

Housing Review

The design and management of all the poultry houses has been reviewed to ensure conformance with the Best Available Techniques described by the Environment Agency (2010); EPR 6.09 Sector Guidance Note; How to comply you're your environmental permit for intensive farming; Version 2 and those in the 2013 Best Available Techniques (BAT) Conclusions document.

Barn Farm is a new installation erected in 2016 and 2017 and owned and operated by Cobb Europe Ltd. Existing dilapidated chicken sheds and auxiliary buildings on the site were entirely demolished and cleared. Installation comprises 8 new poultry houses purpose built for great grandparent breeder chickens producing fertilised eggs for grandparent breeder chicken flocks elsewhere. Each house provides approximately 8,500 places each and a combined capacity for 51,000 places. A vehicle transfer building, feed bins, weighing rooms, administration and egg stores, service crew building, package sewage treatment plant and package standby generator and storing diesel and LPG are directly associated activities.

Name of building	Function	Is Building Management BAT or not BAT?	Is Building Design BAT or not BAT?	Is it identified in Housing Improvement Plan?
Poultry houses No 1- 8	Breeder chickens	BAT	BAT	N/A

Housing improvement plan

Area needing improvement	What needs to be done – possible solutions	Proposed cost	Proposed timescale for completion	Timescale agreed with the Environment Agency
Building design changes				
Poultry houses No 1- 8	N/A	N/A	N/A	N/A
Building management changes				
Poultry houses No 1- 8	N/A	N/A	N/A	N/A

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Poultry housing design

	Condition	Best available techniques used
1	Drinkers	Installed package nipple drinkers in rows over slatted areas running parallel to the long axis of each house. Located on the slatted areas to be close to the community nests in the central part of the house to encourage hens to use the nests, and avoids water leaking on litter.
2	Housing	Erected poultry houses which are well insulated and have impermeable, concrete floors and a damp proof course. Roofs insulated with 200mm fibreglass and the walls with 100mm to achieve not less than $0.4W/m^2/^\circ C$ eliminating condensation on the inner linings and minimising heat loss. All the poultry houses are windowless and use artificial light for applying lighting programmes.
3	Breeder systems	Erected and fitted out poultry houses as fan ventilated houses with a fully littered floor and equipped with non-leaking drinking systems for breeders.

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Building management

	Condition	Best available techniques used
4	Litter and manure	<p>Keeping litter (wood shavings or chopped straw) loose and friable using forced drying of litter using indoor air. Inspecting daily to ensure it does not become excessively wet or dry. Any changes in quality will be investigated and steps taken to rectify the problem, including adding extra litter.</p> <p>Nipple drinkers set at the correct height and maybe altered to meet needs of the birds. Keeping records of water use, higher use maybe indicative of leakages, disease or errors in feed formulation. Regularly checking, repairing and maintaining drinking systems. The drinkers are switched off during cleaning.</p> <p>In addition, restricted feeding is critical for breeders throughout the time the birds are on the farm. It reduces water consumption so maintains a high dry matter content of droppings and litter, minimising emissions of ammonia and odour.</p>
5	Temperature	<p>Temperature will meet the health and welfare needs for the age and number of birds. Extremes of temperature are avoided and draughts minimised.</p> <p>Installed LPG warm air blowers for space heating in cold weather. Controls are used to match heating needs to ventilation needs so that the heat is not wasted, by being drawn out of the poultry houses.</p> <p>Regularly checking, repairing and maintaining heating equipment and LPG storage tanks.</p>
6	Ventilation	<p>Ventilation will meet the health and welfare needs for the age and number of birds.</p> <p>Installed package computer-controlled mechanical ventilations systems Installed high velocity fans with package vertical outlet cones on ridges of the houses</p>

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		<p>Selected low noise fans relative to typical rural background noise Installed ventilation inlets in the side walls.</p> <p>Ventilation rates will provide sufficient fresh air for the age and number of birds - prevent accumulations of ammonia, hydrogen sulphide, carbon dioxide and monoxide and dust. Target rates for different weather conditions are calculated in conjunction equipment supplier or poultry advisor. Air speeds across the house will not be largely different from one area to another, and the houses are free from draughts.</p> <p>Techniques are providing well controlled environments inside the house without condensation, limiting moisture content of droppings and litter and emissions of ammonia and odour. Using high velocity fans with vertical outlet cones on the ridges improves efflux height and dispersal of ammonia, odour and dust and is minimising dust settlement and contamination of clean roof water-run off.</p> <p>Planned for emergency and installed package stand-by generator and diesel tank. Power outages occasionally occur and bird welfare and egg laying would be prejudiced in fan ventilated houses and deterioration of litter quality, increased ammonia and odour emissions.</p> <p>Regularly checking, repairing and maintaining ventilation equipment and stand-by generator, including calibrating thermostats.</p> <p>Litter delivered in plastic wrapped bales and opened and spread inside, new litter used for each batch and never reuse litter.</p>
7	General management	<p>Floors and walls are kept clean and washed and disinfected end of each cycle. Maintain regular inspection & maintenance programme & records for buildings & equipment, including any cracks and damaged areas of floors and walls where water leaks and draughts could increase the moisture content of the litter.</p>

Permit reference EPR/NP3135JA, Cobb Europe Ltd, Barn Farm

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		Regularly checking, repairing and maintaining water and feed supply system, ventilation system and temperature sensors, silos and feed delivery systems and dust collectors on silos. Including cleanliness of the farm and pest management.
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