

# Environment Agency permitting decisions

## Variation

We have decided to grant the permit for Avonmouth Aggregate Production Facility operated by Carbon8 Aggregates Limited.

The permit number is EPR/HP3638WW.

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 environmental protection is provided.

## Description of the main features of the Installation

Carbon8 Aggregates Limited, the operator, has applied for a bespoke environmental permit for their site located in Avonmouth.

The purpose of the installation is to recycle thermal treatment residues using 'Accelerated Carbonation Technology' creating an aggregate, used to produce building blocks, with 'End of Waste' status.

The process plant will be housed within a newly constructed steel framed building, located on a newly constructed concrete pad that meets the standards set within CIRIA 736. There are no emissions to air or land from the process and no waste is generated by the process. The 'Accelerated Carbonation Technology' process consists of three stages:

1. Carbonation of the Air Pollution Control residues (or other thermal treatment residues) in a specialist mixer using waste carbon dioxide.
2. Blending of the carbonated material with fillers and binders (currently sand and cement)
3. Pelletisation of the mix in a carbon dioxide laden atmosphere.

The site will have an annual treatment capacity of 29,000 tonnes per annum and will therefore be regulated under the following activities:

- S5.3A(1)(a)(vi) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving one or more of the following activities; and
- S5.6A(1)(a) Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes.

There is a single discharge point to surface water relating to the sites surface water and roof runoff. Water is directed through a two stage weir silt trap and three stage oil and water interceptor before being captured for use in the site activities or discharge to the River Rhine.

## Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

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

## Structure of this document

- Key issues
- Annex 1 the decision checklist
- Annex 2 the consultation and web publicising responses

## Key issues of the decision

### **Scheduled Activities:**

The application initially applied for the acceptance of both hazardous and non-hazardous waste types for treatment and recovery within their 'Accelerated Carbonation Technology' process. Upon a review of their submission, which only comprised of a single scheduled activity for inclusion within the permit. A further five scheduled activities were identified in addition to a potential waste operation. Some activities were duplicated due to the operator having installed two separate process lines that were capable of working independently of one another and both would be above the threshold for regulation. The activities identified for regulation included:

- Treatment of non-hazardous waste (fly ash); S5.4A(1)(b)(iii)- potentially two activities due to production lines
- Treatment of hazardous waste (fly ash); S5.3A(1)vi - potentially two activities due to production lines
- Blending or mixing of wastes; S5.3 A(1)(a)(iii); Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving one or more of the following activities blending or mixing prior to submission to any of the other activities listed in this Section or Section 5.1
- Storage of hazardous waste (volume >50t) S5.6A(1)(a)

Following discussions with the applicant they revised their application to accept and process only solely hazardous waste. This reduced the operator's number of scheduled activities comprising:

- Treatment of hazardous waste (fly ash); S5.3A(1)vi - potentially two activities due to production lines
- Storage of hazardous waste (volume >50t) S5.6A(1)(a)

Within the application submitted it stated “...mix product with binders and fillers (sands / silts /cement) – either virgin or waste materials”. Following our request for clarification of this statement; as virgin materials and waste materials would require different controls and regulation, the operator revised their application again to solely utilize virgin materials meaning no waste operations were identified within their activities.

**Waste types:**

The application initially applied to include several hazardous and non-hazardous waste types for acceptance and use under the defined activities (as outlined above).

Following discussions with the applicant, a revised list of wastes was submitted in accord with the end of waste submission previously submitted to the Environment Agency. Only two codes have been included in the waste table S2.2 of the environmental permit, comprising 19 01 07\* and 19 01 13\* specifically relating to air pollution control residues from either incineration or pyrolysis of waste activities.

**Hazop Study**

A pre-operational measure has been set within the permit requiring the operator to submit the outcome and conclusions of the plant design and operational hazop studies being undertaken prior to commissioning the site. There is the potential for the operating techniques and environmental risk assessment to be updated following these studies.

## Annex 1: decision checklist

This document should be read in conjunction with the application, supporting information and permit.

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>Receipt of submission</b>		
Confidential information	A claim for commercial confidentiality was originally made by mistake and then withdrawn by the applicant.	✓
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential. The decision was taken in accordance with our guidance on commercial confidentiality.	✓
<b>Consultation</b>		
Scope of consultation	<p>The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.</p> <p>For this application we consulted the following bodies:</p> <ul style="list-style-type: none"> <li>• Local authority environmental protection department</li> <li>• Food Standards Agency</li> <li>• Health and Safety Executive</li> <li>• Public Health England and the relevant Director of Public Health</li> <li>• Local sewerage undertaker and local water undertaker</li> <li>• Fire Service</li> </ul>	✓
Responses to consultation and web publicising	<p>The web publicising and consultation responses (Annex 2) were taken into account in the decision.</p> <p>The decision was taken in accordance with our guidance.</p>	✓
<b>Operator</b>		
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.	✓
<b>The facility</b>		

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>European Directives</b>		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓
<b>The site</b>		
Extent of the site of the facility	<p>The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility including discharge points.</p> <p>A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.</p>	✓
Site condition report	<p>The operator has provided a description of the condition of the site.</p> <p>We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED–guidance and templates (H5).</p>	✓
Biodiversity, Heritage, Landscape and Nature Conservation	<p>The application is within the relevant distance criteria of a nature conservation and protected species and habitat .</p> <p>A full assessment of the application and its potential to affect the sites, species and habitat has been carried out as part of the permitting process. We consider that the application will not affect the sites, habitat or species identified due to there being no point source emissions from the site except for infrequent clean surface water run-off.</p> <p>We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p> <p>There are no emissions to air and the only emission from the site is a discharge from clean uncontaminated surface water run-off at times of peak rainfall.</p>	✓
<b>Environmental Risk Assessment and operating techniques</b>		
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment all emissions may be categorised as environmentally insignificant	
Operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The operator has made direct reference to 'How to comply with your Environmental Permit, and Sector Guidance Note S5.06.	✓
<b>The permit conditions</b>		
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template, which was developed in consultation with industry having regard to the relevant legislation.	✓
Raw materials	We have not specified limits and controls on the use of raw materials and fuels.	✓
Waste types	We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.	✓
Pre-operational conditions	Based on the information in the application, we consider that we need to impose pre-operational conditions. The pre-op has been set for the receipt of a written report following the sites operational hazop study. This directly links to the risk assessment for the site and plant.	✓
Incorporating the application	We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process.  These descriptions are specified in the Operating Techniques table in the permit.	✓
Emission limits	We have decided that emission limits should not be set in the permit.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Monitoring	We have decided that process monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.	✓
<b>Operator Competence</b>		
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓
Technical competence	Technical competency is required for activities permitted. The operator is a member of an agreed scheme.	✓
Relevant convictions	The National Enforcement Database has been checked to ensure that all relevant convictions have been declared.  No relevant convictions were found. The operator satisfies the criteria in RGN 5 on Operator Competence.	✓
Financial provision	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓

## Annex 2: Consultation and web publicising

Summary of responses to consultation and web publication and the way in which we have taken these into account in the determination process.

<i>Response received from</i>
Public Health England ( Charlotte Landeg-Cox) 05/08/2015
<i>Brief summary of issues raised</i>
Provided the installation complies with the Regulatory requirements and the regulator is satisfied that the techniques proposed by the applicant represent best available technique (BAT), there is unlikely to be any significant adverse impact upon public health.
<i>Summary of actions taken or show how this has been covered</i>
The operator has confirmed and stated that the site will be operated and managed in accord with Sector Guidance Note S5.06.

<i>Response received from</i>
South Gloucestershire Council, Environmental Health Officer (Dinah Woolley) 06/08/2015
<i>Brief summary of issues raised</i>
No comments provided.
<i>Summary of actions taken or show how this has been covered</i>
Follow up email sent to representative seeking confirmation of intention to make a representation but no comments or response were received within the consultation or determination timeframes.