

## Environment Agency Permitting decisions

We have decided to vary the permit for Brookhill Landfill Site and AD Waste Limited.

The permit number is BV7273.

The variation notice number is EA/EPR/BV7273IQ/V005.

The PAS reference number is DP3633GF.

The operator is AD Waste Limited.

The facility is located at Brookhill Way, Pinfold Industrial Estate, Buckley, Flintshire, CH37 3PL.

The decision was effective from 1<sup>st</sup> May 2009.

### Summary of the decision

We have decided to grant a permit variation to the operator. This variation application reflects the fact that the Operator wishes to reduce the waste input to the site due to reaching final contours and progressing to final capping and restoration. It also includes an additional source of leachate input to the leachate treatment plant from another site, which the operator proposes to develop subject to appropriate approvals.

Some monitoring requirements for in waste gas, groundwater, and particulate matter in ambient air have also been updated to reflect best practice. A trigger level for BH18A has been amended for landfill gas in external boreholes for environmentally protective purposes.

Two permit conditions have been varied to correct previous mistakes in permit issue as follows:

- Addition of listed activity for leachate treatment
- Addition of point source emission to sewer for treated leachate discharge

Where such permit conditions have been varied an explanation and full technical assessment is given as required in the main body of this document.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environment protection is provided.

A brief description of the installation is included in the introductory note of the original permit.

## **Purpose of this document**

This decision document:

- explains how the applicant's application has been determined;
- provides a record of the decision-making process;
- shows how all relevant factors have been taken into account; and
- justifies the varied conditions in the permit.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

## **Structure of this document**

Key issues with associated decisions are presented in the main text of this document. These include details of any changes to conditions or schedules of the permit together with explanations.

## **Key Issues of the decision**

### **Simple Standard Variation**

As per the application we concur that this is a simple standard variation due to the minor requirement for technical assessment. A number of the changes are purely administrative.

### **The Facility**

The Activities covered by Table S1.1 have been changed to include leachate treatment as a Schedule 1 activity rather than just a directly associated activity. This is viewed as an administrative correction to the original issue of the permit. The Operator had applied originally for the activity of leachate treatment in excess of 50 tonnes per day as a listed activity in 2003. At this time the way listed activities are recorded in a permit differed from the current style and it was less clear what was a listed activity and what wasn't. However, the subsequent variation should have picked this up and made it clear but it did not. The Operator has been paying for the listed activity reflected in the OPRA score since the Permit was granted.

Contact has been made to verify the original permitting position with the determination officer, with e-mail correspondence to that effect help in this variation determination file.

In terms of the original advert only the main activity of landfilling was advertised as this was normal practice at the time. As the Public Participation Directive came in following initial granting of the permit it is not considered necessary to advertise for this administrative change.

This change obviously increases the volume of leachate that can be treated at the facility. However, as assessments were carried out for the additional treatment of such volumes of leachate no issues have been identified. A H1 assessment of emissions to sewer was conducted by the Operator and received on the 28<sup>th</sup> September 2007. We were satisfied with this assessment, which was in response to Improvement Condition item 6. This assessment was conducted for the discharge of leachate to sewer at a rate of 164 m<sup>3</sup>/day. Since the original application and this variation application are for the maximum of 150m<sup>3</sup>/day this volume has been stated as a limiting factor in Table S1.1. This will ensure that the consequence of higher volumes whose impacts have not been assessed can not be discharged.

### **Operating Techniques**

Table S1.2 (Operating Techniques) has been varied to incorporate the techniques to be employed described in this variation application to ensure techniques for acceptance of leachate from the additional site are employed as they are considered acceptable.

### **Additional source of leachate for treatment**

The Operator has applied to allow for leachate from his other landfills to be treated in the leachate treatment plant. It is currently known that the Operator is currently seeking to develop another landfill site at Alltami subject to the relevant approvals. The procedures described for the testing and acceptance of this additional source of leachate at the installation are deemed acceptable and there are no additional risks.

However, due to some reservations about the pollution prevention measures and infrastructure at the leachate treatment plant and in particular relating to the delivery of leachate to the treatment system, which is likely to increase, it has been decided to impose the following improvement condition:

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| 7. | The operator shall carry out an assessment of the pollution prevention measures and secondary containment of the leachate treatment and storage system to include the delivery of leachate to the system from other sites. A written report comparing the current pollution prevention methods and infrastructure of the site to that required by best practice that identifies areas where improvements are required together with timescales for implementation shall be submitted to the Environment Agency for approval. | 30/10/09 |
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It has also been quite a while (2000) since the installation and design of the leachate treatment plant, as such it is considered appropriated for the Operator to review such pollution control measures to ensure best practice. Table S1.3 has been updated appropriately to reflect this.

### **Improvement Conditions General**

Where other improvement conditions have been met the improvement condition table S1.3 has been updated to reflect this.

We have also included the following additional improvement condition:

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| 8. | The operator must install adequate leachate monitoring wells in accordance with the requirements of Guidance for the Landfill Sector, Technical Requirements of the Landfill Directive and Integrated Pollution Prevention and Control (IPPC S5.02). On installation these must be monitored on a monthly basis as a minimum in accordance with Table S4.1 of the Permit. | 30/10/09 |
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At the application stage the Operator did have some a limited number of dedicated leachate monitoring wells remote to the extraction wells. However, with time none of these monitoring wells now exist and they have not been replaced. This means that leachate is being monitored at the extraction wells many of which have been retro drilled. This does not follow best practice guidance. The accuracy of leachate level readings from extraction wells is questionable and the actual taking of the readings causes interruptions to the extraction of leachate at the site with associated potential amenity impacts and impacts on gas management.

The Operator has already submitted plans for the installation of 6 dedicated leachate monitoring wells (1 per cell) and it is understood that he plans to install these over the 2009 summer/ autumn period during capping and restoration works. As such this improvement condition will ensure this is completed to programme to bring the site in line with best practice.

### **Annual Waste Input**

The Operator has applied to reduce the annual waste input from 200,000t/yr (190,000t/yr Non-hazardous and 10,000t/yr inert) to 50,000t/yr to reflect the fact that the site is nearing restoration and stopped accepting waste as an active landfill at the end of 2008.

The Operator wishes to retain the list of waste types even though the main source of waste entering the site will be leachate and soils for restoration purposes. In terms of the leachate 50,000t/yr equates to 137t/d leachate which ties in with the max of 150m<sup>3</sup>/d treatment. We have also increased the inert waste input to 20,000t/yr to allow for the restoration soils input, as it is understood that the operator wishes to import somewhere in the order of this volume this year due to the restoration works in 2009. Table S1.4 has been varied accordingly.

This change is deemed purely administrative as the environmental impact from importing less waste is deemed to be reduced. The associated OPRA score will be revised upon determination to reflect these decreased waste inputs.

### **External gas monitoring borehole 18 trigger level**

The trigger level for external gas borehole BH18 has been changed. This original borehole was lost and replaced with BH18A in close proximity. This has required a revision to the trigger levels. Based on monitoring of this borehole following installation the trigger levels have been set at a lower level so as to be environmentally protective. The Methane was 6.8% and is now 3.5% and the CO<sub>2</sub> was 21.2% and is now 10%. This is based on the monitoring data obtained since installation of this replacement borehole. The revised trigger level is considered environmentally protective as it will recognise any changes to gas levels which could signify migration. Table S4.5 has been varied accordingly.

### **In waste gas monitoring**

As requested by the Operator and in line with current best practice the requirements for in waste gas monitoring have been updated to substitute the routine monitoring of temperature for carbon monoxide and to include the

requirements to monitor differential pressure and flow/suction. Table S4.7 has been varied accordingly.

#### **Groundwater Monitoring Requirements**

The groundwater monitoring requirements in Table S4.9 have been updated to include the requirement to monitor 2 new boreholes GW7 and GW8 installed following an assessment of the provision of adequate groundwater monitoring boreholes required by IC1. As such, it has been made a requirement to monitor these additional boreholes too. A requirement to monitor the groundwater for list 1's annually has also been added as this is considered a general best practice monitoring requirement to ensure protection of the environment. Table S4.9 has been varied accordingly.

#### **Particulate matter**

Table S4.10 has been modified to change the reference period for dust monitoring from 24hr to a monthly average. This is deemed to be a better period to conduct the monitoring over as it is monitoring over a longer period rather than just one day in any quarter. Often the current 24hr period of monitoring for dust is below the limit of detection for this method. This new reference period is considered more environmentally protective. Table S4.10 has been varied accordingly.

#### **Emissions to Sewer**

An administrative change has been made to reflect the fact and acknowledge the discharge made from the treatment plant to the sewer. See varied Condition 3.1.1 and Table S4.11, which has been added.

#### **Hydrogeological Risk Assessment (HRA) and Groundwater Monitoring/Triggers**

We have received and reviewed revision 2 of the Operator's HRA (November 2008 as required by Condition 3.2.4). This HRA review wanted us to consider a change of groundwater trigger levels (relaxation) and a change to the leachate levels set in table S4.1 from 2 metres above the base of the landfill to mirror groundwater levels.

There are 2 memos from the Groundwater and Contaminated Land team contained in the permit determination file. These memos provide technical consideration of these two proposals to change the groundwater trigger levels and leachate trigger levels. Both proposals can not be accepted due to lack of evidence and supporting information to confirm that they are environmentally protective. As such groundwater and leachate triggers remain unchanged until the Operator can submit further information required in support of this proposal.