

# Environment Agency permitting decisions

## Variation

We have decided to issue the variation for Chesterfield Poultry Slaughterhouse operated by Chesterfield Poultry Limited.

The variation number is EPR/XP3036AR/V002.

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

## Description of the main features of the Installation

Chesterfield Poultry Limited provides fresh whole and portioned chickens and other chicken by-products for both the retail and wholesale trade. The installation is situated on the Coulman Street Industrial Estate, Thorne, South Yorkshire. The production capacity is approximately 2,000,000 birds per week which is equivalent of 374 tonnes for daily production.

All original infrastructure was removed from the factory and the variation application sets out a new factory layout, plant and operating techniques for the site. The following activities remain in the permit to authorise the slaughter of birds and the effluent treatment plant.

Section 6.8 A (1) (b) *“Slaughtering animals at plant with a carcass production capacity of more than 50 tonnes per day”*

Section 5.4 A (1) (a) (ii) *“Disposal of non hazardous waste in a facility with a capacity of more than 50 tonnes per day by physico-chemical treatment”*

The following activity has been added to the permit through this variation because the treating and processing of chicken products at the site is of a capacity of greater than 75 tonnes per day.

S6.8 A1 (d) (i) *“Treating and processing materials intended for the production of food products from animal raw materials (other than milk) at plant with a finished product production capacity of more than 75 tonnes per day”*

The following activity has been added to the permit through this variation because the effluent treatment plant has been upgraded to add a phase of biological treatment with a capacity of greater than 50 tonnes per day. This activity is not included within the permit OPRA profile as only one phase of effluent treatment will be charged for.

Section 5.4 A (1) (a) (i) *“Disposal of non hazardous waste in a facility with a capacity of more than 50 tonnes per day by biological treatment”*

## Key issues of the decision

### ***Accident management***

- The factory building is constructed from steel cladding with a layer of mineral wool in-between which is non-flammable.
- Staff operating the site will receive appropriate training in dealing with spillages of oil and fuel and fire response.

### ***Containment***

- The site is constructed with an impervious surface with a sealed drainage system.
- Tanks will be bunded with a capacity of at least 110% of the tank capacity.
- Overfill protection for tanks in the form of high level alarms will be installed.
- Tanks, associated pipework and bunding will be visually checked on a daily basis to assess integrity. Periodic non-destructive testing to check tank thickness will also be carried out.
- The tanks, bunding and activated carbon filter are included within the site preventative maintenance programme.
- The blood tank will have a capacity of approximately 20m<sup>3</sup> and will be sealed and bunded. The blood will be removed from the site on a daily basis.

### ***Effluent treatment***

The effluent treatment plant (ETP) is designed to treat a maximum of 1600m<sup>3</sup>/day although the maximum allowable discharge per day is 1,166m<sup>3</sup> in line with the Yorkshire Water discharge consent. There is a 27% excess design capacity in the treatment plant to cope with periods of peak operation.

Full biological treatment will be in place to reduce the ammonia contained in the effluent to a level below the limit set within the sewer discharge consent.

- The effluent is pre-screened by a coarse screen within the production plant prior to being passed through a fine screen to remove additional solids.
- Screened effluent will be discharged to a balance tank to equalise the flow and loads onto the biological treatment stage of the plant.
- The dissolved air flotation (DAF) plant is designed to remove fats, oils and greases from the effluent.
- Traps will be in place to remove fats, oils and greases and prevent blockage of drains.
- The drains will be checked throughout the day to identify any blockages so that these can be removed as soon as possible.

### ***Emissions to air***

Point source emissions to air from the plant include the scrubber exhaust, the boiler stack, the chiller condenser vent and activated carbon filter vents from the balance tank and sludge storage tank within the effluent treatment plant.

The exhaust from the factory interior will be vented through a scrubber to abate odour. The scrubber will be based on a hypochlorite/caustic system.

The chiller condenser vent should only emit water vapour and therefore have no adverse impact on air quality.

The existing permit authorised operation of boiler plant of the same size as is proposed for the revised site infrastructure. There will therefore be no change in the concentration of combustion gases emitted from the site.

We consider that there is no increase in environmental risk from emissions of air resulting from this variation.

### ***Odour***

An odour management plan is included in the application which includes an odour risk assessment and identifies potential impacts and control measures. Key control measures proposed by the operator include:

#### *Lairage*

- On arrival the delivery lorry will be in a enclosed compartment comprising sealed doors.
- Lairage and hanging line areas covered.
- In house cleaning procedures. Lairage cleaned daily.
- Daily hygiene and housekeeping checks.
- Daily washdown of lairage and immediate processing area.
- Lairage wastes removed from site daily.

#### *Blood tank*

- Blood tank to be emptied daily.
- Blood tank to have spherical bottom to promote complete emptying.
- Blood tank to be cleaned after each collection and cleaning effluent to be drained off to the effluent system in a controlled manner.
- Regular cleaning of the bund, hoses and connection points of the surrounding area.
- Consideration of night time collection if appropriate.
- Addition of preservatives and coagulants or oxidising agents to blood collection system during warmer periods.
- Exhaust from the purging and back venting during blood collection will be vented to the odour scrubber. The air displaced by the blood in the tank is also to be vented to the odour scrubber.
- Ensure no odour breakthrough on carbon filters by using two in series.

- The visible state of the tanks will be checked as part of the preventative maintenance programme.

#### *Effluent treatment plant*

- Lid for the reception pits that is only opened for screen clearing.
- Covers to be fitted to screens to minimise odour release.
- Bin for screenings will be covered.
- Liquor will be aerated.
- Dissolved Air Flotation (DAF) tank will be within an enclosed building.
- DAF sludge tank sealed and under cover in ABP storage area. This area will be behind roller shutter doors.
- Washing down sludge from the tanker connector pipe after every collection.
- Any build up of material within the drainage system to be cleared as soon as possible. Daily checks of the drainage system will be undertaken.

#### *Odour abatement*

The abatement plant will be a packed bed scrubber designed to remove odours from the airstream. The process will be accomplished by contacting the contaminated air stream with a scrubbing liquor (hypochlorite solution) that absorbs or chemically reacts with the acidic and sulfonated organic contaminants. The cleaned air will then be discharged to the atmosphere and the contaminated scrubbing liquor sent to the effluent treatment plant. The scrubber will incorporate the following:

- A pH monitor for the monitoring of pH of scrubbing liquor with a control mechanism to dose with caustic soda.
- An oxidation reduction potential (ORP) monitor for the monitoring of conductivity of the liquor and hence the availability of chlorine for chemical oxidation.
- A flow meter fitted with a low flow alarm to ensure adequate scrubbing liquor is in place.

A daily visual inspection of the scrubber unit will take place. The maintenance of the scrubber is incorporated into the preventative maintenance programme for the site.

Odour will be checked during a daily survey at the surrounds of the factory. A procedure for carrying out the survey is contained within the application. A complaint procedure is also included.

An odour complaint was received by the installation in 2010. The complaint was investigated and it was concluded that the odour resulted from removal of effluent and blood from tanks, with the tanker exhaust a potential key cause.

Odour will be controlled via fugitive controls on sludge collection and tank containment and carbon filters.

A carbon filter is fitted for the abatement of odour associated with the venting of the blood tanker. To ensure that it operates correctly the carbon must have the capacity to adsorb odorous gases and the connections to the pipes/valves must be well maintained. The activated carbon should be renewed every 6 months or earlier if odours are detected during blood collection. The pipe connections will be checked every week.

We have reviewed and approved the Odour Management Plan and consider it complies with the requirements of our H4 Odour management guidance note. We agree with the scope and suitability of key measures but this should not be taken as confirmation that the details of equipment specification design, operation and maintenance are suitable and sufficient. That remains the responsibility of the operator.

### **Noise**

A noise management plan is included in the application which includes a noise risk assessment and identifies potential impacts and control measures. Key control measures proposed by the operator include:

- Deliveries of chickens and raw materials will be made during the daytime (7:00 to 18:00).
- The majority of blood collections will be scheduled to avoid night time hours.
- Regular maintenance of vehicles to minimise engine noise.
- Yard surface to be maintained to minimise potential for noise.
- Power packs provided on site to eliminate the need for lorry engines to be maintained on during deliveries or collections on site.
- Installation of louvers to minimise the impact from noise.
- When blood collection takes place only a small vacuum pump will be in operation to minimise noise.
- Training of operatives on noise minimisation will be implemented.

We have reviewed the Noise Management Plan and consider it complies with the requirements of our noise management guidance. We agree with the scope and suitability of key measures but this should not be taken as confirmation that the details of equipment specification design, operation and maintenance are suitable and sufficient. That remains the responsibility of the operator.

We have included an improvement condition in the permit specifying that the operator is to monitor noise when the site is operational. If the assessment indicates that additional management controls or attenuation are required to minimise the potential impact of noise then the operator will be need to put these in place.

### **Energy efficiency**

The following energy efficiency measures will be put in place to minimise energy use associated with the poultry processing activity:

- A heat exchanger will be installed and used to preheat water for cleaning.
- The airflow within the effluent aeration tanks will be controlled by a dissolved oxygen probe saving energy through linking the power demand of the blowers to the oxygen demand of the applied load.
- Equipment to be included within a preventative maintenance programme to identify faults or replacement needs.
- Records of abatement scrubber performance, including flow, pH and conductivity, are maintained to identify any falls in performance so that these can be addressed.
- Automatic controls of heating, lighting and air conditioning.
- Switching off of equipment and lights whenever not in use.
- Plant and equipment selected for energy efficient operation.

### ***Water use***

11.7 litres of water used per chicken is the anticipated maximum water demand at the installation in comparison to 8 to 15 litres per bird set out as best available techniques within the sector guidance note EPR6.11 for treating and processing poultry.

The following measures will be put in place to minimise water use associated with the poultry processing activity:

- Nozzles will be used instead of irrigation pipes at the defeathering stage.
- Water efficient shower heads will be fitted to wash poultry during evisceration.

## Annex 1: decision checklist

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

Aspect considered	Justification / Detail	Criteria met
		Yes
<b>Consultation</b>		
Scope of consultation	<p>The consultation requirements were identified and implemented. The decision was taken in accordance with Regulatory Guidance Note (RGN) 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.</p> <p>For this application we consulted the following bodies:</p> <ul style="list-style-type: none"> <li>• Public Health England</li> <li>• Director of Public Health</li> <li>• Health and Safety Executive</li> <li>• Sewer undertaker – Yorkshire Water</li> <li>• Local Authority – Environmental Health</li> <li>• Food Standards Agency</li> </ul>	✓
Responses to consultation and web publicising	<p>The web publicising and consultation responses (Annex 2) were taken into account in the decision.</p> <p>The decision was taken in accordance with our guidance.</p>	✓
<b>Operator</b>		
Control of the facility	<p>We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.</p>	✓
<b>European Directives</b>		
Applicable directives	<p>All applicable European directives have been considered in the determination of the application.</p>	✓
<b>The site</b>		
Extent of the site of the facility	<p>The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility.</p> <p>A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Biodiversity, Heritage, Landscape and Nature Conservation	<p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.</p> <p>There will be no significant change to the emissions to air as a result of the variation. All process water is discharged to sewer. Therefore we do not consider the proposed changes likely to have an affect on the designated sites.</p> <p>We have not formally consulted on the application. The decision was taken in accordance with our guidance.</p>	✓
<b>Environmental Risk Assessment and operating techniques</b>		
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p> <p>There will be no significant increase in emissions as a result of this variation, and consequently no increase in environmental risk.</p>	✓
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. See key issues section for measures proposed by the operator.</p> <p>We made these decisions in accordance with the Sector Guidance Note for Treating and Processing Poultry EPR 6.11.</p>	✓
<b>The permit conditions</b>		
Improvement conditions	<p>Based on the information on the application, we consider that we need to impose improvement conditions.</p> <p>See noise key issue section above for additional information.</p>	✓
Incorporating the application	<p>We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process.</p>	✓



Aspect considered	Justification / Detail	Criteria met
		Yes
	These descriptions are specified in the Operating Techniques table in the permit.	
Reporting	We have specified reporting in the permit to ensure that the installation is being operated in an efficient manner. We made these decisions in accordance with the Sector Guidance Note EPR 6.11 for Treating and Processing Poultry.	✓
<b>Operator Competence</b>		
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓

## Annex 2: Consultation and web publicising responses

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

Response received on 22/02/2016 from
Public Health England
Brief summary of issues raised
<ol style="list-style-type: none"><li>1. The applicant notes that emissions from the gas boilers are insignificant in relation to air quality impacts but does not provide an H1 assessment to verify this. Provided that the Regulator is content that further assessment of emissions from the boiler stacks are not required, there are no concerns over this part of the application.</li><li>2. The applicant has provided a noise assessment that notes some activities may cause noise disturbance and recommendations are made to mitigate them. The Regulator should ensure that the installation has sufficient mitigation measures in place to prevent off-site noise nuisance.</li><li>3. A detailed odour management plan has been provided and follows relevant guidance. The correct operation and maintenance of the odour abatement scrubber is important to ensure that odour nuisance is prevented. The Regulator should ensure that it is satisfied that the measures proposed to manage the system are appropriate and the installation has sufficient mitigation measures in place to prevent off-site odour nuisance.</li></ol>
Summary of actions taken or show how this has been covered
<ol style="list-style-type: none"><li>1. Gas boilers of the same size as those outlined in the variation application are already permitted through the existing permit and therefore there will be no increase in emissions associated with the variation.</li><li>2. We have included an improvement condition within the permit which requires the operator to monitor operational noise within 4 months of the variation being issued. If any potential issues are identified, the operator will be required to installation or introduce additional attenuation and management controls to address the source. The permit includes standard noise condition 3.4 which specifies that the activities shall be free from noise at levels likely to cause pollution and enables us to request a revised noise management plan if we consider that one is required.</li><li>3. We have assessed the odour control measures outlined within the application and are satisfied that these are adequate to minimise the potential for odour pollution. The permit includes standard odour condition 3.3 which specifies that the activities shall be free from odour at levels likely to cause pollution and enables us to request a revised odour management plan if we consider that one is required.</li></ol>

Response received from
Director of Public Health
Brief summary of issues raised
No response received
Summary of actions taken or show how this has been covered
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Response received from
Health and Safety Executive
Brief summary of issues raised
No response received
Summary of actions taken or show how this has been covered
-

Response received from
Yorkshire Water
Brief summary of issues raised
No response received
Summary of actions taken or show how this has been covered
-

Response received from
Environmental Health – Doncaster Borough Council
Brief summary of issues raised
No response received
Summary of actions taken or show how this has been covered
-

Response received from
Food Standards Agency
Brief summary of issues raised
No response received
Summary of actions taken or show how this has been covered
-

The application was also advertised on our website for 20 working days and no responses were received.