Gas	}	
Leachate	}	
Waste Return	}	

Schedule 4 - Reporting of performance data

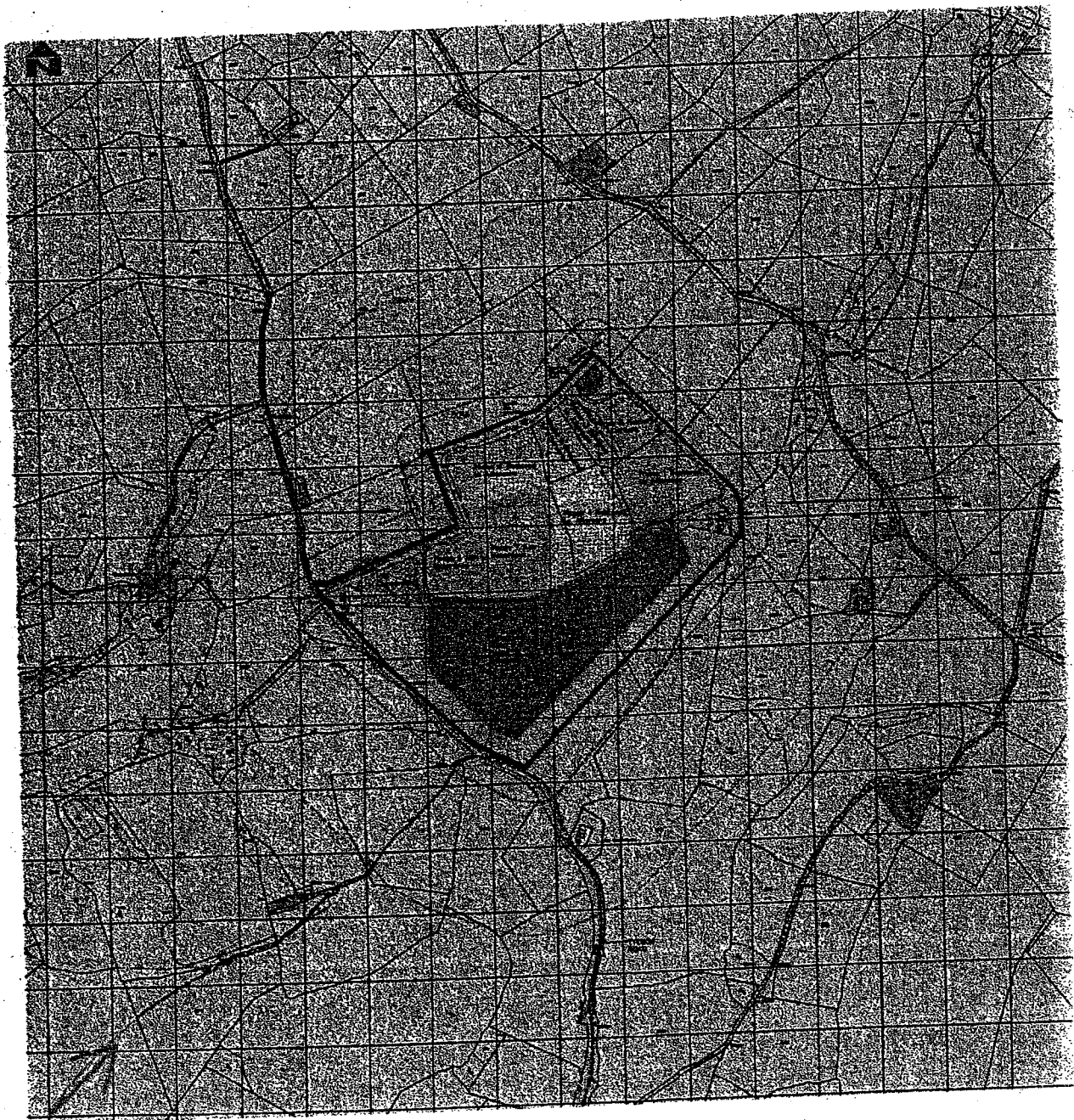
Data required to be recorded and reported by Condition 2.7.1.

Table S4.1: Energy consumption

	Delivered, MWh	Primary, MWh	% of total
Electricity*			
Gas			
Oil			
Other			

*Specify conversion factor of primary source to delivered energy

Schedule 5 - Site Plan



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