



Neutral Citation Number: [2018] EWHC 2962 (Admin)

Case No: CO/1855/2018

IN THE HIGH COURT OF JUSTICE
QUEEN'S BENCH DIVISION
PLANNING COURT

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 6 November 2018

Before :

MRS JUSTICE LANG DBE

Between :

THE QUEEN
on the application of

Claimant

BACI BEDFORDSHIRE LIMITED
- and -

ENVIRONMENT AGENCY

Defendant

COVANTA ENERGY LIMITED

Interested Party

Daniel Stedman Jones (instructed by **Richard Buxton**) for the **Claimant**
Guy Williams (instructed by **Environment Agency Legal Services**) for the **Defendant**
Richard Harwood QC (instructed by **Hogan Lovells International LLP**) for the **Interested Party**

Hearing dates: 10 & 11 October 2018

Approved Judgment

Mrs Justice Lang:

1. The Claimant seeks judicial review of the decision made by the Defendant, in a notice dated 26 January 2018, to grant to Covanta Energy Limited (“Covanta”) an environmental permit (“the Permit”), under the Environmental Permitting Regulations 2016 (“the EPR 2016”), for an energy recovery facility (“ERF”) at a site at Rookery Pit, Stewartby, Bedfordshire (“the Site”).
2. The Claimant is an action group comprised of interested local residents who, along with others, objected to Covanta’s application for the Permit when it was made. The Defendant is the statutory regulator who has responsibility for issuing the Permit and enforcing its terms. Covanta will operate the ERF at the Site.
3. The Claimant’s sole ground of challenge was that the Defendant issued the Permit for a proposed operation whose emissions management system in relation to fugitive emissions from Incinerator Bottom Ash (“IBA”) was premised upon a mistake of fact and/or erroneous science in respect of the discharge of potentially harmful heavy metals. The Claimant contended that, in consequence, there was a risk of unmonitored discharge of toxic dissolved heavy metals, via surface water drainage, into nearby Stewartby Lake, which feeds into the River Ouse system and finally into the public drinking water. This discharge would be in breach of the Industrial Emissions Directive 2010/75/EU (“the IED 2010”) and the EPR 2016.
4. Both the Defendant and Covanta conceded the error by Covanta, but denied that the Defendant relied upon it when issuing the Permit. They also denied that there was a risk of unmonitored discharge of toxic dissolved heavy metals into the surface water drainage system.

Facts

5. Covanta obtained planning approval for an ERF at this Site by development consent order in 2011.
6. Covanta applied for the Permit on 15 February 2017. The purpose of the ERF is to recover energy from residual waste through incineration. Once constructed, the ERF will have the capacity to process some 585,000 tonnes per annum of waste. Only non-hazardous waste will be processed.

The ‘Supporting Information’ document

7. Covanta submitted a document called ‘Supporting Information’ with the application providing information as to how the Site was to be operated.
8. Paragraph 1.4.1.2 explained the proposed combustion process as follows:

“Combustion Bottom Ash and co-mingled metals, known as Incinerator Bottom Ash (IBA), will be discharged off the end of the incinerator grate into a water filled quench pit. The wet ash will then be transferred by conveyor to an ash storage bunker

inside the waste incineration plant for safe and secure storage. The IBA will be approximately 60°C and have a moisture content of 15 to 25% when it leaves the quench bath. The composition of the IBA is expected to be similar to that from modern UK waste incineration facilities.

Periodic sampling of the IBA will be carried out to ensure effective burn out is being achieved by testing for the Total Organic Carbon (TOC) in the residual ash.

The IBA is expected to be transferred to the on-site IBA facility either by conveyor or truck for processing.”

9. I was informed at the hearing that Covanta may decide to send the IBA off-site for processing, by truck, instead of setting up an on-site processing facility. The Permit covers both options.
10. Section 2.3 described two separate water management systems: process water and surface water. Process water is water which is used in the operative processes of the facility, for example feeding the boiler, quenching the IBA post-incineration and it specifically includes surface-water run-off originating from the IBA facilities. Surface water is rainwater from buildings, roads etc. This claim is concerned with the potential contamination of surface water only.
11. Paragraph 2.3.1 of the Supporting Information explained the surface water drainage system as follows:

“Surface water from the roofs of buildings at the Rookery South ERF will be collected in a rainwater storage tank for use within the IBA Quench System. In the event of imminent overflow of the storage tank, an outlet valve system will drain controlled quantities of water through an interceptor into the storm drains.

All other surface water (roadways and areas of hardstanding) shall be collected in drains with oily water interceptors which will incorporate an isolating penstock valve installed on the discharge pipe. This water will then be discharged via an interceptor channel into an attenuation pond to be constructed as part of the Rookery Low Level Restoration drainage scheme. This pond will be located adjacent to the Rookery South ERF, in the north-west corner of the Installation.

The discharge from the interceptors will be tested periodically to verify that it is not contaminated. The drainage system, interceptor and penstock valve will be subject to a planned maintenance regime.”

12. Paragraph 2.3.3.1 described the approach to be taken in respect of spillage management for the surface water drainage system as follows:

“No material will be discharged on the internal road network which could potentially contaminate surface water run-off. Under normal operating conditions materials will be delivered to and from the waste incineration plant in dedicated transport vehicles by competent delivery drivers. Pollution prevention measures and strict operational controls will ensure that internal roadway rainwater run-off remains uncontaminated from process materials from the waste incineration plant. A trained member of Covanta’s operational team will be in attendance during the delivery and off-loading of all chemicals and fuels.

In an emergency condition, such as a spillage or vehicle accident, the surface water discharge penstock valves will be closed. Any spillage or leak on the road network will be isolated, retained and remediated locally following the waste incineration plant spill procedure. The penstock valve will retain all surface water run-off within the drainage system to prevent its release to the environment. The retained surface water run-off will be tested and transferred off-site to an appropriately permitted waste management facility. If necessary, the drainage system and interceptor will be emptied and cleaned prior to the penstock valve being opened to allow the discharge of uncontaminated rain water.”

13. Paragraph 2.4.3 stated as follows:

“2.4.3 Emissions to water

There will be no process emissions to water. Wastewaters from the process will be collected and re-utilized.

All areas of hardstanding within the IBA will be profiled so that surface water run-off from areas subject to potential ash contamination is collected.

Clean water such as rainwater from roofs will be collected in a rainwater storage tank and utilised within the waste incineration plant or IBA facility or released through an interceptor into the storm drains. Surface water from roadways and areas of hardstanding will pass through an oil/silt interceptor prior to being discharged into the Low Level Restoration Scheme (LLRS) attenuation pond.”

14. Paragraph 2.4.4, headed “Contaminated water” provided for the safe containment of chemicals, and reporting procedures to be followed in the event of spillage. It also stated:

“Adequate quantities of spillage absorbent materials will be available onsite. These will be located at appropriate, accessible locations near to liquid storage areas. A site drainage plan which includes the locations of foul and surface water drains and

interceptors will be made available onsite. Water interceptors will have penstock valves to prevent the discharge of contaminated surface water in case of an incident on site.”

15. Paragraph 2.4.5 addressed the issue of “Fugitive Emissions and IBA Storage”. This referred to accidental or unintended discharges of IBA outside the closed processing area, for example, spillages on the road during transportation by lorry, or dust escaping from the processing area. It provided as follows:

“Good housekeeping practices will be implemented to ensure that any IBA spillage that does occur is cleaned up at the earliest opportunity. Spill kits will be available for the cleanup of IBA spills as procedures in the Quality and Environmental Management System (EMS) require ash spills to be cleaned up promptly.

Water released from the IBA will be also prevented from entering surface water drains through preventative maintenance, monitoring, housekeeping, and strict operational controls.

Any heavy metals within the IBA will be present as salts. These salts will be retained in solution when mixed with water and would not be expected to dissolve. Metals would be retained in solution form if there was an IBA spill on the internal roadways or other areas of hardstanding. If the IBA were to enter the surface water drainage system, it would collect within the interceptors in the surface water drainage systems for the waste incineration plant. The interceptors are designed to prevent the discharge of suspended solids and oils and grease.”

[Emphasis added]

16. The passage underlined above contains the error upon which this claim is founded, as it was agreed before me that many heavy metals will dissolve when mixed with water, and so will not be suspended solids, capable of being filtered out by the interceptors, before the surface water discharges into the attenuation pond.

17. Section 5 made provision for emissions monitoring. Paragraph 2.5.3 stated as follows:

“2.5.3 Monitoring emissions to water

As discussed in Section 2.4.3, there will be no process emissions to water and the only emissions to water will be of uncontaminated rainwater. Therefore, there will be no requirement to undertake monitoring of emissions to water.”

18. Covanta submitted an ‘Incinerator Bottom Ash (IBA) Dust Management Plan’, which was intended to address the Defendant’s concerns about IBA generation, onsite transport, storage and treatment.

19. At paragraph 4.2, it identified potential sources of IBA and IBA aggregate (“IBAA”) dust and particulate emissions as:
 - i) The handling of IBA via conveyors and conveyor transport points between the ash dischargers and the maturation area, or alternatively by truck to the maturation area;
 - ii) The handling of IBA by trucks between the maturation area and the IBA facility;
 - iii) The generation, storage and loading of IBA, IBAA, recovered metals materials; and
 - iv) The movement of vehicles and the transport of various materials across the Site.
20. By reference to the ‘Best Available Techniques (BAT)’ as provided by the Defendant’s Sector Guidance Note EPR 55.01 ‘The Incineration of Waste’, it listed at paragraph 4.4 measures to control fugitive dust and particulate emissions. These measures included *inter alia*:
 - i) High moisture content maintained in handling and storage of the IBA to reduce dust and particulate emissions to a negligible level.
 - ii) IBA handling and generations systems, including conveyors and transfer points between conveyors, to be closed.
 - iii) Trucks transporting IBA and IBAA to be sheeted with tarpaulin and provision of a wheel wash.
 - iv) Dust and particulate emissions to be monitored by use of sticky discs in the main boiler building, the maturation area and the IBA facility building.
 - v) Facility roadways and paved areas to be swept by a road sweeper.
21. Paragraph 4.4.2 considered contingency measures, which included IBA being transported by covered trucks if the conveyor broke down.
22. Paragraph 5.2 set out reporting and complaints procedures.

Consultation

23. Following requests under Schedule 5 of the EPR 2016 for further information, the Defendant consulted twice on the application. The Claimant submitted detailed representations during both consultations. A number of health concerns were raised about contamination of surface water including:
 - i) Stewartby Lake (a former clay pit) is already polluted and classified as a nitrate vulnerable zone.
 - ii) Stewartby Lake is used for leisure and sporting activities in which people come into direct contact with the water.

- iii) Pollutants entering the public drinking water system. There is a pathway downstream from Stewartby Lake into the Great Ouse system and Stewartby Lake is scheduled to be used to connect two sections of the proposed Bedford to Milton Keynes Waterway.
 - iv) Dust pollution across the Site when the IBA is stored or moved. It was noted that IBA ash is light and readily windborne.
 - v) The risk of flooding of the ash processing buildings and areas, resulting in contaminated water draining away as surface water. The area is prone to flooding.
24. Professor Jeremy Ramsden, a scientist by profession, who lives in Bedfordshire, submitted detailed representations to the second consultation on 6 November 2017. The letter included the following paragraphs:
- “15. It would be naïve not to suppose that ash residues will be deposited throughout the proposed facility. According to the Applicant’s Supporting Information (2.4.3) the proposed design means that some leachate from the ash will inevitably end up in the LLRS attenuation pond.”
- “16. The Applicant appears to lack basic knowledge of dissolution phenomena. In Supporting Information 2.4.5 it is stated that “Any heavy metals within the IBA will be present as salts. These salts will be retained in solution when mixed with water and would not be expected to dissolve.” In so far as this statement is intelligible, it is wrong.”
25. At the hearing, I queried how it was envisaged that IBA could enter the attenuation pond, as stated in paragraph 15 of Professor Ramsden’s letter. On instructions, and by reference to Professor Ramsden’s three witness statements, Mr Stedman Jones explained that it could occur as a result of (1) accidental spillages from lorries during transportation; (2) accidental dust emissions into the air from lorries, the conveyor, or other parts of the closed processing area because of failures in dust management and other preventative measures. IBA dust would then settle on roads and hardstanding outside the closed processing area and on roofs of buildings. When it rained, the surface water would become contaminated by the IBA on these surfaces. As the surface water drained away, the dissolved heavy metals from the IBA would enter the attenuation pond.
26. The Defendant replied to the consultation responses in Annex 4 to the document headed ‘Determination of an Application for an Environmental Permit under the Environmental Permitting (England & Wales) Regulations 2016, Consultation on our decision document recording our decision-making process’ (hereinafter “the Decision Document”). Initial representations on the consultation included, *inter alia*, the following comments and replies:

Representations from Local MP, Councillors and Parish/Town/Community Councils

“Comments about impacts on water courses

Brief summary of issues raised:

Dust including IBA could be washed from roofs and into the drainage system thereby contaminating Stewartby Lake and other water bodies.

Summary of action taken/how this has been covered:

Table S3.2 of the permit only allows the discharge of uncontaminated site surface water.

Dust emissions from the stack will be insignificant and accumulation on building roofs via this route will not occur.

IBA storage and processing and IBAA storage will be in enclosed buildings. The Operator will also have a dust management plan. Further details are in section 6.5.3 of this decision document.

Brief summary of issues raised: Concern over emissions of waste water into local waterways, Stewartby lake could become polluted and affect drinking water.

Summary of action taken/how this has been covered: The only emissions will be of uncontaminated surface water (rainwater) run-off to an attenuation pond and then to the nearby restoration scheme pond (LLRS). The LLRS is part of the wider Rookery Pit development site drainage system and is not part of the Installation. The LLRS will overflow to Stewartby Lake.

Brief summary of issues raised: There are contradictions in the Application as to how surface water drainage will be handled.

Summary of action taken/how this has been covered: We requested clarification on this aspect. The schedule 5 response received on 19/05/17 addresses this.

Section 6.5.1 of this decision document has further details.

...”

“Comments about residues

Brief summary of issues raised:

Concern over ash spillages from transport.

Summary of action taken/how this has been covered:

APC residues will be transported from site in sealed tankers.

Treated bottom ash will be transported off-site in covered vehicles. A Wheel wash will be used to clean vehicles.

Any waste transportation is subject to duty of care regulations.

...

Brief summary of issues raised:

More details are required on the proposed monitoring of the IBA plant, such as location of monitors and frequency of monitoring.

Summary of action taken/how this has been covered:

IBA storage, processing and IBAA store will be carried out in an enclosed building and the material will be kept damp using water sprays. These are the primary measures to control dust.

The Applicant also proposed using sticky discs on the Installation boundary to check dust levels. A trigger level of 2% effective coverage per day was proposed. Emissions above the trigger level would trigger additional measures to be used.

We are satisfied that the control measures proposed by the Applicant will ensure that dust emissions beyond the Installation boundary are unlikely. We consider that the dust monitoring is an additional control on top of the primary measures and that the details can be confirmed in a pre-operational condition.

We have set Pre-op (P10) to confirm frequency and location of monitors.

...”

Representations from Community and Other Organisations

“Comments about residues

Brief summary of issues raised:

Concern over impacts on conservation areas that are linked to Stewartby Lake.

Summary of action taken/how this has been covered:

The only emissions will be of clean surface water run-off to an attenuation pond. The Permit specifies that this will be uncontaminated and free from visible oil and grease. The attenuation pond will drain to the nearby restoration scheme pond (LLRS). The LLRS is part of the wider Rookery Pit

drainage system and is not part of the Installation. The LLRS will overflow to Stewartby Lake. So there will be no impact on the lake.

Brief summary of issues raised:

The current Rookery South discharge consent specifies that the discharge must not contain any poisonous, noxious or polluting matter, or solid matter greater than 40mg/l – can this be complied with?

Summary of action taken/how this has been covered:

The only discharge from the Installation will be of uncontaminated surface water run-off.

Brief summary of issues raised:

Emissions from the stack will pollute water bodies.

Summary of action taken/how this has been covered:

It is feasible that if a plant had very high emissions from a stack such as a very large quantity of dust or acid gases than it could be deposited in lakes. However emissions from the stack of this Installation will be sufficiently small so that they will not have the potential to pollute water bodies

Brief summary of issues raised:

Concern about impacts on Stewartby Watersports Club located at Stewartby Lake.

Summary of action taken/how this has been covered:

The only emissions will be of uncontaminated surface water run-off to an attenuation pond and then to the nearby restoration scheme pond (LLRS). The LLRS is part of the wider Rookery Pit drainage system and is not part of the Installation. The LLRS will overflow to Stewartby Lake.

We are satisfied that there is unlikely to be an impact on any watercourses.”

27. Representations on the draft decision included, *inter alia*, the following comments and replies:

Representations from Local MP, Councillors and Parish/Town/Community Councils

“Comments about impacts on water courses

Brief summary of issues raised:

There is confusion over how water discharges will be dealt with.

Summary of action taken/how this has been covered:

We do not agree that there is confusion. To clarify:

The only emissions from the Installation will be of uncontaminated surface water (rainwater) run-off to an attenuation pond

Brief summary of issues raised:

Question how frequently will the water in the attenuation pond and LLRS pond be checked for contamination and if it is found what is the process to prevent it reaching Stewartby Lake.

Summary of action taken/how this has been covered:

We have not required monitoring of the attenuation pond. Emissions to this pond will be of clean surface water run-off only. The Permit specifies that the surface water run-off is Uncontaminated surface water run-off and our view is that monitoring is not required.

The LLRS does not form part of the installation.

...”

“Comments about residues

...

Brief summary of issues raised:

The statement in the Application ‘any heavy metals within the IBA will be present as salts. These salts will be retained in solution when mixed with water and would not be expected to dissolve.’ Concern that use of recirculating water will result in heavy metal emissions, silt traps will not prevent the release of dissolve metal salts in ash water run-off

Summary of action taken/how this has been covered:

The IBA will be stored in an area with a sealed drainage system. There will be no emission from the Installation of water run-off from the IBA area. Recirculated water will be used but as stated above there will be no emissions from this area.

...

Brief summary of issues raised:

Concern over recirculating water for dust suppression will not reduce metal leaching potential from the ash which means it does not comply with IED articles 44(c) and 53(1) to minimise the residue harmfulness.

Use of recirculating water will mean that sampling is not representative.

Summary of action taken/how this has been covered:

The use of recirculated water that will be collected with rainwater for dust suppression is standard practice at IBA plants. It reduces the amount of fresh water needed. The Applicant stated that the use of recirculating water is unlikely to have an effect on the IBAA composition.

However if testing showed that the use of recirculating water was to become an issue then fresh water could be used.

We are satisfied that recovering the IBA for use as an aggregate is complying with the quoted IED articles.

...”

Representations from Community and Other Organisations

“Comments about impacts on water courses

...

Brief summary of issues raised: Concern about uncontaminated water being pumped into Stewartby lake.

Summary of action taken/how this has been covered: We are satisfied that measures will be in place to ensure that only uncontaminated surface water run-off will be emitted via an attenuation pond to the LLRS. The LLRS will ultimately overflow to Stewartby lake. We are satisfied that uncontaminated rainwater run-off will not cause pollution.”

“Comments about BAT and control measures

...

Brief summary of issues raised:

No details were provided on the design or location of the interceptors.

Summary of action taken/how this has been covered:

The Application stated that surface water will discharge via interceptors. The location of these will be on the surface water drains.

We were satisfied that this was sufficient information to determine that appropriate measures would be in place to prevent pollution from surface water run-off. Given the controls set through the Permit, the Operator will need to ensure that the interceptors are suitably designed.

...”

“Comments about residues

Brief summary of issues raised:

The permit only requires IBAA to be in a building and not the IBA as well.

Summary of action taken/how this has been covered:

This is not the case. Both IBA and IBAA storage will be in fully enclosed buildings as specified in table S1.1 of the Permit.

Brief summary of issues raised:

IBA could be transported by conveyor or vehicle. Have the risks from both options been assessed?

Summary of action taken/how this has been covered:

We are satisfied that the risks have been assessed.

Brief summary of issues raised:

No details were provided about the conveyor.

Summary of action taken/how this has been covered:

The conveyor was described in the dust management plan and we are satisfied that we have enough detail to assess it. Final details will be provided through pre-operational condition PO 10.

Brief summary of issues raised:

In the event of high rainfall, how will overflow from the IBA catch pit be prevented?

Summary of action taken/how this has been covered:

The catch pit overflows to the IBA lagoon. The Applicant did not provide details on the sizing of the catch pit, but we are satisfied that this detail would be considered by the Operator at the detailed design stage. Given the controls set through the Permit, the Operator will need to ensure that this is suitably sized.”

Representations from individual members of the public

“Comments about accident risk

...

Brief summary of issues raised:

Concern over chemical spillages.

Summary of action taken/how this has been covered:

Measures will be used to prevent spillages and to deal with them if they were to occur. Section 6.5.3 of this decision document has further details.

...”

“Comments about residues

Brief summary of issues raised:

Fugitive emissions of IBA have not been adequately considered. Concern over impacts of dust on nearby footpath ~350 m away at the Forest Centre and railway line.

Summary of action taken/how this has been covered:

This issue was considered, as discussed in section 6.5.3 of this decision document.

We are satisfied that the measures set in the Permit will ensure that dust emissions will be insignificant.

Brief summary of issues raised:

Concern that the dust management plan has a 400 m buffer line indicating that impacts will occur.

Summary of action taken/how this has been covered:

The plan is not showing that impacts will occur within 400m, it indicates that receptors within 400m could be affected if there was a dust emission.

We are satisfied that measures will be in place to prevent dust emissions.

Brief summary of issues raised:

Tarpaulins are not adequate to contain ash from vehicles leaving site – should be airtight seals. Concern over wear and tear over tarpaulins

Summary of action taken/how this has been covered:

Our view is that covered vehicles using tarpaulins will be sufficient to minimise emissions from bottom ash transport. The ash will be damp. The EMS will include a preventative maintenance system to ensure that worn items are replaced. APC residues on the other hand are dry and will be transported in sealed tankers.

The IBA will be subject to duty of care regulations covering transportation.

Brief summary of issues raised:

Wheel wash described as being used where necessary, this does not sound like it will be used regularly.

Summary of action taken/how this has been covered:

Our view is that it is reasonable to use the wheel wash when needed.

Brief summary of issues raised:

Sweeping is not an appropriate method to control dust from IBA.

Summary of action taken/how this has been covered:

A mechanical broom road sweeper will be utilized to minimise potential fugitive dust emissions from roadways within the installation boundary. A written procedure for periodic sweeping, targeting specific areas and frequent inspections will be followed for the reduction of fugitive dust emissions.

The road sweeper will be subject of a periodic maintenance programme to ensure its long-term performance. Other measures to control dust are set out in section 6.5.3 of this decision document.

Brief summary of issues raised:

Concern over dust while loading IBA and IBAA on lorries. How will this be carried out?

Concern as to whether the Operator will be able to temporarily postpone loading and unloading in the event of adverse weather and whether vehicles will be turned away or queue to get into the site.

Summary of action taken/how this has been covered:

Loading shovels will be used. IBA and IBAA will be kept damp to minimise any risk. Loading and unloading will be avoided during adverse weather.

The Applicant stated that the storage area for IBAA will be sufficient for 6 months storage, so there will be sufficient contingency storage arrangements.

Brief summary of issues raised:

Covanta say that rainwater weathers the bottom ash but rainy days could be limited.

Summary of action taken/how this has been covered:

The dust management plan states that other sources of water can also be used, from the service water supply.

Brief summary of issues raised:

Concern that vehicles entering bottom ash areas will become contaminated with ash.

Summary of action taken/how this has been covered:

A wheel wash will be used if required to remove ash from vehicles prior to leaving the Installation.

...

Brief summary of issues raised:

How often will the IBA be sprayed to keep it damp and will this be done more frequently during hot weather? Concern that suppression is not an automatic system.

Summary of action taken/how this has been covered:

The Applicant stated that the moisture condition of both the IBA and IBAA will be visually monitored daily. The dust management plan describes additional use of the water sprays during dry weather. We are satisfied that the proposed suppression along with storage in a fully enclosed building will prevent any significant dust impacts.

...

Brief summary of issues raised:

Concern that transporting ash off site rather than treating on-site will result in increased vehicle movements and increased dust risk.

Summary of action taken/how this has been covered:

We don't agree that this would be the case. The ash would still be required to be removed from site whether treated on or off-site.

..."

The Decision

28. Following the consultation stage, the Defendant issued the Permit on 26 January 2018, authorising Covanta to operate an installation at the Site, to the extent authorised by and subject to the conditions of this permit.
29. The Introductory Note to the Permit explained the operations of the Site *inter alia* as follows:

".....

The installation will receive waste in refuse collection vehicles and bulk transfer vehicles. The waste will be delivered to the tipping hall where it will be tipped into the waste bunker. Gantry crane grabs will be used to homogenise the waste tipped into the storage pit and remove any unsuitable or non-combustible items. The grabs will transfer waste to one of the three feed hoppers which feed the three moving grate furnaces where the waste is burned.

.....

Emissions to air will be via a 105m high stack and will be minimised by cleaning the waste combustion gases as follows:

Oxides of nitrogen (NO_x) will be abated using Selective Non-Catalytic Reduction (SNCR)
Acid Gases will be abatement using a lime abatement system
Dioxins mercury and volatiles abated using activated carbon injection
Particulate matter and metals abated by bag filters

Hot gases from the incineration of waste will pass through a series of heat exchangers and superheaters and finally through an economiser. The economiser will be used to preheat feedwater before it is supplied to the boiler. The design of the boilers, following a computerised fluid dynamics assessment, will ensure that the flue gas temperature is quickly reduced to minimise the risk of dioxin reformation. The steam generated in the boilers will be fed to a steam turbine which will generate electricity. Water for steam generation will be sourced from the mains and treated in a demineralisation plant prior to use in the boilers. Steam will be condensed in an air cooled condenser and recycled to the boiler. Process waste water will be re-used for quenching bottom ash.

Bottom ash will either be transferred off-site for processing, or transferred by conveyor to a storage area for processing into different size fractions. The processed material will then be stored prior to transfer off site. The processing and storage will all be carried out in enclosed areas.

Air pollution control (APC) residues will be stored in silos prior to removal from site in sealed tankers.

There are no discharges to sewer. Only uncontaminated site surface water will be discharged; via an interceptor and then into an onsite attenuation pond. The attenuation pond will subsequently discharge into the Low Level Restoration Scheme (LLRS) for the Rookery South development site. The LLRS serves the whole Rookery Development area.

The Installation facility will generate electricity at a rate of 65 MWe with 60 MWe supplied to the grid. The facility will have the capability to alternatively provide up to 40 MWth of heat as steam when the viability of Combined Heat and Power (CHP) is established.

The operator will have an environmental management system and intends to have it certified to ISO 14001.”

30. Under the heading ‘Operating techniques’, Condition 2.3 provided *inter alia*:

“2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner

described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.”

31. Table S1.2 in schedule 1, which was referred to in condition 2.3.1, set out the “Operating techniques” to be used. It cross-referred to the operating techniques set out in specified paragraphs of the Supporting Information. The list included paragraph 2.4.5 of the Supporting Information, which was the paragraph containing Covanta’s acknowledged scientific error. The operating techniques in table S1.2 also included the Dust management plan.

32. Condition 2.5 provided:

“2.5 Pre-operational conditions

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

33. Section 3 was headed ‘Emissions and monitoring’. Condition 3.1.1 addressed point source emissions to water. Schedule 3, table 3.2 provided for uncontaminated surface water run-off via interceptor from the surface water attenuation pond. No limits were set in table 3.2, and no monitoring was specified, because the only permitted emission was surface water, without any contaminants.

34. Emission of surface water from the attenuation pond which contained substances would be contrary to Condition 3.2, which provided as follows:

“3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management

plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.2.4 The Operator shall carry out monitoring of soil and groundwater in accordance with IED articles 14(1)(b), 14(1)(e) and 16(2) to the protocol approved in writing with the Environment Agency under PO6.

35. PO6 provided as follows:

“The Operator shall submit the written protocol referenced in condition 3.2.4 for the monitoring of soil and groundwater for approval by the Environment Agency. The protocol shall demonstrate how the Operator will meet the requirements of Articles 14(1)(b), 14(1)(e) and 16(2) of the Industrial Emissions Directive. The procedure shall be implemented in accordance with the written approval from the Environment Agency.”

36. The Defendant’s reasons for the issue of the Permit and its conditions were set out in the Decision Document. At p.9, the Defendant stated:

“We consider that the Permit will ensure that the operation of the Installation complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.”

37. At paragraph 6.5.1, the Decision Document addressed emissions to water as follows:

“6.5.1 Emissions to water

Surface water from roadways and areas of hardstanding will be collected in drains. Oil / water interceptors will be used and there will be an isolating penstock valve installed on the discharge pipe. The water will then be discharged via an interceptor channel into an attenuation pond.

Surface water from the roofs will be collected in a rainwater storage tank for use within the IBA Quench System. Excess water can overflow by use of an outlet valve system to drain controlled quantities of water through an interceptor into the attenuation pond.

The attenuation pond will drain into the Rookery Low Level Restoration Scheme (LLRS). The LLRS is a pond serving the drainage for the wider Rookery Pit development area. The LLRS will ultimately drain into Stewartby Lake.

The discharge from the interceptors will be tested periodically to verify that it is not contaminated. The drainage system, interceptor and penstock valve will be subject to a planned maintenance regime. Based upon the information in the application we are satisfied that appropriate measures will be in place to prevent and/or minimise emissions to water.

There will be no discharge of contaminated water. Water from process areas including wash-down water and boiler blow down will be collected in a dirty water tank and used for quenching bottom ash.”

38. At paragraph 6.5.3, the Decision Document considered fugitive emissions materially as follows:

“The IED specifies that plants must be able to demonstrate that the plant is designed in such a way as to prevent the unauthorised and accidental release of polluting substances into soil, surface water and groundwater.¹ In addition storage requirements for waste and for contaminated water of Article 46(5) must be arranged.

The ammonia and gas oil tanks will be within bunds

Chemical storage will be in a bunded area

All process area will be on hardstanding with no direct drains to surface water

The IBA area will be on an impermeable surface with a sealed drainage system to a lagoon. The water will be re-used for dust suppression.

There will be provision to remove water from site from the lagoon and transfer for off-site disposal using a tanker, if required, during periods of high rainfall.

APC residues will be stored in a silo and will be removed from site in enclosed tankers. During the tanker filling operation, displaced air will vent back to the silo and any releases to atmosphere would pass through a fabric filter.

The risk of dust from IBA storage and treatment will be controlled through a dust management plan. The key parts of that plan are:

- IBA quenched in water

¹ However the Supporting Information states that IBA will be carried via a conveyor or trucked [CB/x – p4]; also at 1.4.2.2 (line1).

- Transferred to a maturation building by covered conveyor
- Stored in an enclosed building
- Transferred to a processing area also within the building
- Use of water suppression to prevent the material becoming dusty.
- Treated IBA (IBAA) will be stored in an enclosed area or will be removed from site rather than stored on site.
- Perimeter dust monitoring will be carried out and further actions taken if trigger levels are exceeded

.....

Based upon the information in the application we are satisfied that appropriate measures will be in place to prevent and /or minimise fugitive emissions. We have set pre-operational condition PO10 for the dust management plan to be updated after the detailed design stage of the plant. The Applicant stated that the IBAA, if stored on site, would be in a fully or partially enclosed area. We have specified in PO10 that the IBAA enclosure must be in a fully enclosed building. We have defined ‘fully enclosed building’ in the permit to ensure that adequate containment is used. The storage area will be ~ 400 m from the nearest housing. However the plant is located within a local wildlife site (Rookery Clay Pits) as such containment is required in order to minimize emissions of dust.”

Legal framework

39. Article 46 (5) of Chapter IV of the IED 2010 provides as follows:

“5. Waste incineration plant sites and waste co-incineration plant sites, including associated storage areas for waste, shall be designed and operated in such a way as to prevent the unauthorised and accidental release of any polluting substances into soil, surface water and groundwater.

Storage capacity shall be provided for contaminated rainwater run-off from the waste incineration plant site or waste co-incineration plant site or for contaminated water arising from spillage or fire-fighting operations. The storage capacity shall be adequate to ensure that such waters can be tested and treated before discharge where necessary.”

40. Regulation 13(1) of the EPR 2016 provides as follows:

“13.— Grant of an environmental permit

(1) On the application of an operator, the regulator may grant the operator a permit (an “environmental permit”) authorising—

- (a) the operation of a regulated facility, and
- (b) that operator as the person authorised to operate that regulated facility.”

41. Regulation 35 (1) of the EPR 2016 gives effect *inter alia* to Schedule 13. Schedule 13 (4) of the EPR 2016 provides materially as follows:

“4.— Exercise of relevant functions

(1) The regulator must exercise its relevant functions so as to ensure compliance with the following provisions of the Industrial Emissions Directive—

- [...]
- (h) Article 46[.]”

42. The Defendant may impose conditions on a permit. Its Core Guidance (‘Environmental Permitting: Core Guidance’ (March 2013)) provides that all permit conditions should be both necessary and enforceable (paragraph 7.9).

43. In *R (Mott) v Environment Agency* [2016] 1 WLR 4338 the Court of Appeal reviewed the approach to be taken by the court to a challenge by judicial review to a decision of the designated statutory regulator that is the result of evaluation of assessments made using scientific material as to what might happen in the future. In principle, the court should afford a decision-maker an enhanced margin of appreciation in cases involving scientific, technical and predictive assessments. The case was appealed to the Supreme Court, but not on the issue of rationality.

44. In *Levy v Environment Agency* [2003] Env LR 11 the High Court (Silber J.) considered the approach by the court to the judicial review of a decision by the Environment Agency to vary a permit. The Court said:

“21 Consideration of these issues will entail considering how the Agency performed its task and there are four significant points, which must be borne in mind when considering the Decision Document. First, although the wording of the Decision Document has been subjected to sustained and detailed scrutiny especially by Mr Wolfe, it is important to bear in mind that it must not be construed as a statute but that it must be read fairly against the background that it was not necessary for the Decision Document to deal fully with every point raised. After I had reached that conclusion, I noted that Lord Clyde had explained recently in *R. (on the application of Alconbury Developments Ltd) v Secretary of State for the Environment, Transport and the Regions* [2001] 2 W.L.R. 1389 at [170] that:

“What is required is there should be a decision with reasons. Providing that those set out clearly the grounds

on which the decision has been reached, it does not seem to me necessary that all the thinking which lies behind it should also be made available”.

22 Second, in the same way as contractual provisions have to be construed in the light of their factual matrix, so must the Decision Document. Third, in order to determine if the Agency has applied BATNEEC and BPEO, it is the approach of the Agency as revealed in the reasoning of the Decision Document and not the precise wording used in it that is determinative. Lord Browne-Wilkinson (with whom the other members of the Appellate Committee agreed) has explained that:

“The courts should not intervene just because the reasons given, if strictly construed, may disclose an error of law. The jurisdiction to quash a decision only exists where there has in fact been an error of law” (*R. v Governors of the Bishop Challoner Roman Catholic Comprehensive Girls’ School Ex p. Choudhury* [1992] 2 A.C. 182 at 197E with my emphasis added).

23 Fourth, the concept of margin of appreciation is relevant as the courts accept that the Agency, like every other decision-maker, has a discretion about how it resolves environmental issues raised before it so that any consideration of its decision by the courts is a “review with built-in latitude” (Fordham, *Judicial Review Handbook* (3rd ed., 2001), p.222). In such cases,

“[the courts] will intervene if the [appointed decision-maker] asks itself the wrong questions (that is, questions other than those which Parliament directed it to ask itself). But if it directs itself to the right inquiry, asking the right questions, they will not intervene merely because it has or may have come to the wrong answer, provided that is an answer that lies within its jurisdiction” (*Ansiminic Corporation v Foreign Compensation Commission* [1969] 2 A.C. 147 at 195F per Lord Pearce).”

Conclusions

45. The Claimant’s ground of challenge was that, by incorporating paragraph 2.4.5 into the Permit, the Defendant adopted Covanta’s mistake of fact and/or erroneous science.
46. The Claimant relied upon the case law concerning mistake of fact: *E v Secretary of State for the Home Department* [2004] EWCA Civ 49; *R (Patel) v Secretary of State for Communities and Local Government* [2016] EWHC 3354 (Admin) and *R (Royal Borough of Kensington and Chelsea) v Secretary of State for Communities and Local Government* [2017] EWHC 1704 (Admin). It is well-established that, in order to found a challenge on the grounds of mistake of fact, (1) there must have been a mistake as to

an existing fact; (2) the mistake must be established in the sense that it is uncontentionous and objectively verifiable; (3) the claimant or its advisers must not have been responsible for the mistake; and (4) the mistake must have been material to the reasoning.

47. The Claimant also relied upon the case of *Wealden DC v Secretary of State for Communities and Local Government* [2017] EWHC 351 (Admin), in which the High Court held that a Habitats Regulation Assessment was vitiated by the plainly erroneous technical advice given by Natural England, and quashed the Inspector's decision which had been made in reliance upon it.
48. On my reading, the meaning of paragraph 2.4.5 of the Supporting Information (set out at paragraph 15 above) is that heavy metals within the IBA will be retained as suspended solids when mixed with water, and will not dissolve. I accept that the language used in the paragraph is confusing and scientifically inaccurate, because of the use of the term "in solution" rather than "suspended solid", but the author clearly states that the heavy metals will not dissolve. It is common ground that this is scientifically incorrect: heavy metals within the IBA will dissolve when mixed with water.
49. Paragraph 2.4.5 goes on to state, in the same sub-paragraph, that if IBA was to enter the surface water (e.g. following a spillage on internal roads), the interceptors in the surface water drainage system would prevent the discharge of suspended solids (as well as oil and grease), as they would collect within the interceptors, as the water flowed into the attenuation pond. The implication is that, as the heavy metals will not have dissolved, they will be among the suspended solids collected by the interceptors and not discharged into the surface water system. That is incorrect; dissolved heavy metals would not be collected by the interceptors.
50. Paragraph 2.4.5 of the Supporting Information was incorporated by reference into the Permit by Condition 2.3.1 and schedule 1, table S1.2. I accept the Defendant's submission that, on a proper interpretation of the provisions, only the operating techniques in paragraph 2.4.5 were incorporated (i.e. preventative maintenance, monitoring, housekeeping, operational controls and interceptors), not the description of heavy metals in the IBA.
51. However, in the absence of any clarification or disclaimer by the Defendant in the consultation process, or the Decision Document, the Claimant was understandably concerned that the Defendant was proceeding on the same underlying assumption as Covanta, namely, that the heavy metals would not dissolve and would be collected by the interceptors.
52. On reviewing the evidence, summarised above, I am satisfied that the Defendant did not make the same mistake as Covanta. It is elementary science that heavy metals dissolve in water. The Defendant is the regulator, with wide experience of ERFs, and its officers have scientific expertise. I find it implausible that the Defendant would make this mistake. Furthermore, the Permit, in tables S3.4 and S4.1, expressly referred to the monitoring of metal emissions as "soluble fractions" in the Bottom Ash. In the consultation responses, there was reference to the "leaching of metals". These references to solubility and leaching confirm that the Defendant was familiar with the characteristics of heavy metals.

53. Moreover, the issue was expressly brought to the Defendant's attention in Professor Ramsden's helpful consultation response (paragraph 24 above). The point is referred to in the Defendant's consultation responses at p.172 of the Decision Document (paragraph 27 above), though it is attributed to a Council, rather than an individual, so perhaps the same issue was raised by other objectors too. In the other consultation responses (paragraphs 26 and 27 above), the Defendant also addressed broader concerns about IBA pollution in the surface water drainage system, explaining that the necessary measures were in place to ensure that only uncontaminated surface water would enter the attenuation pond and Stewartby Lake.
54. Thus, my conclusion is that, even though Covanta made a factual and scientific error in its application, the Defendant did not adopt it when making its decision. It follows that the error was immaterial.
55. There is a fundamental difference of opinion between the Claimant and Professor Ramsden on the one hand, and the Defendant on the other. The Claimant and Professor Ramsden contend that there is a significant risk that fugitive emissions of IBA will escape from the closed processing areas and the trucks used to transport the IBA, and will be washed by rainwater into the surface water drainage system, polluting the attenuation pond and Stewartby Lake. Although Covanta states it will carry out periodic testing of the discharge into the attenuation pond, the frequency and extent of its monitoring has not been specified, and such monitoring is not an explicit requirement in the Permit. Professor Ramsden has recommended monitoring should be carried out, by testing the water in the attenuation pond, and if necessary, removing heavy metal toxins by precipitation, adapting a technique which is recommended in the Defendant's Technical Guidance document, EPR 5.01, as a BAT for treating soluble metals in scrubber liquors.
56. However, the Defendant has made it abundantly clear, in its consultation responses (paragraphs 26 and 27 above), the Permit (paragraphs 29, 33, 34 above) and the Decision Document (paragraphs 36 to 38 above), that in its opinion the surface water drainage system will not be contaminated by IBA. IBA will not escape from the closed processing areas or trucks, particularly having regard to the Dust Management Plan (paragraphs 18 to 22 above). If there is an accidental escape of IBA, there are adequate measures in place to contain it before it can enter the surface water drainage system, by cleaning any small spillages and in the event of a major accident, closure of the penstock valve which will prevent water from flowing into the attenuation pond. Thus, the Defendant does not accept that there is any risk of dissolved heavy metals in the IBA entering the attenuation pond. In the light of its views, the Defendant rejects the submission that testing and monitoring should be enforced, as it is not necessary. It correctly points out that it is under no obligation to adopt the precipitation technique Professor Ramsden recommends, as it is not a BAT in this context (witness statement of Mr Jones, senior permitting officer of the Defendant, paragraphs 5 and 6).
57. Moreover, the Defendant has enforcement powers if the preventative measures are not enforced, and if there is an alleged breach of the Permit conditions and/or the EPR 2016 once the operation commences.
58. In my judgment, it is impossible to characterise the Defendant's assessment as irrational, or based on incorrect science. I am not equipped to adjudicate upon the technical merits of the differing schemes proposed by Professor Ramsden and the

Defendant. But, in any event, it is not the Court's role to second-guess the regulator's professional assessments. Judicial review only lies where the regulator has erred in law, and the Claimant has failed to establish any error of law by the Defendant in this case. Therefore the claim has to be dismissed.