

# Environment Agency permitting decisions

## Bespoke permit

We have decided to refuse the permit application for Avonmouth IBA Recycling Facility by Day Group Limited.

The application number is EPR/TP3138DP/A001 (“The Application”)

The applicant is Day Group Limited (“The Applicant”)

The facility that the Applicant applied for is called “The Installation” in this document.

The decision was effective from 12/04/17.

### Summary of the decision

We have decided to refuse the Application.

The reason for refusal is that based on the information that has been provided to us we do not consider that the proposed method of operation would use the best available techniques and we are not satisfied that the activities can be undertaken without resulting in an unacceptable risk of significant pollution of the environment due to dust and odour which will result in offence to human senses or impair/interfere with amenity and/or legitimate uses of the environment and be harmful to the quality of the environment. In addition the Applicant has not shown that pollution will be prevented in the event of flooding at the site.

We consider in reaching our decision we have taken into account all relevant considerations and legal requirements.

### Purpose of this document

This decision document:

- explains how the Application has been determined
- provides a record of the decision making process

### Structure of this document

Glossary of acronyms

Part A: Administrative issues

Part B: Process description

Part C: Reason for refusal

Part D: Issues still to be resolved

Part E: Other considerations

Annex 1: Consultation responses

Annex 2: Map showing location of the proposed Installation and surrounding area

## **Glossary of acronyms used in this document**

AQMA – Air Quality Management Area

BAT – Best Available Techniques

BREF - Reference Document on the Best Available Techniques for Waste Incineration

IBA – Incinerator Bottom Ash

IED – Industrial Emissions Directive

IBAA – Incinerator Bottom Ash Aggregate (IBA after treatment)

EPR - Environmental Permitting (England and Wales) Regulations 2016  
(2016 No. 1154)

EMS – Environmental Management System

SCR – Site Condition Report

SSSI – Site of Special Scientific Interest

SAC – Special Area of Conservation

SPA – Special Protection Area

USEPA – United States Environmental Protection Agency

## **Part A: Administrative issues**

### **1. Receipt of Application**

The Application was for the following listed activities in Part 2 of Schedule 1 of the EPR.

Section 5.4 Part A(1)(b)(iii)- the treatment of slags and ashes

The Application was duly made on 30/09/16. This means we considered it was in the correct form and contained sufficient information for us to begin our determination but not that it necessarily contained all the information we would need to complete that determination.

The Applicant made no claim for commercial confidentiality. We have not received any information in relation to the Application that appears to be confidential in relation to any party.

### **2. Consultation on the Application**

We carried out consultation on the Application in accordance with the EPR.

We advertised the Application by a notice placed on our website, which contained all the information required by the IED, including telling people where and when they could see a copy of the Application. We also placed an advertisement in the Bristol Evening Post on 18/10/16.

We made a copy of the Application documents available to view on our website where people could also submit comments on the application.

The Application and additional information (see section 3 below) were made available to view on our Public Register at Rivers House, Bridgwater. Anyone wishing to see these documents could do so and arrange for copies to be made.

Copies of the Application were also placed in Avonmouth Library and Avonmouth Community Centre on 18/10/16.

We consulted on the Application with following bodies, which includes those with whom we have "Working Together Agreements":

- Bristol City Council – planning department
- Bristol City Council – Environmental Health
- Public Health England
- Director of Public Health
- Health & Safety Executive
- Wessex Water
- Bristol Port Company
- Food Standards Agency

A summary of consultation comments and our response to the representations we received can be found in Annex 1. We have taken all relevant representations into consideration in reaching our decision.

### 3. Requests for Further Information

Although we were able to consider the Application duly made, we needed more information in order to determine it. We issued an information notice (schedule 5 notice) on 01/12/16. A copy of the information notice was placed on our public register.

A response to the notice was received on 20/12/16. We also received an updated site plan on 06/02/17. The responses were placed on our public register.

### 4. The legal framework

The Application has been refused. This decision has been made in accordance with the requirements set out in the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the proposed regulated facility contains activities that are:

- an *installation* as described by the Industrial Emissions Directive (IED);
- an *operation* covered by the Waste Framework Directive (WFD), and
- subject to aspects of other relevant legislation which also have to be addressed.

We consider some of the major legal requirements directly where relevant in the body of this document. Other requirements are considered in Part E.

## Part B: Process Description

The Applicant proposed that a maximum of 700 tonnes per day and 130,000 tonnes per year of IBA would be received. IBA would be delivered in vehicles and tipped into the storage building and stored in windrows up to 8 m high. A hydraulic excavator would be used to create the windrows. The IBA would be stored for up to 3 weeks to achieve the appropriate pH. A water based suppression system would be used to prevent emissions of dust. The IBA building would have an open front and a vented ridge line to prevent the build-up of flammable gas (hydrogen) that can be released as the IBA is stored.

It was proposed that the IBA would be transferred via a hopper and conveyor to a processing plant. The processing was proposed to consist of separation using magnets, eddy current separators and a picking area, crushing; and size separation using screens. Processing equipment would be external but enclosed with covered conveyors.

The processed material (IBAA) would be stored externally in open bays. IBAA fractions would be blended, to meet the required customer specification, using a loading shovel in open mixing bays in the north-west corner of the site. The bays would have a storage capacity of 10,000 tonnes.

The applicant proposed the following control measures:

- On receipt the IBA will be damp, typically ~18% moisture. The dust potential will increase as it dries when stored. IBA will be stored in a 15.5m high building to limit exposure to winds. The building will be fitted with a water suppression system including a cluster around the feed hopper; excavators will also be fitted with dust suppressors. The storage building will be open at one end and will have a vented ridge line.
- After storage the IBA will be transferred via covered conveyor to the processing area. The processing area will not be within the building but it will be enclosed.
- Product storage bays will be fitted with a suppression system but will not be covered.
- Suppression sprays will be located around the site.
- Visual dust monitoring will be carried out on site and at the site boundary. A weather station and wind sock will be used to monitor weather and to predict adverse weather.
- Vehicles will be cleaned to prevent dust being tracked off-site.
- Where necessary, road cleaning equipment will be deployed to prevent the tracking of mud and debris onto the highway. A wheel wash will also be used.

## Part C: Reason for Refusal

### 1. Summary

The reason for refusal is that based on the information that has been provided to us we do not consider that the proposed method of operation would use the best available techniques and we are not satisfied that the activities can be undertaken without resulting in an unacceptable risk of significant pollution of the environment due to dust and odour which will result in offence to human senses or impair/interfere with amenity and/or legitimate uses of the environment and be harmful to the quality of the environment. In addition the Applicant has not shown that pollution will be prevented in the event of flooding at the site.

The proposed activities on site have potential to produce significant dust and odour. The site is located close to a number of sensitive receptors, including housing at approximately 50 m from the Installation boundary. Given how close the receptors are to the boundary we are not satisfied that significant dust or odour impacts can be prevented at these receptors by the control methods proposed by the Applicant. Our view is that total enclosure with extraction and dust abatement would be required to prevent dust impacts, although this may not eliminate odour impacts depending on the type of abatement used. The plan in Annex 2 shows the location of the proposed installation outlined in red with the nearest housing located to the south east shown in blue.

### 2. How we reached our decision

#### 2.1 Dust Management Plan

The Application contained a document titled 'Environmental Management System & Operating Techniques' in which measures to control dust emissions were included. We issued a schedule 5 notice requesting further details on dust control on 01/12/16 to address the following concerns that we had with the original application:

- A lack of contingency plans for suppression system failure or in adverse weather
- The absence of any quantitative monitoring
- Lack of details of the suppression system such as frequency of use and how its use will be determined.
- Lack of information of abnormal operations that could cause dust and measures that would be taken to remedy.
- Lack of evidence to back up the claim that water suppression will prevent dust emissions.

We requested that the dust management plan be updated to reflect the additional information. We also provided a template dust management plan and stated that this was provided to assist in providing an amended dust management plan. The Applicant provided answers to the questions and updated the 'Environmental Management System & Operating Techniques' document. However a separate dust management plan based on the template was not provided.

The key measures that were proposed by the applicant were:

### Containment

The Applicant proposed that the IBA will be delivered and stored in a building up to a maximum of 10,000 tonnes in 8m high windrows. The building will be open at one end and will have an open ridge line. Processing will be outside but enclosed. Treated material will be stored in external bays with the material at least 0.5 m below the bay walls.

The product will be blended on site using a loading shovel directly onto a lorry for off-site delivery. This will take place in the mixing bays in the north western corner of the site. These bays will be used for additional storage of IBAA and comprise of an area of 1850 m<sup>2</sup> with a storage capacity of up to 10,000 tonnes.

We asked the applicant to supply a BAT assessment of their proposal against fully containing the storage and treatment in a building with negative pressure, fast acting closing doors and abatement of vented air. We stated that this needed to be considered to fully control dust, odour and noise given that receptors are 50 m away.

The applicant did not change their proposal but provided a justification as to why their proposal is BAT. [See section 2.6 for further details of the BAT assessment]

### Suppression system

The Applicant proposed the use of a water based suppression system to control dust emissions. The suppression system will be located in the yard areas, the IBA storage building and the IBAA storage and mixing bays. This system is designed to keep the material damp to minimise dust.

There will be two main pumps with one of them on standby should the other fail. The system will be subject to a maintenance programme with spares held on site. Dust from vehicles will be controlled by keeping the site wet and in addition vehicles will be cleaned and roads swept. Sprays will be located around the site with a cluster around the feed hopper and an additional spray fitted to the excavator bucket.

We asked for further details on when the system would be used, the frequency of use, the water content that the IBA will be kept at, actions that would be taken if it fails (including timescales) , evidence to show its effectiveness in general and in keeping the middle of windrows damp. The Applicant provided a response as follows:

- The system will be used whenever there is no rain and there is a risk of dust arising.
- In the event of breakdown of the suppression system activities will be limited in that area. If the whole system failed activities would cease until at least one part of the suppression system is fixed.

No operational evidence was provided to show that the system could be effective, the Applicant stated that keeping the material wet would control dust and that preventing piles drying is part of the normal operation of IBA sites.

The Applicant referenced two sources that refer to this method of control :USEPA AP-42 emission factor document and a document by the Institute of Air Quality management (IAQM).

The Applicant did not provide the level of detail that we would expect to see in a dust management plan. We would have expected to see timescales for taking remedial actions in the event that the system failed or was not working to its optimum level such as how quickly operations would be suspended, how quickly equipment would be repaired and what would be done with further deliveries if the system was down. We also expected, more details on the frequency of use of the suppression system and how the frequency will be determined. The evidence provided to show that suppression will be effective was also lacking in that no operational evidence was provided.

#### Abnormal operations

We requested that the Applicant provided details of any abnormal operations that could give rise to dust and actions that would be carried out to remedy along with timescales for carrying out those actions. Unlike a point source emission which can normally be stopped in the event of abatement failure, emissions from open stockpiles would be harder to control.

The Applicant provided a very brief response with two scenarios identified:

- Failure of dust suppressions
- Accidental spillage within the site

The only actions described by the Applicant to remedy the abnormal scenarios were that spares for the suppression system would be kept and that any spillage would be cleaned up. The Applicant did not provide details of how quickly these remedial actions would be taken. Although they indicated that how quickly action was required would be based on the weather conditions at the time with spillages in summer leading to issues quicker than during wet weather. We expected the Applicant to submit a full list of scenarios that could cause dust emissions with full details of actions that would be taken and how quickly those actions would be carried out. Some scenarios that might have been useful to consider are loss of water supply to the suppression system, periods of sustained dry or windy weather, failure of part of the plant leading to build up of storage quantities and periods of maintenance or cleaning, periods of low temperatures leading to blockages due to freezing.

#### Monitoring

The Applicant had proposed to carry out visual monitoring and only do further monitoring should issues be reported by the Environment Agency. We requested that the Applicant make a proposal for quantitative monitoring to include details of equipment, location of equipment, trigger levels, actions that would be taken if the trigger levels were exceeded and timescales for taking the actions.

The Applicant stated that monitoring would be carried out as already specified and subject to the permitting requirements. Quantitative monitoring would only be carried out if problems are reported by the Environment Agency and if considered necessary to investigate the problems. The Applicant provided details of the monitoring that they would carry out if required to do so. Two monitors were proposed with a trigger levels for PM10. Dust is likely to be made up of a range of particle sizes. PM10 refers to particles that have a diameter of < 10 µm. Due to their small size PM10 can cause health effects by being able to penetrate into the lungs. The proposed trigger levels were PM10 of 250 µg/m<sup>3</sup> as a 15 minute average or 50 µg/m<sup>3</sup> as a 1 hour mean having subtracted the background levels. The Applicant stated that if the PM10 threshold was significantly breached then the area of the site creating the issue would stop work immediately. Our view is that it is likely that a 1-hour mean 50 µg/m<sup>3</sup> control level would ensure that the particulate air quality environment standards (ESs) would not be exceeded. ESs are set out in our guidance 'Air emissions risk assessment for your environmental permit'.

We were not satisfied with this response. Receptors being so close means that full quantitative monitoring is required from the start of operations. If the site were to operate then monitoring would be required to establish whether or not the site would be causing dust issues. Our preference when setting dust monitoring is to have the monitoring and limits specified in a dust management plan. No details were given on what a significant breach of the threshold means or as to how the area of the site causing the problem would be identified. In addition even if the environment standard for PM10 was not exceeded there is still potential for total dust (all particle sizes) to cause a nuisance at nearby receptors. If we had issued a permit we could have specified monitoring conditions, appropriate standards and limits in the permit. However monitoring of itself does not control emissions to an acceptable level adequate primary control measures are required to achieve this. Monitoring simply confirms those control measures are being effective.

We did not give the Applicant another chance to provide a robust dust management plan, because as set out in section 2.5 our view is that a totally enclosed plant would be required to control dust impacts. If a totally enclosed plant had been proposed then a revised robust dust management plan would be required to manage dust emissions that reflected the revised plant.

## 2.2 Odour management

Our experience of regulating IBA sites is that odour can be an issue with moderate to strong odour detected on-site and in some cases off-site complaints received. The proposed Installation is very close to houses and so there would be very little dilution of any odour before reaching the houses. Any releases of odour would impact very quickly on houses nearby meaning that the Applicant would have very little time to implement any remedial measures before people would be adversely affected. We therefore asked the applicant to submit an Odour Management Plan (OMP).

The Applicant stated that odour is low risk with the material being inherently non-odorous. An Environment Agency decision document was quoted where we stated that material is not odorous. The Applicant stated that odour control units will be installed in the IBA storage building which could work with the suppression system using a neutralising spray.

The Applicant did not submit an OMP. We do not accept that there is no odour risk with IBA and that it is inherently non-odorous. Despite the statement that the Applicant refers to we are aware that IBA can give rise to a level of odour. Generally where IBA sites are remote from receptors an OMP would not be required but we know from sites that we regulate that the IBA can give off an odour (described as a wet concrete or dusty metallic smell) and that in some cases odour complaints have been received. The BREF acknowledges that odour can be an issue. It states the following:

- In some cases the entire process is performed inside a closed building. This assists with dust, odour, noise (from machinery and vehicles), and leachate control
- Odour and dust controls may be required.

The Applicant included the following photograph in their application of IBA piles. IBA appears to be giving off steam, showing that the IBA storage does have the potential for emissions that could be entrained with odour.



Given how close receptors are to the proposed installation it is likely that any odour from the storage or treatment of the IBA could cause an impact at those receptors. We do not accept that using the suppression system with a neutralising spray would be BAT. They do not prevent or minimise the odour itself. Neutralising sprays are not usually an effective method for odour control and in fact can in some cases make odour issues worse if there is an odour associated with the agent itself. In addition in this case there is the added issue that the suppression system will not be in continuous operation and so odour control would not be used all the time. We usually consider BAT

to be containing the odour at source such as providing further containment measures to prevent fugitive emissions.

The absence of an OMP means that we don't know how the Applicant will try and minimise odour, how they will identify odour is an issue and how quickly and effectively they would then seek to address the issue.

### 2.3 Flooding

The proposed Installation is located in a flood zone (zones 2 and 3.) We requested that the Applicant provide details of measures that would be used to prevent pollution in the event of a flood. The Applicant replied that the flood risk is very low due to flood protection measures that are in place in the area and that the Environment Agency had confirmed that it would not be at risk of flooding up to a 1 in 200 year event. The Applicant also stated that a previous risk assessment considered a 1 in 1000 year event where the sea defences had not been maintained. In this worst case scenario the flood depth was estimated to be 0.62 m at the site. In this situation the IBA would come into contact with water but it is not hazardous and so would not cause a significant impact. Also it would be significantly diluted due to the volumes of sea water.

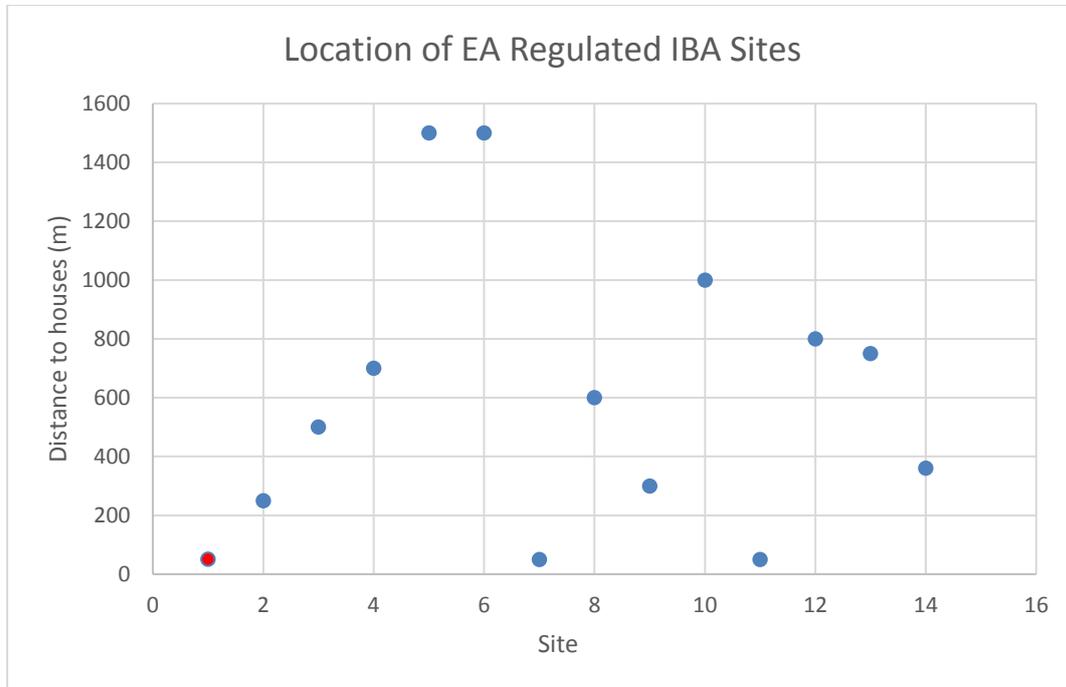
Our view is that the Applicant should have considered the risk over the next 60 years taking into account climate change. The site is at risk of flooding (around 0.25-0.5m depth of flooding) in a 1:200 year tidal event. Given this depth of flood water we are not satisfied that appropriate measures would be in place to prevent pollution in the event of a flood. Although the IBA is classed as non-hazardous waste we do not accept that IBA washing out to the dock which is in hydraulic continuity with the Severn Estuary would not post a significant risk to the environment. IBA contains levels of metals which are classed as hazardous pollutants when considering the impacts on watercourses. The Severn Estuary is also a protected area classed as a SSSI, SAC, SPA and Ramsar.

It is possible that the risk of pollution from flooding could be controlled but until the Applicant provides details of control measures we cannot be sure of this.

### 2.4 Evidence from other sites

We regulate IBA sites under the Environmental Permitting Regulations. We identified 14 permitted and operational sites across the country that store and/or treat large quantities of IBA. The sites are permitted to receive between 100,000 tonnes per year and 275,000 tonnes per year. We looked at the recent history of the sites to gather information on whether the sites have the potential to cause dust or odour emissions.

The sites are located at varying distances from housing with a range of 20-1500m. The site which is 20 m from housing only carries out storage of waste prior to loading onto ships, with the storage in a building and so is not considered further. The graph below shows the distance to houses of the other 13 sites. Site number 1 (shown with a red dot) is the proposed Installation.



The graph shows that the proposed Installation is very close to houses when compared to other sites. Two other sites are at a similar distance of ~ 50 m.

The control measures used on the 13 sites are similar to those proposed by the Applicant. All sites use water suppression systems to minimise dust emissions. The major difference is that these sites store the IBA outside after receipt, whereas the Applicant is proposing storage in a partially open building. After the initial storage the process is very similar, with the processing in a building and then open air storage of IBAA. The applicant proposed external enclosed processing and then outdoor IBAA storage.

Although there are some differences in the control measures proposed by the Applicant to those used at other sites, the evidence is still useful to establish the general risk. This is especially important because if the IBA process has the potential to cause dust or odour then there is likely to be an impact where receptors are very close to the site.

### Dust

38 % of the sites had received dust complaints in the last 3 years. The details of these are:

- One site had 60-80 complaints that related mainly to odour but also dust. This site has houses 50 m away. This appears to be a poorly run site (for example IBA was being stored outside the site boundary)

~150 m from houses, activities being carried out that were not in the permit) and may not be representative of the sector. However it does show the potential that the activity has to cause issues if not carefully controlled.

- One site had 2 complaints from residents that were 150 m away but the complaints were not substantiated.
- One site had 1 complaint from a neighbouring business
- One site had a substantiated complaint from a neighbouring businesses in 2016. The dust issue was caused by the failure to use the sprinkler system and wind transferring dust off-site.
- Another site had 3 complaints from neighbouring businesses (<50m from the IBA site boundary) that complained of large amounts of dust and difficulty breathing.

38 % of the sites were described by Environment Agency inspectors as being dusty on-site. This is important because if the site itself is dusty then it is likely to indicate that where receptors are very close dust impacts are likely to occur at the receptors.

The Application included an aerial photograph of the Brentford IBA site, the plan was included in their noise assessment to show the location of noise sources. Brentford IBA is another IBA site that Day Group operate.



The photograph appears to show a dusty site with IBA or IBAA tracked around the roads. This supports our view that this type of activity has the potential to cause dust, which could then impact if receptors are close to the site boundary. We are not aware of any complaints about this site, but houses are ~360 m away.

Although not many of the complaints were substantiated it is not always possible to substantiate complaints. This can be due to difficulty in getting staff to a site quick enough to witness the actual emission. Even though evidence of dust emissions such as deposits may be seen, if the actual emission is not witnessed then it can be difficult to prove where the dust came from.

### Odour

One site had reported odour complaints as follows:

- One site with houses 50 m away had reported 60 to 80 complaints relating to odour and/or dust. Although this appears to be a poorly run site (as discussed in the section above on dust) and may not be representative the sector, it does show that the IBA activity has the potential to cause odour issues if not carefully managed.

Environment Agency inspectors reported that the process itself was odorous, Odour was rated on a scale of 0 to 5, with 0 being no odour and 5 being a strong odour on-site. Inspectors for ten sites provided an odour rating and this is shown in the graph below.



The graph shows that odour can be detected on most of the sites and on three sites the odour is rated at 3 or above. As with dust this is important because it is likely to indicate that where receptors are very close odour impacts are likely to occur at those receptors. With receptors so close we could not set permit conditions to control odour. Our odour permit condition, that requires there is no odour pollution, is outcome based. This means that the way in which this is achieved is a matter for the Applicant to decide but we would need to see what measures they propose to have sufficient confidence the condition could be met. Whilst we may be able to impose specific requirements such as on storage time of potentially odorous waste it is not for us to effectively design their method of operation.

#### Other Sites operated by the Applicant

Of the sites that we have evidence on, the Applicant is the operator of two of them. One site reported that there had been no problems over the last few years. There have been dust and odour issues at the other site but this was associated with other activities on site and in the area and were not associated with IBA as the operator has not commissioned the IBA plant yet. They are located at 300 m and 360 m from houses so they are considerably further away than the proposed Installation.

## 2.5 Impact Assessment

The Applicant submitted a screening assessment for PM10. IBA contains levels of metals. The Applicant also assessed the impact of the metals within potential dust emissions.

Emissions were calculated based on an equation in the USEPA AP-42 document for dust release from aggregate handling and storage piles. The calculation includes emissions from loading onto storage piles, equipment traffic in storage areas, wind erosion of pile surfaces and ground around piles, loading of aggregate for shipment or return to the process. A 90% reduction was applied, which is the value used in AP-42 for watering.

Process contributions for PM10 and for metals deposition were calculated based on ground level dispersion factors. The Applicant considered that the impacts were at a level at which they would normally screen out from further assessment.

We checked the assessment and accept that the method used is likely to be conservative. Using the Applicant's method we also checked metal impacts against human health standards and found that they were at a level where we would normally screen them out from further assessment.

We still have concerns over dust impacts despite the conclusions of the impact assessment. Evidence from other sites is that this type of process can give rise to on-site dust and also cause impacts off-site. Our concerns are twofold:

- The impact assessment assumes that the control methods are used effectively at all times. Our experience is that in practice water based suppression systems are not always effective. They need to be carefully managed to be effective. There will inevitably be occasions where the system is not working at the optimum level and where dust impacts are likely to occur with receptors being so close to the proposed Installation, especially during dry or windy weather. This could be due to breakdown or a failure to control/manage the system to ensure it is providing full control at all times.
- The Applicant's assessment uses a method that provided an indicative impact. We have real data from operational plants that shows dust can cause an issue. The real data takes precedence over that from the indicative impact assessment methodology.
- In this case receptors are very close to the proposed Installation. Therefore we do not accept that dust levels can be controlled to the level where there would not cause an unacceptable impact.

## 2.6BAT Assessment

The BREF states *'In some cases the entire process is performed inside a closed building. This assists with dust, odour, noise (from machinery and vehicles), and leachate control. In other cases, the entire process is totally or partially performed outdoors. This generally allows more space to easily handle bottom ash, and can give*

*more air circulation for bottom ash to mature, and may avoid the release of explosive hydrogen in combination with aluminium during the ageing process.'*

From the BREF it is clear that total enclosure is a BAT option.

We are in the process of amending an internal guidance note 'Storing and treating incinerator bottom ash'. Although the guidance is still in draft form it sets out our thinking on what we consider to be BAT. Industry had a chance to see our thinking on BAT when they were consulted on the draft in July 2016. The draft guidance states 'For new operations, IBA storage and processing should be carried out within a building. The building should be under negative air pressure, the air extracted to appropriate abatement equipment (e.g. fabric filters, cyclones or wet scrubbers) to minimise emissions. Access doors should be shut when not in use and fast acting roller doors should be considered to minimise fugitive releases. Buildings with a vented ridge line are unlikely to be accepted.'

We asked the Applicant to supply a BAT assessment to compare their proposal against fully containing the storage and treatment in a building with negative pressure, fast acting closing doors and abatement of vented air. We stated that this needed to be considered to fully control dust, odour and noise given that receptors are 50 m away.

The Applicant stated the following in relation to the risk posed by the process:

- IBA treatment is an inherently non-odorous process
- The received IBA will have water content of 13-20%
- It generally has a large particle size with less than 10% being < 75 µm diameter

In relation to the above points, we do not accept the process is inherently non-odorous and no evidence has been provided to demonstrate that the IBA will be any different from that would be considered normal in terms of moisture and particle size.

The Applicant's BAT assessment considered the following options. The BREF gives options for enclosing in a building, carrying on outdoors or carrying out partially outdoors, so the Applicant's assessment considers appropriate options:

Option	IBA storage	Processing	IBAA storage and blending
1	Open	Enclosed (housing)	Open
2	Covered	Enclosed (housing)	Open
3	Fully enclosed	Enclosed (housing)	Open
4	Covered	Enclosed (housing)	Fully enclosed
5	Fully enclosed	Enclosed (housing)	Fully enclosed

Fully enclosed in the above table refers to an enclosed building with fast acting doors and negative pressure vented via dust abatement.

The Applicant concluded that their original design (option 2) is BAT. The reasons for this are summarised below:

- Full enclosure increases the accident risk due to movement of large machinery in a limited area and from hydrogen emissions
- Moderate risk of dust emissions due to IBA being in a building, although it was stated that full enclosure will give lowest risk
- Full enclosure will have a higher energy use due to requirement for forced ventilation
- Noise levels potentially slightly lower with full enclosure although additional fans for ventilation could cause higher levels
- Option 2 is cheaper than full enclosure – although costs were not quantified
- The risk assessment showed that dust impacts from option 2 will be insignificant so any additional measures are not justified

We do not accept that the Applicant's proposal is BAT in this case. The Applicant claimed that emissions screen out from further assessment and generally where this happens we accept what is proposed as BAT without further assessment. However screening is only a tool. Ultimately we need to be satisfied that the impacts from a proposal will be acceptable. In reaching this decision we take into account all available and relevant evidence. BAT is about minimising emissions. In this case the very close proximity of the receptors with the potential for dust and odour emissions means that in our view measures beyond those that we have previously required at other (and usually more remote) IBA sites, and beyond those proposed by the Applicant would be required to control emissions sufficiently to prevent pollution. Available techniques are defined in the IED as "those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into account costs and advantages, whether or not the techniques are used or produced in the member state in question as long as they are reasonably accessible to the operator". Techniques include both the technology used and the way in which the plant is designed and built. Our view is that total enclosure of the Installation would be an available technique and that the applicant has not demonstrated that it is not available. We do not accept that it would increase accident risk due to hydrogen if it was ventilated and abated. Therefore the Applicant has not demonstrated that their proposal is BAT in this very sensitive location.

The BREF is clear that enclosing the process in a building is a BAT option to control emissions including dust and odour. Therefore total enclosure is an available technique. Our view is that where an installation is proposed very close to houses, the BREF option of total enclosure is likely to be required to guarantee that emissions are fully controlled at all times. In some cases

where emissions could in theory be controlled but we have doubts about whether this is achievable in practice, we can issue a permit and then take action if issues occur. However in this case given the distance to receptors and the sensitivity of the area, we need to be confident from the outset that pollution would not occur.

If we were to permit the Installation as proposed and dust or odour issues occurred, totally enclosing the site would not be something that could be put in place quickly. It would require a new building to be erected and would be likely to require a planning application. It would also require a variation to the environmental permit. It would not help the applicant to be issued with a permit which could then very quickly be suspended or revoked.

## 2.7 Conclusion

Evidence from other sites show that dust and odour can be issues on-site and off-site.

The location of the proposed Installation is very sensitive. In this very sensitive location we do not accept that the Applicant's proposals can control dust or odour to a sufficient level to prevent significant pollution at nearby receptors. On the information currently available to us our view is that only a totally enclosed system with abated ventilation would be BAT and would be capable of controlling emissions to an acceptable level in this location.

A totally enclosed system would clearly reduce emissions compared to the current proposals. Whilst modelling can be a useful tool empirical data carries more weight. That data confirms operations of this nature give rise to dust and odour and that the proposed activities would be highly likely to give rise to complaints from those who would be impacted by them and who would consider the impact of those emissions to be unacceptable. Distance to receptors can reduce any impact but here the distance and hence any reduction in impact is minimal. The local authority has confirmed that there are concerns with dust in this location. Therefore it is important in accordance with BAT to ensure that any operations in this location are designed to prevent and where that is not practicable to reduce emissions and the impact on the environment as a whole. That can mean imposing higher standards than we have previously imposed elsewhere this is in accordance with our draft guidance and takes into account the specific location of this site.

Evidence confirms that these types of activities relying on similar techniques give rise to dust and odour. Given the proximity of receptors and taking into account prevailing conditions in this location we consider that there would be an unacceptable risk of those emissions causing significant pollution.

## **Part D: Issues still to be resolved**

The Application has been refused, however the following issues remain unresolved and would also need to be addressed before a permit could be granted for this site in the future. These are issues where we would require to see information provided prior to issue of a permit, rather than addressed through pre-operational conditions. As we have decided to refuse the Application it seemed unreasonable to put the Applicant to the expense of trying to resolve the issues at this time.

If not mentioned then we have accepted the Applicant's proposals.

### 1. Noise

The Applicant proposed the following to minimise noise impacts:

- No openings on the side of the IBA storage building that faces the nearest houses
- The SW and SE walls be will next to concrete push walls which will improve noise insulation
- The wall closest to the houses will have acoustic cladding
- A 6 m high acoustic barrier along the boundary with the closest houses
- A proposal to carry out noise monitoring within 3 months of commissioning and again after 1 year and take remedial action if required.

The Application contained a noise impact assessment. The assessment was carried out in accordance with BS 4142:2014 to compare the predicted plant rating noise levels with the existing (background) noise levels.

The report concluded that the predicted noise levels would be less than 5 dB above the background.

BS 4142:2014 includes the following to assess the significance of the impacts:

- Typically, the greater this difference, the greater the magnitude of the impact.
- A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

We audited the Applicant's noise assessment. We found that the method used by the Applicant is likely to be conservative and that adverse impact are unlikely

at sensitive receptors provided the facility is constructed to achieve the sound levels and noise remediation proposed in the assessment.

Due to the very close location of receptors the Installation still has the potential to cause noise impacts at nearby receptors if noise is not managed very carefully. The Applicant submitted a noise management plan in their Application. We requested that the Applicant amended their noise management plan to include:

- Measures to minimise vehicle noise
- Measures to minimise noise from any activities that could give rise to peak noise levels
- Details of abnormal operating scenarios that could give rise to noise issues along with actions that would be taken and timescales
- Actions that would be taken if complaints are received along with timescales

The Applicant provided a very brief response. They stated major crushing would not be required, that activities that could give rise to peak noise would be contained in the building, manual transfer points would be enclosed and discharge points within bays. Abnormal operating scenarios were not identified, the Applicant stated that it is not possible to state what could give rise to complaints until the plant is operating. The Applicant stated that once operating the site manager would assess what is normal and then carry out inspections to detect any abnormal noise. If noise issues at houses occurred the site manager would determine how long the abnormal scenario would take place and if it could not be remedied within 1 day would propose measures to remedy within 2 days.

If complaints are received the site manager would listen at a location near to the houses. If noise is detectable then noise monitoring would take place within 3 weeks subject to suitable weather. After the monitoring, if required, remedial action will be taken as agreed with the Environment Agency.

The noise management plan does not contain the level of detail that we would expect. Houses are very close to the proposed Installation and noise will need to be very well managed to prevent impacts. If we had issued a permit we would have required a robust and detailed noise management plan to be submitted before issue. The plan would need to identify all activities that could give rise to peak noise, such as crushing of oversize material with an excavator that is described in the Application. It would also need to include likely abnormal scenarios that could give rise to excess noise (such as faulty equipment or maintenance activities) along with details of what actions would be taken in the event of noise impacts occurring up to and including suspending any operations that are giving rise to noise issues. We do not accept that the Applicant cannot identify abnormal scenarios before the plant is operating.

We would also expect the plan to include details of immediate measures that would be taken to investigate and remedy noise impacts in the event that complaints are received up to and including suspending any operations that are giving rise to noise issues. The Applicant's proposal of monitoring within 3

weeks and the vague description of following actions is not acceptable. Although the noise management plan was not acceptable our view is that noise could be managed to an acceptable level in this location.

## 2. Emission to sewer

Surface water run-off will be reused in the ash suppression system. The Applicant proposed that it would be emitted to sewer in the event that there is excess water.

The Applicant submitted a screening impact assessment using H1. The assessment showed that detailed modelling was required but the Applicant failed to submit a modelling report. In the schedule 5 notice, we asked the Applicant to submit a modelling impact assessment. Before responding the Applicant asked us whether modelling was required for an emission to sewer. We confirmed that modelling was required and explained why. However the Applicant still failed to submit a modelling report and instead focussed on the fact that it would be covered by a discharge consent and that Wessex Water were prepared to take the discharge.

If we were to issue a permit we would require the Applicant to carry out detailed modelling of the discharge to sewer. The IBA will contain levels of metals that are classed as hazardous pollutants and therefore the run-off will contain levels of these too. The H1 screening assessment confirmed that the discharge would contain hazardous pollutants. Although there will be a discharge consent in place, the responsibility for checking whether the discharge to the sewage works will impact on the final watercourse still lies with the Environment Agency.

## 3. Site condition report (SCR)

Under Article 22(2) of the IED the Applicant is required to provide a report to establish the baseline of soil and groundwater contamination. At permit surrender an operator must show that the land and groundwater has been returned to the same state as at permit issue.

The Applicant provides an SCR which includes results of soil and groundwater testing. We checked the report and are of the view that it did not fully establish the baseline in the following areas:

- Soil and groundwater sampling was limited to the southern part of the site due to difficulties penetrating existing structures. We agree with the recommendation in the SCR to further investigate if other areas become exposed during development.
- The samples were from limited depths and predominantly from the made ground except one location where a borehole was successful but even then the water sampled was likely from perched water in the Tidal Flats Deposits rather than the underlying secondary aquifer.

Greater spatial coverage of groundwater samples and from greater depths into the Tidal Flats Deposits and Mercia Mudstone aquifer would allow better characterisation of existing contamination.

- We also recommend testing soil samples for poly chlorinated biphenyls to allow future discrimination between existing concentrations and any contamination resulting from the IBA.

Had we issued a permit we would have recommended to the Applicant to gather the further information. Without further baseline work, at permit surrender we will hold the Applicant responsible for any contamination that is found, where it is not possible to determine it was caused before the permit was issued.

#### 4. Enclosure of processing equipment

The Application described the processing steps would be external but would be enclosed. In the schedule 5 notice we requested that the Applicant submit further details of how this would be achieved, but this was not provided. We would require further details of how the processing steps would be enclosed before we could issue a permit.

#### 5. Water supply

The Applicant provided details of how much water would be required for the suppression system and stated that this was available based on the size of the mains and the flow and also from on-site rainwater storage. If we had issued a permit we would have required confirmation that this volume of water was actually available for use at the Installation and also actions that would be taken if water supply is not available from the mains or from rainwater storage, for example in drought conditions.

#### 6. Sub-surface structures

If we issued a permit we would require clarification of which structures such as drainage pipes, tanks or pits are subsurface, the contents and measures (such as inspections) that would be used to prevent any ground pollution from these structures.

## **Part E: Other Considerations**

### **1. Other legal requirements**

In this section we explain how we have addressed other relevant legal requirements, to the extent that we have not addressed them elsewhere in this document.

#### **1.1 Schedule 9 to the EPR 2016 – Waste Framework Directive**

As the Installation involves the treatment of waste, it is carrying out a *waste operation* for the purposes of the EPR 2016, and the requirements of Schedule 9 therefore apply. This means that we must exercise our functions so as to ensure implementation of certain articles of the WFD.

We must exercise our relevant functions for the purposes of ensuring that the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste and that any waste generated is treated in accordance with Article 4 of the Waste Framework Directive. (See also section 4.3.9)

The conditions of any permit would have ensured compliance with Article 4.

We must also exercise our relevant functions for the purposes of implementing Article 13 of the Waste Framework Directive; ensuring that the requirements in the second paragraph of Article 23(1) of the Waste Framework Directive are met; and ensuring compliance with Articles 18(2)(b), 18(2)(c), 23(3), 23(4) and 35(1) of the Waste Framework Directive.

Article 13 relates to the protection of human health and the environment. These objectives are addressed elsewhere in this document we consider that the decision to refuse is in accordance with Article 13.

Had we issued a permit it would have ensured the other requirements referred to above were met.

#### **1.2 Directive 2003/35/EC – The Public Participation Directive**

Regulation 60 of the EPR 2016 requires the Environment Agency to prepare and publish a statement of its policies for complying with its public participation duties. We have published our public participation statement.

This Application has been consulted upon in line with this statement, as well as with our guidance RGS6 on Sites of High Public Interest, which addresses specifically extended consultation arrangements for determinations where public interest is particularly high. This satisfies the requirements of the Public Participation Directive.

## 1.3 National primary legislation

### 1.3.1 Environment Act 1995

#### (i) Section 4 (Pursuit of Sustainable Development)

We are required to contribute towards achieving sustainable development, as considered appropriate by Ministers and set out in guidance issued to us. The Secretary of State for Environment, Food and Rural Affairs has issued *The Environment Agency's Objectives and Contribution to Sustainable Development: Statutory Guidance (December 2002)*. This document:

*“provides guidance to the Agency on such matters as the formulation of approaches that the Agency should take to its work, decisions about priorities for the Agency and the allocation of resources. It is not directly applicable to individual regulatory decisions of the Agency”.*

The Environment Agency considers that it has pursued the objectives set out in the Government's guidance, where relevant, and that our decision takes account of the Section 4 duty

#### (ii) Section 5 (Preventing or Minimising Effects of Pollution of the Environment)

We are satisfied that our pollution control powers have been exercised for the purpose of preventing or minimising, remedying or mitigating the effects of pollution.

#### (iii) Section 7 (General Environmental Duties)

This places a duty on us, when considering any proposal relating to our functions, to have regard amongst other things to any effect which the proposals would have on sites of archaeological, architectural, or historic interest; the economic and social well-being of local communities in rural areas; and to take into account any effect which the proposals would have on the beauty or amenity of any rural or urban area or on any such flora, fauna, features, buildings, sites or objects.

We have had regard to the various conservation objectives set out in Section 7.

#### (iv) Section 39 (Costs and Benefits)

We have a duty to take into account the likely costs and benefits of our decisions on the applications ('costs' being defined as including costs to the environment as well as any person). This duty, however, does not affect our

obligation to discharge any duties imposed upon us in other legislative provisions.

It has not been demonstrated that the costs of fully enclosing operations would be unreasonable or disproportionate in terms of the benefits it provides. In any event the refusal is justified in order to protect the environment.

(v) Section 108 Deregulation Act 2015 – Growth duty

We considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider our decision is reasonable and necessary to avoid a risk of an unacceptable level of pollution. The standards applied to the Application are consistent with those we would apply to other applications in similar settings in this sector and have been set to achieve the required legislative standards.

### 1.3.2 Wildlife and Countryside Act 1981

Under section 28G of the Wildlife and Countryside Act 1981 the Environment Agency has a duty to take reasonable steps to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which a site is of special scientific interest. Under section 28I the Environment Agency has a duty to consult Natural England in relation to any permit that is likely to damage SSSIs.

We assessed the Application and concluded that the Installation will not damage the special features of any SSSI.

## 1.4 National secondary legislation

### 1.4.1 Conservation of Habitats and Species Regulations 2010

We have assessed the Application in accordance with guidance agreed jointly with Natural England and concluded that there will be no likely significant effect on any European Site.

## **Annex 1: External Consultation, web publicising and newspaper advertising responses**

### **A) Advertising and Consultation on the Application**

The Application has been advertised and consulted upon in accordance with the Environment Agency's Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our draft decision is summarised in this Annex. Copies the consultation responses have been placed on the Environment Agency public register.

#### **1) Consultation Responses from Statutory and Non-Statutory Bodies**

<b>Response Received from Public Health England</b>	
<b>Brief summary of issues raised:</b>	<b>Summary of action taken / how this has been covered</b>
Suggest that prior to the installation operating the Regulator might want to consider that the operator undertakes air quality monitoring in order to achieve a baseline on which to compare any complaints monitoring against.	The Application has been refused. If we had issued a permit it would have required the operator to carry out dust monitoring at several points on the site boundary.
Based solely on the information contained in the application provided, PHE has no significant concerns regarding risk to health of the local population from this proposed activity, providing that the operator takes all appropriate measures to prevent or control pollution, in accordance with the relevant sector technical guidance or industry best practice.	No action required

<b>Response Received from Bristol City Council</b>	
<b>Brief summary of issues raised:</b>	<b>Summary of action taken / how this has been covered</b>
The site is subject to a Certificate of Lawfulness. The council are investigating whether current development is compliant with this.	Noted but planning enforcement is a matter for the relevant local planning authority.
Consideration of ability to ensure that the risk of pollution from the activity will be prevented or minimised and demonstrate they are applying best available techniques and appropriate measures when doing so is critical and needs very careful examination.	We have considered whether the proposals are best available techniques. See part c section 2.6 of this document for further details
Planning permission for the development does not exist and there are no conditions	

that restrict the use under planning legislation. Therefore there is a very serious risk of inadequate regulatory control should the activity not be suitably restricted with either refusal of this permit application or very stringent conditions which protect the amenity of local residents and are clearly able to be enforced.	<p>We have refused the Application. The reasons for refusal are set out in part C of this document.</p> <p>Had we granted a permit we would only have done so if we were satisfied with the environmental and health impacts.</p>
There is widespread public concern regarding nuisance issues generally, including that from activities that have taken place at the Port. Previous activities at the site has been a source of justified complaints in the past. It is important to do all that is possible to protect residents from further detriment. This history and sensitivity of the site gives rise to significant concern regarding the ability to operate such a facility at this site.	<p>We are aware of the local concern over dust in the past and of current concerns and other nuisance issues.</p> <p>We have refused the Application due to the risk of additional impacts on nearby houses.</p>
Several concerns were raised about the applicant's noise assessment.	We audited the Applicants noise assessment. We were in agreement with the conclusions of the report and found that the method used was likely to be conservative. We still have some concerns over noise management and these concerns are set out in part D, section 1 of this document.
Requested that dust monitoring be carried out including establishing the baseline levels.	The Application has been refused. If we had issued a permit it would have required the operator to carry out dust monitoring at several points on the site boundary. This would have included monitors on at least each boundary to enable upwind and downwind levels to be established.
Minimal odour controls were proposed.	Odour is considered in detail in part C section 2.2 of this document
The Council raised concerns about the adequacy of the site condition report and about land contamination	<p>The purpose of the site condition report is to establish the baseline contamination of the site.</p> <p>We had some concerns over whether the baseline had been established. Further details are in part D section 3 of this document.</p>
There are residential receptors within 100m of the boundary of the site.	We have considered the location of receptors in making our decision.
There is a growing issue of community dissent which although does not have a physical health impact is likely to add to the emotional wellbeing burden of ill health in the Avonmouth area.	Strength of feeling is not in itself a factor in making our decision. We have however taken the public's views where relevant into account in making our decision as set out in Annex 1 of this document.
The Council has very serious concerns over the impact of the proposed activities in terms of noise, dust, odour, land contamination and public health. A rigorous assessment of the impacts of the proposed activities on local residents is required.	We have undertaken a rigorous assessment of these issues.

Additional response Received from <b>Bristol City Council</b> relating to the schedule 5 notice response	
<b>Brief summary of issues raised:</b>	<b>Summary of action taken / how this has been covered</b>
The council reiterated their concerns over noise, dust and the site condition report that were set out in their initial response.	These issues are covered in the table above
Stated that drains, trenches and conduits should be constructed to prevent any pollution risk.	Our views on subsurface structures are set out in part D section 6 of this decision document.

## 2) Consultation Responses from Members of the Public and Community Organisations

The consultation responses received were wide ranging and a number of the issues raised were outside the Environment Agency's remit in reaching its permitting decisions. Specifically questions were raised which fall within the jurisdiction of the planning system, both on the development of planning policy and the grant of planning permission.

Guidance on the interaction between planning and pollution control is given in the National Planning Policy Framework. It says that the planning and pollution control systems are separate but complementary. We are only able to take into account those issues, which fall within the scope of the Environmental Permitting Regulations.

### a) Representations from Local MP, Assembly Member (AM), Councillors and Parish / Town / Community Councils

Representations were received from the local MP, the Mayor of Bristol, a local councillor and Pill & Easton-in-Gordano Parish Council who raised the following issues.

<b>Brief summary of issues raised:</b>	<b>Summary of action taken / how this has been covered</b>
<b>Comments about the location of the Installation</b>	
The site is <100 m from residential properties. Similar facilities elsewhere in the country are located further away from residential properties.	Location is primarily a land use planning issue. We have a legal duty to determine any application made to us for an environmental permit. Our role is to determine whether appropriate measures are used to minimise emissions and whether any impacts on the environment and health are acceptable. We

	have considered the location of receptors in making our decision.
Concern about burning ash affecting the village of Pill & Easton-in-Gordano from a northerly wind.	The proposed Installation does not burn waste. The IBA that was proposed to be received is residue from waste that had already been burned. The village is ~ 2km away from the proposed Installation and had a permit been issued, at this distance, it would not be affected by dust from the Installation.
<b>Comments about emissions, health and environment impact</b>	
Day Group has failed to demonstrate how the risk of pollution will be prevented or minimised.	The Applicant described control measures in the Application. Our decision regarding these measures is set out in part C section 2.2 of this document.
Concern was expressed over noise impacts from plant operation of vehicle movements. Concern over 24 hour 7 days a week operation. Stated that the council would impose stricter controls	<p>The Applicant submitted a noise assessment with the Applicant. We audited the assessment and were satisfied that the Installation would be unlikely to cause a significant impact. However we still had some concerns over noise management which is discussed further in part D section 1 of this document.</p> <p>We do not decide on the operational hours of sites. However when we check impacts we ensure that we have considered the impacts over the full range of operating hours.</p> <p>If we had issued a permit the Environment Agency would be responsible for regulating noise impacts at the site and as such we would have ensured the permit contained conditions to control noise impacts.</p>
Concern over dust impacts with dust landing on residential properties. The plant will make existing dust problems worse. Treated ash will be stored in open bays.	Our reason for refusal include concerns over dust impacts. This is discussed in detail in part C of this document
The proposed dust monitoring is inadequate.	We were not satisfied the Applicant's proposal for monitoring. If we had issued a permit we would have included a requirement for dust monitoring at various points around the site boundary. See part C section 2.1 of this document for further details.
<b>Comments about pollution in the area</b>	
There are already too many waste plants in the area	We do not decide on the location of plants.
<b>Comments about planning permission</b>	
The certificate of lawfulness could mean a lack of control. The Environment Agency should refuse the application until planning has been sought.	We cannot refuse the Environmental Permit application because the site does not have planning permission.
<b>Comments about transport</b>	

Concern over additional traffic on already busy roads.	Traffic is a relevant consideration for the planning regime and outside the remit of the Environment Agency.
Vehicle movements to and from the facility will impact on air quality.	Air quality due to traffic emissions is a matter for the planning authority. It is only a consideration for the Environment Agency in how the emissions could affect prevailing background pollution levels. Small increases in traffic flows to and from the Installation are not likely to have a significant effect on current background levels.
<b>Other comments</b>	
The Applicant should have approached Bristol City Council for information on land contamination. The Council would have shared knowledge of the area.	Who the Applicant takes advice from is a matter for the Applicant. We have assessed the site condition report and details of this are in part D section 3 of this document
Requested that the Environment Agency work with the council to keep residents updated.	We issued several briefing notes during the determination to keep the public updated. We consulted with Bristol City Council on the Application and have considered comments that they submitted.

b) Representations from Community and Other Organisations

Representations were received from UK Without Incineration (UKWIN), Avonmouth Community Action Group, Avonmouth Planning and Industrial Liaison Group, Avonmouth Planning Group and Totterdown & Knowle Traders a number of these issues are the same as those raised by the Local MP / Councillors/ Town Council.

<b>Brief summary of issues raised:</b>	<b>Summary of action taken / how this has been covered</b>
<b>Comments about the location of the Installation</b>	
Concern that the site is too close to houses.	Location is primarily a land use planning issue. We have a legal duty to determine any application made to us for an environmental permit. Our role is to determine whether appropriate measures are used to minimise emissions and whether any impacts on the environment and health are acceptable. We have considered the location of receptors in making our decision.
Environment Agency guidance says the site cannot be located within 500 m of a SSSI or 250 m from sensitive receptors.	The distances mentioned in this response are applicable for a standard rules permit SR2012 No.13. Standard rules permit for

	<p>facilities that are deemed to be the lowest risk and can be assessed based on a generic risk assessment provided these distance criteria are met. A site that is closer than these distances is not eligible for a standard rules permit. However this does not mean that it cannot be permitted, but that it needs a site specific risk assessment and a site specific permit known as a bespoke permit.</p>
<p>Comments about emissions, health and environment impact</p>	
<p>The application does not include a health impact assessment on the houses next to the site or further away. The ash will contain heavy metals. The area already has residual contamination from a zinc smelter and other sites. Other development will lead to cumulative effects.</p>	<p>The Applicant submitted a quantitative health risk assessment in response to our schedule 5 notice. The risk assessment is discussed in part C section 2.5 of this document. We are satisfied that the health risk assessment considered the appropriate health risks. Metal impacts were at the level that would mean cumulative effects would be unlikely to occur.</p>
<p>There is a SSSI 500m away and the dock is 50m away. The claim that there is no pathway to the SSSI was challenged. Dust will migrate and leachate could get into the dock (during stormy conditions) and then to the SSSI.</p>	<p>The River Severn SSSI is ~470 m away at its nearest point. The storage, both internally and externally will be on impermeable concrete with sealed drainage. There is potential for wind blown dust but such dust is unlikely to cause a significant impact on an ecological site at this distance. We are satisfied that the Installation would not have a significant impact on any ecological site and consultation with Natural England was not required.</p> <p>We do have concerns over the risk of pollution during flooding. In certain flood conditions ash has the potential to wash into the nearby dock which is in hydraulic continuity with the SSSI. This is discussed in part C section 2.3 of this document.</p>
<p>The dust risk assessment relies on evidence from the 2014 study by the Environment Agency and Bristol City Council. The study is flawed and designed to mislead. It looked at PM10 and PM2.5 but not the composition of the dust.</p>	<p>We do not accept that the study was flawed. The 2014 study did consider the composition of the dust.</p>
<p>Concern that unsuitable weather data was used in the risk assessment.</p>	<p>The concerns relate to the Applicant's initial qualitative assessment which used weather data from Bristol airport. We were not satisfied with this assessment so we requested a quantitative health risk assessment which was submitted as part of the schedule 5 response, this did not use weather data but was instead based on conservative emission factors. This is discussed further in part C section 2.5 of this document.</p>
<p>The building has a vented roof, but released gases are heavier than air and so will not reach the vent.</p>	<p>The main gas released from the process is hydrogen. Hydrogen is lighter than air and so</p>

	will rise. Therefore a vented roof line would achieve adequate ventilation.
Concern was raised that poisonous, noxious gases will be emitted from the open ended building and impact on amenity.	We don't agree that the process would produce toxic gases. However we do have concerns over odour as set out in part C section 2.2 of this document.
Concerns that background noise measurements are not representative. Measurements should have been taken at King Street where levels could be lower.  Should not allow a 5dB increase when noise already exceeds WHO levels.	We audited the noise model which included checking that background data. We concluded that adverse impacts are unlikely at sensitive receptor provided the facility is constructed to achieve the sound levels and noise remediation proposed in the assessment.  We still have some concerns over noise management and this is discussed in part D section 1 of this document.
Concern over noise from off-site transport	Noise from on-site vehicle movements were considered in the applicant's noise assessment. However any off-site traffic movements do not form part of the Environmental Permit decision making process.
Concerns expressed over odour control	Impacts from odour form part of our reasons for refusal. Further details are in part C section 2.1 of this document.
Dust can be seen in a promotional photograph of a Day Group site.	Evidence from other IBA sites that we regulate is that they have the potential to be dusty. This is discussed further in part C section 2.4 of this document.
Concern that the noise cladding could become damaged.	If a permit had been issued an environmental management system would have been in place, this would have included an inspection and maintenance regime.
<b>Comments about proposed control measures</b>	
Unacceptable that the environmental management and operating techniques document states that any issues that could cause a risk of pollution will be addressed within 5 working days.	Had we issued a permit we would have required a robust dust management plan. This plan would have set out actions to resolve problems and timescales to carry out those actions.
Assurance is needed that the site can operate to strict environmental conditions.	We had concerns as to whether the site could be controlled to prevent pollution. This is discussed further in part C of this document.
The Avonmouth planning group voted against the proposal.	We cannot take this vote in to account in making our decision. However the way we have considered public comments is set out in Annex 1 of this document.
<b>Comments about existing pollution in the area</b>	
Concerns were raised as to why Bristol City Council have not declared an air quality management area (AQMA).	Decisions on whether the declare AQMAs are made by the local authority. This is not something that we can address through the Environmental Permitting process.

Cars already have metallic dust deposited on them. If the proposed site does cause dust issues it will be difficult to prove where it has come from. This has been an issue in the past with failed prosecutions in this area.	The application has been refused. Had we issued a permit it would have required the operator to carry out dust monitoring at several points on the site boundary. Part C section 2.1 has more details.
<b>Comments about planning permission</b>	
Concerns were raised about the planning status of the site.	Grant or refusal of a Planning Permission is a matter for the relevant local planning authority. We cannot refuse the Environmental Permit application because the site does not have planning permission.
Concern that the consultation period is extended until planning permission discussions are completed.	We consider that we have provided sufficient time within which people can comment on the permit application.
<b>Comments on ash composition and testing</b>	
Concern that the site will receive raw, untreated and untested IBA.	The IBA that is received will have been subject to testing at the site at which it was produced.
The applicant has included a copy of the 2010 ESA ash sampling protocol, however the latest version is 2016. The proposed storage arrangements do not meet the requirements of the latest protocol.	In the schedule 5 response, the Applicant confirmed that they would follow the 2016 protocol.
Concern that no information is provided on the toxicity, hazard or the chemistry of the bottom ash.	Had a permit been issued both the incinerator operator and the operator of the ash treatment site would have been required to test for hazard status in line with the ESA 2016 protocol.
IBA should be classed as hazardous. Literature references to support this were provided.  The application states that hazardous waste will not be accepted.	Testing to the ESA protocol would have been carried out determined the hazard status. The hazard status would then have been assigned based on the testing results.  The Applicant confirmed that procedures would be in place to quarantine any waste that tested as hazardous.
The use of an annual waste transfer note is unacceptable because the IBA will change in composition and both domestic and industrial bottom ash will be received. The protocol relaxes with time to the point where there are effectively no checks. The ash should be treated as hazardous until proved otherwise. One failed sample should trigger emergency steps.	We are satisfied with the testing requirements set out in the 2016 ESA protocol.
Concerns were raised about the robustness of the protocol due to it including disclaimer.	The protocol is written by the Environmental Services Association (ESA). It is then up to individual operators as to whether they use the protocol. This disclaimer is for the ESA

	and does not absolve the operator from any responsibility should sampling not be carried out correctly. We are satisfied that the protocol is appropriate.
DEFRA guidance (Incineration of Municipal Solid Waste, February 2013, page 16) shows that the ash will contain between 2% and 6% hazardous material.	The table on page 16 of this guidance shows the outputs from the incineration process. The table lists APC or air pollution control residues that are hazardous and produced in the amount of between 2% and 6% of the waste that has been burned. APC residues are different to bottom ash which is shown in the table as being non-hazardous.
Concerns were raised as to whether we would regulate the installation effectively.	We have refused the Application. Had we issued a permit we would have regulated the Installation to ensure the operator complied with the permit.
<p>A document was submitted that had been written by the Buckfastleigh Community Forum. The document had been written in 2012 and originally submitted to the Environment Agency during the consultation for an incinerator at Devonport, Plymouth. Some of the points in the document are only relevant to operation of an incineration plant, but many were about bottom ash. The key issues from the document concerning bottom ash are:</p> <ul style="list-style-type: none"> <li>• Concerns over the testing procedure for bottom ash. Concern that the ash should be classed as hazardous waste.</li> <li>• Planning conditions and other government initiatives encourage the recovery of IBA as an aggregate</li> <li>• Concern over pollution or accidents from subsequent use of the treated ash</li> </ul>	<p>The application states that the treated bottom ash will be subject to testing in line with the 2016 ESA protocol. We are satisfied that this testing will be sufficient to determine whether the material is hazardous. The use of the ash after it has left the Installation is outside the scope of this permit determination</p> <p>Any government or planning initiatives on recovery of waste are outside the scope of this permit determination.</p>
<b>Comments about transport</b>	
The rail network is inadequate and could be dangerous to transport the required amount of material.	Transport infrastructure for the site does not form part of the Environmental Permit decision making process.
<b>Comments about the consultation</b>	
The consultation period is too short for a complex application document and should be extended.	<p>We consulted on the application for a period of twenty working days. The application was available to view on our Citizen space website and our public register. It was also available in the Avonmouth library and community centre. The public were given the opportunity to comment via the website, via e-mail or post.</p> <p>Our view is that we have given the public plenty of opportunity to view the application</p>

	and to comment on it. Part A section 2 of this document has more details
Children have the right to be consulted over matters that affect them under the Convention of Rights of the Child. The Environment Agency has no procedures for doing this even though children are particularly vulnerable to incinerator, diesel lorry pollution and noise.	We are satisfied that we took appropriate steps to inform the local community about the application. Part A section 2 of this document has more details.
Dissatisfaction was expressed about Day Group's public consultation event.	This was an event organised and run by Day Group Limited. The way they ran the event is a matter for them and is not something that the Environment Agency has control over.
<b>Management of the site</b>	
The WAMITAB certificate provided in the application was out of date before the application was submitted.	The correct WAMITAB certificate was submitted as part of the schedule 5 notice response.
The environmental management system covers investigations of incidents and shutdowns but it is lacking in detail on measurable criteria to which accountability and liability can be attached.	Liability and accountability for complying with an environmental permit lies with the operator. In this case Day Group Limited would have been the operator. If we had issued the permit an EMS would have been in place that meets the criteria set out in our guidance. This would have been audited by us to ensure that it was fit for purpose.
The application mentions the use of a site diary. No examples are given. It is unacceptable that this information would only be available to Environment Agency officers.	The site diary would have formed part of the EMS. There is no obligation for the operator to make such internal recording publically available. Any information sent to use as required by the permit would have been available to view on our public register.
The emergency plan has not considered a fire affecting a conveyor that runs next to the site. The conveyor contains explosive dusts.	This was considered in the schedule 5 notice response. We are satisfied that there would not have been a significant accident risk.
As land owner Day Group should have taken more responsibility for problems caused by previous operators on the land. This indicates that they will not now take the necessary measures to control the ash operation.	We cannot comment on any previous legal agreement between the landowner and previous operators. However if we had issued a permit Day Group Limited would have been the operator of this installation and would have been accountable for any permit breaches.  We have refused the application due to concern over impacts at nearby houses. Part C of this document contains further details.
<b>Concerns over flooding</b>	
The risk of ash contaminated waters causing pollution via storm overflows during flooding is not covered in the application. Flooding from rivers, the estuary, peak rainfall and groundwater need to be considered. Comparisons to major oil spills were made	We have concerns over the risk of pollution in the event of a flood. This is covered in part C section 2.3 of this decision document.

<p>and the question of who would pay to clear up was asked.</p>	
<p><b>Other comments</b></p>	
<p>The non-technical summary is inadequate to meet the EIA directive and regulations. It fails to summarise key issues for the public.</p>	<p>The non-technical summary gives a very brief overview of what the application is for. Further details are contained in the main additional application documents. We are satisfied we have the information we need to determine the Application. The EIA is implemented domestically through the planning regime.</p>
<p>The land could be contaminated with asbestos and should be assessed as soon as possible. The site condition report recommends that a site specific risk assessment is required and asbestos specialists should be appointed prior to work on site.</p>	<p>The purpose of the site condition report under environmental permitting is to establish a baseline contaminant level for the soil and groundwater. At permit surrender an operator then has to show that they have not polluted the soil and groundwater by comparing it to the baseline. The recommendation in the site report refers to the risks from asbestos during construction which does not form part of the environmental permitting process.</p>
<p>The site condition report exposure model is based on an adult worker receptor. However emissions in the past have affected children.</p>	<p>The Applicant's site condition report provided baseline contamination information and also provided a risk assessment for land use based on any land contamination. The purpose of the site condition report under environmental permitting is only to establish a baseline contaminant level for the soil and groundwater. At permit surrender an operator then has to show that they have not polluted the soil and groundwater by comparing it to the baseline.</p>
<p>The Environment Agency officer will be guilty of the crime of malfeasance in public office if they permit this development knowing that the site conditions will mean pollution of critical receptors.</p>	<p>We have determined the application on its merits. The decision has been made by the Environment Agency and not by an individual officer. The condition of the land was not one of the reasons for refusing this permit as it will not be a cause of pollution in respect of the activities applied for.</p>
<p>Concern was expressed that the site condition report did not include a full list of pollution incidents in the area.</p>	<p>This part of the site report is a desk based study which is part of establishing the baseline ground and soil conditions. In addition to this desk based study the applicant carried out analysis of soils and groundwater. We have some reservations as to whether the baseline has been fully established. However this is the operator's risk. If the permit had been issued and the baseline had not been fully established then at permit surrender we would have been likely to hold the operator responsible for any contamination.</p>

<p>The site condition report states that it is likely that there will be inhalation of airborne dusts, vapours and skin contact with dust and soil. The report does not mention adjacent critical receptors and the risk of ingesting dusts attached to food or drink.</p>	<p>The tables in the site report are concerned with construction workers and users of the site and the risks from any existing land contamination. This is not a consideration for environmental permitting.</p> <p>Through the environmental permitting process we have considered potential emissions and impacts from the operation of the installation.</p>
<p>The Environment Agency and Bristol City Council have a commercial interest in the port. The Environment Agency's interest is from a market and licensing perspective.</p>	<p>We cannot comment on Bristol City Council. The Environment Agency's interest in assessing this application has been to check whether it will have a significant impact on the environment or health it has no commercial interest in the port.</p>
<p>15,000 tonnes of diesel will be stored. This requires a site safety plan under COMAH regulations.</p>	<p>The proposed diesel tank has a capacity of 15,000 litres. The lower tier COMAH threshold for petroleum products such as diesel is 2,500 tonnes which is ~ 3 million litres, so the COMAH regulations do not apply.</p>
<p>Security at the port is understandably tight but this means it is the wrong location for this site because it will be hidden away from public scrutiny.</p>	<p>Port security is a matter for the port authority. Had a permit been issued we would have had the power to access the site if required to do so. Details of inspections or enforcement action would have been on the public register for the public to see.</p>

c) Representations from Individual Members of the Public

40 of responses were received from individual members of the public a number of these issues are the same as those raised by the Community and Other Organisations. Of the additional issues raised:

Brief summary of issues raised:	Summary of action taken / how this has been covered
<b>Comments about the location of the Installation</b>	
An incinerator should not be built in Avonmouth.	The Application is not for an incineration plant. The Application is for a bottom ash

	treatment plant with ash imported to the site from an incinerator. Bottom ash is a residue that is left over when waste is incinerated.
The site is too close to houses.	Location is primarily a land use planning issue. We have a legal duty to determine any application made to us for an environmental permit. Our role is to determine whether appropriate measures are used to minimise emissions and whether any impacts on the environment and health are acceptable. We have considered the location of receptors in making our decision.
There should be no more environmental problems dumped into the area. It has become the dumping ground for waste from south west and London and should not be allowed to continue.	Our responsibility is to ensure that sites that we regulate do not cause significant pollution. Wider land use planning matters are within the remit of Bristol City Council.
<b>Comments about emissions, health and environment impact</b>	
Concern over dust, noise and odour emissions that could impact on homes that are close to the site and a nearby children's play area. Concern over health effects including children's health.	Our assessment of impacts is considered in part C section 2.5 of this document
Ash will be unloaded at the docks. Who will ensure that spillages are prevented? Will the permit cover the unloading operation?	The unloading operation will not take place within the application site and so is outside the scope of the permit determination.
Who will pay for cleaning cars, windows and repainting?	The permit has been refused. Any potential compensation claims for any potential damage had the permit been issued would have needed to have been taken up with the operator.
Will the gases that are given off be filtered and monitored?	The applicant made no proposal to filter any emissions from the Installation. This option was considered in their BAT assessment. See part C section 2.6 for more details.
Prevailing wind towards Wales was highlighted as a positive point. Have any wind measurements been taken?	The Application included a windrose showing wind direction. The prevailing wind is from the south west and so is not towards Wales.
No-one will be accountable for dust emissions.	If a permit had been issued it would have required dust to be controlled. If the Installation had been shown to be emitting dust then we would have taken action in line with our enforcement procedures.
The chimney should be as high as possible using the best control measures.	A chimney was not proposed as part of the Application.
A nearby high building will affect the wind. Wind sweeps across the site since the flour mill was removed. Who will monitor the wind if a permit is issued?	If a permit had been issued we would have required a robust dust management plan to be in place. This would have included details of what weather conditions could cause issues and measures that would be taken in these circumstances.

Human impact studies have not been undertaken to a level that respects lives and health. There is not enough evidence to show that it will not affect health.	A health risk assessment was submitted as part of the schedule 5 notice response. See part C section 2.5 of this document for more details.
<b>Comments about proposed control measures</b>	
The plans have changed. Day Group Ltd had previously stated that water suppression would not be needed.	Details within applications can develop and change during a determination. However the Application has not changed with respect to using a water suppression system.
<b>Comments about existing pollution in the area</b>	
The area is already subject concern over existing pollution from the port, industries, rubbish tips, recycling plants, a scrap metal plant and the motorway. Windows cannot be left open due to pollution. There are issues with flies, odour, noise, dust and explosions. Dust is deposited on cars, windows and inside homes.	We are aware of the local concern over dust and other nuisance issues.  We have refused the Application due to the risk of impacts on nearby houses.
People do not want to live in this area and wish to move away.	This is not relevant to our determination which requires us to assess the acceptability or otherwise of the emissions from this proposal.
Reference was made to an incident where acidic water fell from a chimney at the St. Andrews Road works. The wind was driving it down from the chimney.	This incident is not relevant to the determination of the Application.
<b>Comments about planning permission</b>	
Disturbance is occurring at night due to construction works. Children are trying to sleep at this time.	Any impacts from construction works cannot be considered by us. Environmental permitting is legally restricted to the operation of the facility.
There has been no consultation on the planning application.	This is a matter for the local planning authority. The way we have consulted on this environmental permit application is set out in Part A section 2 of this decision document.
<b>Comments on ash composition and testing</b>	
Ash is described as inert which means not chemically reactive and does not mean harmless to health	We agree that the use of the term inert in this context does not necessarily mean that the ash is harmless. That is why we have assessed the risk to human health
<b>Comments about the Environment Agency</b>	
Concerns raised about how the Agency regulates existing sites in the area, whether it would effectively enforce any permit and that it does not take account of public comments	If the permit had been issued and we then had received complaints, we would have investigated them in line with our procedures. We take complaints seriously and it is our policy to investigate them and not to ignore them.
The Environment Agency should make sure that maintenance schedules are adhered to.	If a permit had been issued maintenance schedules would have formed part of the site Environmental Management System (EMS).

	We would have audited the EMS to make sure that the Operator was complying with it.
The Environment Agency shows no concern for local people.	We do not agree with this statement. We take our responsibility to protect the people and environment seriously.
The Environment Agency has no control over existing businesses and it will be the same with the new plant. Permits are not enforced.	If we had issued the permit any breach of permit conditions would have been dealt with in line with our enforcement procedures.
<b>Comments about waste delivery</b>	
How will waste be delivered? The dock that will be used is not yet known. How will residue be disposed of?	If the permit had been issued, waste would have been delivered to the Installation by vehicles. Delivery to the dock is outside the scope of the permit. Treated ash will be taken off site by vehicles for use as aggregate.
The plant should be closer to the dock to reduce the transport of the ash. A conveyor system could then be used for ash transport.	Delivery of ash to the docks was outside the scope of this determination. Location is only relevant to our determination in so far as it has a potential to have an adverse effect on people or the environment.
<b>Comments about the consultation</b>	
The consultation is being rushed through without people having the opportunity to ask questions and get answers.	We do not agree that the consultation was rushed. We carried out extensive consultation, the details of which are set out in Part A section 2 of this decision document.
The Environment Agency should visit Avonmouth to explain why they would allow a plant like this to operate so close to where people live.	We are satisfied that we took the appropriate steps to inform the public about this application. Part A section 2 has more details. A public event such as the one described was not considered necessary to achieve this.
Concern that the Application is written using jargon.	The way the Application was written is a matter for the Applicant. In this decision document we have tried to explain our decision as accurately, comprehensively and plainly as possible. However some technical terms and acronyms are inevitable in a document of this nature.
<b>Management of the site</b>	
How will the site be controlled during the night particularly the key time period of between 1am and 3am? Will the plant be prevented from operating all hours?	The Application contains details of how the site will be run. The permit would have required the operator to have an EMS and use appropriate measures at all times.
There is no management plan or disaster plan.	If the permit had been issued the EMS would have included an accident management plan.
<b>Comments about the applicant</b>	
When questioned about plant records, dust monitoring equipment Day Group became unsettled. They appeared to be unaware of the history of problems in the area.	We cannot comment about responses that the Applicant has given to others. We have determined the application based on the information submitted to us.

<b>Other Issues that are not relevant for Environmental Permitting</b>	
Ash will be delivered from sites dotted around the country.	Waste strategy is a matter for the local waste authority and is outside the scope of environmental permitting.
Waste incineration is the only way forward for waste disposal.	The Application is for treatment of bottom ash rather than for an incineration plant.
<p>Granting the permit would help create jobs in the area. The area needs business to create jobs and improve the area for residents. Companies are more concerned with profit than people in the area. Managers and owners should live in Avonmouth. The company should make a contribution to the area linked to amount of waste taken. The company should offer above average wages. The council should provide more skilled jobs.</p> <p>Will council tax be affected if there is a shortfall in material received?</p> <p>Concern over the effect on house prices.</p>	These are not factors that we can consider through environmental permitting
The NHS should do health checks on locals	<p>This is a matter for the local health authority.</p> <p>We consulted Public Health England and the director of public health on this application and their comments are in Annex 1 of this document.</p>
Letters should be copied to MP, councillors and public	It was not clear what letters this referred to. We have made our decision to refuse this application known to a range of local interested parties including the MP
Can the waste be reused for hard-core or could it be absorbed by other incinerators in the UK?	Treated IBA is usually used as aggregate for road building or other construction uses.
Surprise was expressed that the Environment Agency is proposing this site, given the history of pollution in the area.	<p>The Environment Agency is not proposing this site we are determining the Application made to us.</p> <p>We have considered the location of receptors in making our decision.</p>

# Annex 2: Site Plan

