



# APPENDIX 11: BEST AVAILABLE TECHNIQUES

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ENVIRONMENTAL PERMIT VARIATION  
APPLICATION

On behalf of

RJ Hughes

**BERRYS**

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The following Best Available Techniques (BAT) under Directive 2010/75/EU of the European Parliament and of the Council for the intensive rearing of poultry, are complied with as part of the Environmental Permit for RJ Hughes.

## BAT 1. Environmental management Systems (EMS)

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There is an EMS in place which incorporates all required features under BAT 1, as shown in Appendix 3 – Environmental Management System.

## BAT 2. Good House Keeping

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As part of the Environmental Management System in place, techniques under BAT 2, Good House Keeping will be undertaken.

## BAT 3. & BAT 4. Nutritional Management

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In order to reduce total nitrogen and phosphorus excreted and consequently ammonia emissions while meeting the nutritional needs of the animals the following will be undertaken at the Poultry Site;

- Reduce the protein content by using an N-balanced diet, based on the energy needs and digestible amino acids, as detailed in the Odour Management Plan.
- Diet formulation adapted to specific requirements of the production period, as detailed in the Odour Management Plan.
- Feed specifications are prepared by the feed compounder's specialist in nutrition.
- Feed will be supplied from UKASTA accredited feed mills, so that only approved raw materials will be used.

The Poultry Site can meet the relevant BAT Associated Emission Levels (AELS) for nitrogen and phosphorous excretion as set out in Table 1.1 of BAT 3 and Table 1.2 of BAT 4.

## BAT 5. Efficient Use of Water

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In order to use water efficiently, water records will be kept as detailed within Appendix 3 – Environmental Management System, in addition the following techniques will be used to minimise water usage;

- Detect and repair water leakages immediately.

- Use high-pressure cleaners for cleaning animal housing and equipment.
- Select and use suitable equipment, which includes the use of nipple drinkers to provide water on demand, but to minimise wastage and spillage.

## BAT 6. & 7. Emissions from Wastewater

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In order to reduce the generation of waste water and to reduce emissions to water from waste water a combination of the following techniques will be used;

- The yard areas will be kept clean and free from manure, dirty litter or other materials.
- The farm will minimise the use of water
- Clean water is kept separate from dirty water. Dirty water will be directed to underground water tanks for storage.

Land spreading of waste water will take place in the suitable weather conditions, using farming equipment such as a tanker or irrigation system.

## BAT 8. Efficient Use of Energy

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Energy efficiency techniques in relation to the Poultry Site are as detailed in Appendix 6 – Energy Efficiency.

## BAT 9. & BAT 10. Noise Emissions

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In order to prevent or, where that is not practicable, to reduce noise emissions, a Noise Management Plan has been put in place, as detailed in Appendix 10 – NMP.

This document contains methods, techniques and protocol for containing appropriate actions, timelines and noise monitoring along with responding to identified noise events.

## BAT 11. Dust Emissions

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In order to reduce dust emissions from the poultry houses and site, techniques set out in Appendix 2 – H1 Environmental Risk Assessment will be undertaken.

## BAT 12. & BAT 13. Odour Emissions

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In order to prevent or, where that is not practicable, to reduce odour emissions, an Odour Management Plan has been put in place, as detailed in Appendix 9– OMP.

This document contains methods, techniques and protocol for containing appropriate actions, timelines and odour monitoring along with responding to identified odour events.

## BAT 24. & BAT 25. Monitor of Nitrogen and Phosphorous Emissions

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In order to monitor the total nitrogen and total phosphorus excreted in manure, the following technique and frequency will be recorded and monitored by the Site Operator;

- Estimation using manure analysis for total nitrogen and total phosphorus content. The frequency required is once a year.

In order to monitor ammonia emissions to the air, the following technique and frequency will be recorded and monitored by the Site Operator;

- Estimation by using a mass balance based on the excretion and the total nitrogen present at each manure management stage. The frequency required is once a year.

## BAT 26. Monitor Odour Emissions to Air

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Odour emissions to the air will be monitored as detailed in Appendix 9 – Odour Management Plan.

Monitoring takes one of 3 forms:

1. Proactive (operational management);
2. Proactive (impacts); and
3. Reactive (impacts).

The monitoring undertaken at the Poultry Site begins with ensuring the appropriate operation of the farm in relation to the potential sources of odour emissions detailed above. Monitoring in this way is proactive, for example ensuring that the litter remains at optimum moisture content.

If on site operations (for example cycle stage) and ambient conditions (for example warm weather) are suitable for a high potential for emission and impact, a review of process and operational optimisation will be undertaken by the farm manager. This may inform, for example, the precise timing for destocking.

RJ Hughes will carry out pro-active monitoring of odours in the area around the site to help detect any off-site odours and identify the cause or causes if present. This monitoring is based on static “sniffing” at various locations around the site following a standard format. The odour reporting form is included with the OMP.

The expansion to the site will be monitored routinely (daily initially and then weekly after the first three months operations, if odours are not detected) using sniff testing. Further sniff testing and observations will be conducted around the various operations on site to identify potential odour risks and sources.

Results of this assessment will be recorded in the site diary and daily monitoring sheet, which will be available for inspection in the site office. Prevailing weather conditions and processing conditions being carried out on site at the time of the assessment will also be recorded.

RJ Hughes already have a proactive relationship with near neighbours so that neighbours are encouraged to report any low level odours which are not at “complaint” levels as a means of detecting potential future problems at an early stage.

Neighbours will also be warned of any likely short term odour episodes which might arise as a result of exceptional or infrequent maintenance events. A list of contact details for near neighbours will be maintained in case there is a need to contact them in the event of an emergence event with potential off-site consequences (e.g. serious fire).

RJ Hughes will also follow weather conditions online to allow these to be logged and highlight whether the wind was in the direction of the receptor when the complaint was logged. In this way the potential for complaints may be verified and the potential for other sources discounted.

Monitoring of operations at close receptor points will be undertaken routinely to check that odour is not an issue for neighbouring properties.

In the event of a complaint, ambient odour surveys will be undertaken in accordance with IAQM methods.

It is noted that BAT 26. Is only applicable to cases where an odour nuisance at sensitive receptors is expected and / or has been substantiated. The above techniques will be undertaken to eliminate odour nuisance at sensitive receptors.

## BAT 27. Monitoring Dust Emissions

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In order to monitor dust emissions from each poultry use the following technique and frequency will be reordered and monitored by the Site Operator;

- Estimation by using emission factors. The frequency required is once a year.

## BAT 31. Ammonia Emissions form Poultry Houses

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In order to reduce ammonia emissions to air from each house, the Poultry Site will use of a combination of the techniques given below;

- Full house clear down at the end of each crop cycle.
- Non-leaking drinking system:
- Computer controlled ventilation system