



ENVIRONMENT  
AGENCY

## Permit with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

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Aberthaw Quarry Ash Disposal Site

RWE Npower plc  
Lafarge Cement Works  
East Aberthaw  
Barry  
Vale of Glamorgan  
CF62 3ZR

Permit number

BP3339BH

# Aberthaw Quarry Ash Disposal Site

## Permit Number BP3339BH

### Introductory note

#### ***This introductory note does not form a part of the permit***

The main features of the installation are as follows.

This is the permit to operate a landfill accepting solely Pulverised Fuel Ash (PFA) produced at Aberthaw power station. PFA has been classified as non hazardous waste.

Aberthaw ash disposal site is situated in a limestone quarry previously excavated by Lafarge cement works. The site is approximately 27 hectares in area and 24 meters deep. The Landfill is located north east of Aberthaw power station, approximately 2.5km to the west of Cardiff Airport and to the west of the village of Fonman.

The quarry lies within 'Blue Lias' rock, which consists of layers of limestone and mudstone and is classified as a minor aquifer. To protect the ground water the development of the site will involve preparation works, installation of a groundwater drainage layer and geological barrier and finally the disposal of PFA by land raising within four phases.

Due to the nature of PFA only small amounts of leachate will be produced and therefore no leachate management system is required. Surface water will drain into peripheral drainage ditches which lead to a settlement pond prior to discharge to a lagoon.

The amenity risks identified are dust and noise, which will be controlled by dust suppression equipment and limits to working hours. Due to the nature of PFA and the management of the site other amenity issues such as litter, odour, mud on roads, birds, vermin and insects will not occur.

The site is not within 2km of a European habitats site but is within 1km of the East Aberthaw Coast SSSI.

Status log of the permit		
Detail	Date	Response Date
Application BP3339BH	Received 25/04/06	
Additional information submitted	Received 26/06/06	
Additional information submitted	Received 07/07/06	
Schedule 4 notice	Request dated 09/10/06	Response dated 07/12/06
Request to extend determination	Request dated 14/08/06	Request accepted 16/08/06
Request to extend determination	Request dated 24/11/06	Request accepted 01/12/06
Additional information submitted	Received 18/01/07	
Permit determined	04/05/07	

End of Introductory Note

## Permit

Pollution Prevention and Control (England and Wales) Regulations 2000  
Landfill (England and Wales) Regulations 2002

## Permit

Permit number

**BP3339BH**

The Environment Agency (the Agency) in exercise of its powers under regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (SI 2000 No 1973) and regulation 6 of the Landfill (England and Wales) Regulations 2002 (SI 2002 No.1559) hereby authorises **RWE Npower plc** ("the operator"),

of/ whose registered office (or principal office) is

**Windmill Hill Business Park**

**Whitehill way**

**Swindon**

**Wiltshire**

**SN5 6PB**

**Company registration number** 3892782

to operate an installation at

**Aberthaw Quarry**

**Lafarge Cement Works**

**East Aberthaw**

**Barry**

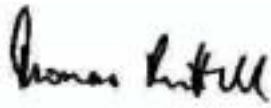
**Vale of Glamorgan**

**CF62 3ZR**

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

Signed

Date

	04/05/07
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Tom Ruffell – Waste Permitting Team Leader

Authorised to sign on behalf of the Agency

# Conditions

## 1. Management

### 1.1 General management

- 1.1.1 The activities shall be managed and operated:
- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the operator as a result of complaints; and
  - (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

### 1.2 Accidents that may cause pollution

- 1.2.1 The operator shall:
- (a) maintain and implement an accident management plan;
  - (b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
  - (c) make any appropriate changes to the plan identified by a review.

### 1.3 Finance

- 1.3.1 The financial provision for meeting the obligations under this permit set out in the agreement made between the operator and the Agency dated 04/05/07 shall be maintained by the operator throughout the subsistence of this permit and the operator shall produce evidence of such provision whenever required by the Agency.
- 1.3.2 The operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:
- (a) the costs of setting up and operating the landfill;
  - (b) the costs of the financial provision required by condition 1.3.1; and
  - (c) the estimated costs for the closure and aftercare of the landfill.

## **1.4 Energy efficiency**

1.4.1 The operator shall:

- (a) Review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (b) Implement any appropriate measures identified by a review.

## **1.5 Site security**

1.5.1 Site security measures shall prevent unauthorised access to the site, as far as practicable.

# **2. Operations**

## **2.1 Permitted activities**

2.1.1 The operator is authorised to carry out the activities specified in Schedule 1 Table S1.1 (the "activities").

## **2.2 The site**

2.2.1 The activities shall not extend beyond the site, being the land shown edged in red on the site plan at schedule 2 to this permit.

## **2.3 Operating techniques**

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

## **2.4 Off-site conditions**

There are no conditions in this permit to which regulation 12(12) of the PPC Regulations apply.

## **2.5 Improvement programme**

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

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

## **2.6 Pre-operational conditions**

2.6.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

## **2.7 Engineering**

- 2.7.1 No construction of any new cell shall commence until the operator has submitted construction proposals and the Agency has confirmed that it is satisfied with the construction proposals.
- 2.7.2 The construction of a new cell shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
  - (b) a change has otherwise been agreed in writing by the Agency.
- 2.7.3 No disposal of waste shall take place in a new cell until the operator has submitted a CQA Validation Report and the Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.7.4 No construction of landfill Infrastructure shall commence until the operator has submitted relevant construction proposals or a written request to use previous construction proposals and the Agency has confirmed that it is satisfied with the construction proposals.
- 2.7.5 The construction of the landfill Infrastructure shall take place only in accordance with the approved construction proposals unless:
- (a) any change to the approved construction proposals would have no impact on the performance of any element of the design; or
  - (b) a change has otherwise been agreed in writing by the Agency.
- 2.7.6 The operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant landfill Infrastructure.
- 2.7.7 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.7.4 and 2.7.5 do not apply and the relevant landfill Infrastructure may be constructed, provided that the construction proposals are submitted to the Agency as soon as practicable.
- 2.7.8 For the purposes of conditions 2.7.1, 2.7.3 and 2.7.4, the Agency shall be deemed to be satisfied where it has not, within the period of 4 weeks from the date of receipt of the relevant construction proposals or CQA Validation Report, either:
- (a) confirmed whether or not it is satisfied; or
  - (b) informed the operator that it requires further information.

## **2.8 Waste acceptance**

- 2.8.1 Wastes shall only be accepted for disposal if:
- (a) they are listed in schedule 3, and
  - (b) they are non-hazardous waste, and
  - (c) from 30<sup>th</sup> October 2007 they are not liquid waste (including waste waters but excluding carrier waters and sludge), and
  - (d) all the relevant waste acceptance procedures set out in schedule 1 of the Landfill Regulations have been completed, and
  - (e) they fulfil the relevant waste acceptance criteria, and

- (f) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and
  - (g) from 30<sup>th</sup> October 2007 they are wastes which have been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment.
- 2.8.2 The operator shall visually inspect:
  - (a) without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill or at the point of dispatch; and
  - (b) waste at the point of deposit;and shall satisfy itself that it conforms to the basic characterisation documentation submitted by the holder.
- 2.8.3 Where the operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.
- 2.8.4 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on the drawing requested in Schedule 1, table S1.3 [1], of this permit.
- 2.8.5 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in schedule 1 table S1.5.
- 2.8.6 The operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, date of delivery and, where practicable, origin of any waste that is received for disposal or recovery and of the identity of the producer, or in the case of municipal waste and multiple collection vehicles, of the collector of such waste. Any information regarded by the operator as commercially confidential shall be clearly identified in the record.

## **2.9 Closure, aftercare and decommissioning**

- 2.9.1 The operator shall maintain and operate the activities so as to prevent or where that is not practicable, to minimise, any pollution risk on closure and decommissioning.

### **3. Emissions and monitoring**

#### **3.1 Emissions to water, air or land**

- 3.1.1 There shall be no point source emissions to water, except from the sources and emission points listed in schedule 4 table S4.1
- 3.1.2 The limits given in that schedule shall not be exceeded.

#### **3.2 Emissions to groundwater**

- 3.2.1 There shall be no emission from the activities into groundwater of any substance in List I (as defined by the Groundwater Regulations) contrary to those regulations.
- 3.2.2 There shall be no emission from the activities into groundwater of any substance in List II (as defined in the Groundwater Regulations) so as to cause pollution (as defined in those regulations).
- 3.2.3 The trigger levels for emissions into groundwater for the parameter(s) and monitoring point(s) set out in schedule 4 Table S4.2 shall not be exceeded.
- 3.2.4 The operator shall submit to the Agency a review of the Hydrogeological Risk Assessment:
  - (a) between 9 and 6 months prior to the fourth anniversary of the granting of the permit, and
  - (b) between 9 and 6 months prior to every subsequent 4 years after the fourth anniversary of the granting of the permit.

#### **3.3 Fugitive emissions of substances**

- 3.3.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.3.2 Mud arising from the activities shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, have been used to prevent or where that is not practicable to minimise, the mud.
- 3.3.3 Mud arising from the activities shall be cleared from affected areas outside the site as soon as practicable.
- 3.3.4 All liquids, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.



### **3.4 Odour**

- 3.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, to prevent or where that is not practicable to minimise the odour.

### **3.5 Noise and vibration**

- 3.5.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures to prevent or where that is not practicable to minimise the noise and vibration.

### **3.6 Monitoring**

- 3.6.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring specified in the following tables in schedule 4 to this permit:
- (a) Point source emissions specified in table S4.1;
  - (b) Groundwater specified in tables S4.2 and S4.4;
  - (c) Surface water specified in table S4.3
- 3.6.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.6.3 A topographical survey of the site referenced to ordnance datum shall be carried out:
- (a) prior to the disposal of waste in any new cell or new development area of the landfill, and
  - (b) following closure of the landfill or part of the landfill.
- The topographical survey shall be used to produce a plan of a scale adequate to show the surveyed features of the site.

### **3.7 Transfers off-site**

- 3.7.1 Records of all the wastes sent off site from the activities, for either disposal or recovery, shall be maintained.

## **4. Information**

### **4.1 Records**

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

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender, the results of:
  - (i) groundwater monitoring;
  - (ii) particulate matter;
  - (iii) waste types and quantities;
  - (iv) the specification and as built drawings of the basal and sidewall engineering systems

4.1.2. Any records required to be made by this permit shall be supplied to the Agency within 14 days where the records have been requested in writing by the Agency.

4.1.3. All records required to be held by this permit shall be held on site and shall be available for inspection by the Agency at any reasonable time. Records shall be available for inspection on site on the next working day following a request by Agency.

### **4.2 Reporting**

4.2.1 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the risk assessments submitted with the application;
- (b) where the operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;
- (c) the annual production/treatment set out in schedule 5 table S5.2.
- (d) details of any contamination or decontamination of the site which has occurred;
- (e) the topographical surveys required by condition 3.6.3 other than those submitted as part of a CQA validation report;
- (f) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
- (g) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey.

- (h) a summary of the waste acceptance compliance testing undertaken in the period;

- 4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
  - (a) in respect of the parameters and emission points specified in schedule 5 Table S5.1;
  - (b) for the reporting periods specified in schedule 5 Table S5.1 and using the forms specified in schedule 5 Table S5.4 ; and
  - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.3 A summary report of the waste types and quantities accepted and removed from the site shall be made for each quarter. It shall be submitted to the Agency within one month of the end of the quarter and shall be in the format required by the Agency.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency

## **4.3 Notifications**

- 4.3.1 The Agency shall be notified without delay following the detection of:
  - (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
  - (b) the breach of a limit specified in the permit;
  - (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 6 to this permit within the time period specified in that schedule.
- 4.3.3. Prior written notification shall be given to the Agency of the following events and in the specified timescales:
  - (a) as soon as practicable in the event of the permanent cessation of any of the permitted activities;
  - (b) as soon as practicable in the event of the cessation of the landfill disposal activities, for a period likely to exceed 1 month; and
  - (c) in the event of the resumption of the landfill disposal activities after a cessation notified under (b) above.
  - (d) Prior to the excavation/ treatment of previously deposited wastes

- 4.3.4 Where the Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.5 The Agency shall be notified within 7 days of any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence.
- 4.3.6 The Agency shall be provided, within 14 days of the operator or any relevant person being convicted of a relevant offence, (unless such information has already been notified to the Agency), with details of the nature of the offence, the place and date of conviction, and the sentence imposed.
- 4.3.7 The Agency shall be notified within 14 days of the operator and/or any relevant person lodging an appeal against a conviction for any relevant offence and of the outcome when the appeal is decided.
- 4.3.8 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- (a) any change in the operator's trading name, registered name or registered office address;
  - (b) 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); and
  - (c) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

## **4.4 Interpretation**

- 4.4.1 In this permit the expressions listed in Schedule 7 shall have the meaning given in that schedule.

# Schedule 1 - Operations

**Table S1.1 Activities**

Activity listed in Schedule 1 of the PPC Regulations	Description of specified activity	Limits of specified activity
Section 5.2 Part A(1) (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 wastes, consisting of the types and quantities specified in conditions 2.8, as an integral part of landfilling.
<b>Directly Associated Activity</b>		
Water discharges to controlled waters.	Discharges of site drainage from the landfill.	From surface water management system to point of entry to controlled waters.

**Table S1.2 Operating techniques**

Description	Parts	Date Received
Application	The response to questions B2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 and 2.11 of the Application.  Excluding sections: 2.2.6, ESID section 2.2.2, Stability Risk Assessment section 1.2.3 - The use of PFA/E-clay mixture as an artificial geological barrier; Table HRA 19 – surface water compliance criteria; Table HRA 18 – proposed surface water monitoring measurements;	25/04/06
Schedule 4 response	All	07/12/06

**Table S1.3 Improvement programme requirements**

Reference	Requirement	Date
1	A detailed drawing shall be submitted to the Environment Agency for approval showing, in particular: the site layout, waste deposition and pre-settlement contours.	01/06/07
2	A noise management plan shall be submitted to the Agency, detailing the measures to be used to control emissions of noise and vibration and shall be accordance with Appendix 4 (noise management plan) of Horizontal Guidance Note H3 (Horizontal Guidance for Noise Part 2 - Noise Assessment and Control).	01/08/07
3	The Operator shall submit, in writing to the Environment Agency, a detailed monitoring plan for gas within the waste to include:  a) proposals to install in-situ gas monitoring wells; b) proposals for the design of these wells; c) schedules for the installation of these wells and the subsequent monitoring of gas levels; and d) actions that shall be required in the case of gas being detected.  The Operator shall implement the monitoring plan upon approval in writing from the Agency.	01/05/08

**Table S1.4 Pre-operational measures**

Reference	Pre-operational Measures
1	<p>The Operator shall submit to the Environment Agency for approval an appropriate monitoring programme in order to measure emissions of airborne dust from the installation. The programme should address the following:</p> <ul style="list-style-type: none"> <li>· parameters to monitor including a relevant limit (if appropriate)</li> <li>· monitoring techniques</li> <li>· monitoring strategy</li> <li>· monitoring frequencies</li> <li>· period of review</li> </ul> <p>The programme shall be implemented following the written approval of the Environment Agency.</p> <p>Appropriate guidance to use includes Technical Guidance Document (Monitoring) M17 'Monitoring of particulate matter in ambient air around waste facilities'</p>
2	<p>The Operator shall submit to the Environment Agency for approval, complete with justifications, a site specific dust management plan, detailing the abatement techniques and site management techniques for preventing / minimising dust generation on site. The report shall also propose a period of review, which shall take into account information from the data obtained during the agreed monitoring programme.</p> <p>Appropriate guidance to use includes Technical Guidance Document (Monitoring) M17 'Monitoring of particulate matter in ambient air around waste facilities'</p>
3	<p>The Operator shall undertake monitoring of the relevant parameters agreed in accordance with Pre-operational measure 1, for a period of no less than 3 months, in order to fully determine the existing background concentrations prior to the commencement of the permitted activity.</p>

**Table S1.5 Annual waste input limits**

Category	Limit Tonnes/ Year
Non-hazardous waste	500000

## Schedule 2 - Site plan



Plan Reference: UKP/ATB/1317/AP2

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## Schedule 3 - List of permitted wastes

Waste Material	European Waste Catalogue No	Notes/Description
10	WASTES FROM THERMAL PROCESSES	
10 01	wastes from power stations and other combustion plants (except 19)	
10 01 02	coal fly ash	Pulverised Fuel Ash/ Solid, non-hazardous, stable and non-reactive



## Schedule 4 – Emissions and monitoring

**Table S4.1 Point source emissions to water (other than sewer) – emission limits and monitoring requirements**

Emission point Ref. & Location	Parameter	Source	Limit (incl unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
Discharge point from settlement ponds to surface water course as located on drawing UKP/ATB/1323/A	Total Ammonia as N	Surface	0.6mg/l	Spot Sample	monthly	In accordance with Environment Agency Guidance LFTGN02 Monitoring Landfill Leachate, groundwater and surface water.
	Arsenic	Water	50ug/l			
	Boron		2mg/l			
	Cadmium		5ug/l			
	Chromium		50ug/l			
	Sulphate		400mg/l			
	Vanadium		60ug/l			
	pH		<9			

**Table S4.2 Trigger levels for emissions into groundwater and monitoring requirements**

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
E05/03, E05/04 as located on Drawing UKP/ATB/1255/B	Aluminium	50ug/l	Spot Sample	Quarterly	As per Agency Guidance "Monitoring of Landfill Leachate, Groundwater and Surface Water"
	Ammoniacal-N	1.6mg/l			
	Arsenic	10ug/l			
	Boron	2.8mg/l			
	Cadmium	0.4ug/l			
	Chromium	50ug/l			
	Molybdenum	50ug/l			
	Sulphate	400mg/l			
	Vanadium	20ug/l			

**Table S4.3 Surface water – other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
SW12, SW13	Aluminium	Quarterly	As per Agency Guidance	
As located on drawing UKP/ATB/1255/B	Ammoniacal-nitrogen		"Monitoring of Landfill Leachate, Groundwater and Surface Water"	
	Antimony			
	Arsenic			
	Boron			
	Cadmium			
	Calcium			
	Chloride			
	Chromium			
	Copper			
	Fluoride			
	Iron			
	Magnesium			
	Manganese			
	Molybdenum			
	Mercury			
	Nickel			
	Phosphate			
	Potassium			
	Sodium			
	Selenium			
	Sulphate			
	Vanadium			
	Zinc			
	Alkalinity			
	Electrical Conductivity			
	Total Organic Carbon			
	Total Organic Nitrogen			
	pH			

**Table S4.4 Groundwater – other monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
BH01, BH1B, BH2C, BH3, BH4, BH5,  EO5/01A, EO5/01B, EO5/02A, EO5/02B, EO5/03, EO5/04.  as located on Drawing UKP/ATB/1255/B	Aluminium	Quarterly	As per Agency Guidance "Monitoring of Landfill Leachate, Groundwater and Surface Water"	
	Ammoniacal-nitrogen			
	Antimony			
	Arsenic			
	Boron			
	Cadmium			
	Calcium			
	Chloride			
	Chromium			
	Copper			
	Fluoride			
	Iron			
	Magnesium			
	Manganese			
	Molybdenum			
	Mercury			
	Nickel			
	Phosphate			
	Potassium			
	Sodium			
	Selenium			
	Sulphate			
	Vanadium			
	Zinc			
	Alkalinity			
	Electrical Conductivity			
	Total Organic Carbon			
	Total Organic Nitrogen			
	PH			
	Groundwater level			
BH05, BH103, BH105, 99/01*, 99/02*, 99/03*, 99/04*, 99/05*, 99/06*.	Groundwater level	Quarterly	As per Agency Guidance "Monitoring of Landfill Leachate, Groundwater and Surface Water"	
as located on Drawing UKP/ATB/1255/B.				

\* only monitor groundwater level until 1<sup>st</sup> January 2008

## Schedule 5 - Reporting

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

**Table S5.1 Reporting of monitoring data**

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to water Parameters as required by condition 3.6.1	exact location is subject to detailed design documents	Every 6 months	04/05/07
Groundwater Parameters as required by condition 3.6.1	BH01, BH1B, BH2C, BH3, BH4, BH5, BH05, BH103, BH105  EO5/01A, EO5/01B, EO5/02A, EO5/02B, EO5/03, EO5/04.  99/01*, 99/02*, 99/03*, 99/04*, 99/05*, 99/06*.	Every 6 Months	04/05/07
Other surface water monitoring Parameters as required by condition 3.6.1	SW2, SW4, SW8b SW9, SW10, SW11, SW12, SW13	Every 6 months	04/05/07

**Table S5.2: Annual production/treatment**

Surface water and/ or groundwater: Disposed of off site;	Cubic metres/year

**Table S5.3 Performance Parameters**

Parameter	Frequency of assessment	Annual total	Unit
Energy used (including for leachate treatment)	Annually		MWh of electricity

**Table S5.4 Reporting Forms**

Media/parameter	Reporting Format	Date of Form
Controlled water	Form Water 1 or other reporting format to be agreed in writing with the Agency	
Groundwater	Form Groundwater 1 or other reporting format to be agreed in writing with the Agency	
Waste Return	Waste Return Form RATS2E	
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Agency	

## Schedule 6 - Notification

This page outlines the information that the operator must provide.

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

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

### Part A

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

#### **(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution**

<b>To be notified within 24 hours of detection</b>	
Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

#### **(b) Notification requirements for the breach of a limit**

<b>To be notified within 24 hours of detection unless otherwise specified below</b>	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

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

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

### Part B to be supplied as soon as practicable

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

Name*	
Post	
Signature	
Date	

\* authorised to sign on behalf of RWE Npower PLC

## Schedule 7 - Interpretation

*"Accident"* means an accident that may result in pollution.

*"Annually"* means once every Year.

*"Application"* means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 4 to the PPC Regulations

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

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

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

*"Carrier water"* means a liquid used as an aid to facilitate the transport of waste to the landfill, usually by pipeline, where the liquid is subsequently removed

*"Construction Proposals"* means written information, at a level of detail appropriate to the complexity and pollution risk, on the design, specifications of materials selected, stability assessment (where relevant) and the construction quality assurance (CQA) programme in relation to the New Cell or Landfill Infrastructure.

*"CQA Validation Report"* means the final "as built" construction and engineering details of the New Cell or of the Landfill Infrastructure. It must provide a comprehensive record of the construction and must include, where relevant:

- The results of all testing required by the CQA programme - this must include the records of any failed tests with a written explanation, details of the remedial action taken, referenced to the appropriate secondary testing;
- Plans showing the location of all tests;
- "As-built" plans and sections of the works;
- Copies of the site engineer's daily records;
- Records of any problems or non-compliances and the solution applied;
- Any other site specific information considered relevant to proving the integrity of the New Cell or Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the Construction Proposals.

*"Fugitive emission"* means an emission to air, water or land from the activities which is not controlled by an emission or background concentration limit.

*"Groundwater Regulations"* means the Groundwater Regulations SI 1998 No. 2746, and words and expressions used in this permit which are also used in the Regulations shall have the same meanings as in those Regulations.

*"Landfill Infrastructure"* means any specified element of the:

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

within the site.

*"Landfill Regulations"* means the Landfill (England and Wales) Regulations SI 2002 No. 1559, and words and expressions used in this permit which are also used in the Regulations shall have the same meanings as in those Regulations.

*"Land Protection Guidance"* means Agency guidance "H7 - Guidance on the protection of land under the PPC Regime: Application site report and site protection monitoring programme".

*"Leachate"* means water that has percolated through emplaced waste and in so doing has extracted suspended solids, soluble constituents of waste and soluble products of the waste degradation process.

*"Liquids"* means any liquid other than leachate within the engineered landfill containment system.

*"LFTGN 05"* means Environment Agency Guidance for monitoring enclosed landfill gas flares, September 2004.

*"LFTGN 08"* means Environment Agency Guidance for monitoring landfill gas engines, September 2004.

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

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

for the New Cell.

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

"notify without delay" and "notified without delay" means that a telephone call can be used, whereas all other reports and notifications must be supplied in writing, either electronically or on paper.

"PPC Regulations" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"Quarter" means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

"Relevant person" and "relevant conviction" shall have the meanings given to them in the Environmental Protection Act 1990

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

"Site Protection and Monitoring Programme" means a document which meets the requirements for Site Protection and Monitoring Programmes described in the Land Protection Guidance.

"Technically competent management" and "technical competence" shall have the meanings given to them in the Environmental Protection Act 1990.

"Waste code" means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

"Year" means calendar year ending 31 December.

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.

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

END OF PERMIT