



# APPENDIX 4: TECHNICAL STANDARDS

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ENVIRONMENTAL PERMIT VARIATION  
APPLICATION

On behalf of

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**BERRYS**

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## Appendix 4: Technical Standards

### 1. Operations

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The operation of the farm is in accordance with SGN EPR6.09 Version 2 'How to comply with your environmental permit for intensive farming'.

Argoed Poultry Unit already operates an existing laying hen poultry site, housing 32,000 laying hens. This operation will be replaced with a broiler chicken unit, including the conversion of the existing shed. Three further sheds will be built on the unit along with associated infrastructure.

The existing egg production building is located to the east of the main farmstead and consists of an egg laying unit and two feed bins. The site for the proposed new broiler units is immediately to the north of the existing egg unit which is to be converted. The site is currently down to grassland and is grazed by livestock and cut for hay/silage. There is existing access into the site which was improved as part of the development of the existing poultry unit. The total site area is around 3.20ha.

The Permit Application is for a new boiler chicken unit to replace the egg laying site. The boiler unit will house a total of 220,000 birds over the four sheds and include the removal of the 32,000 laying hens.

The existing permit is EPR/AB3694HZ.

### 2. Feed

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The selection and use of feed is in accordance with SGN EPR6.09 Version 2 'How to comply with your environmental permit for intensive farming'.

The feed is supplied by the processing company and is mixed to the appropriate requirement at each stage of the production cycle. Protein is reduced over the growing cycle by providing different feeds. Phosphorus levels in rations are reduced over the production cycle.

There are existing feed bins in place. Additional feed bins will be erected as part of the three proposed additional poultry sheds. These bins are specifically designed to accommodate the required feeding regime. They will have a capacity of 30 tonnes and measure 6.6m in height and 2.8m in diameter. These bins are to be located in groups between the poultry buildings.

### 3. Housing

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The conversion of the egg laying shed and erection of the three additional poultry shed housing, design and management will be in accordance with SGN EPR6.09 Version 2 'How to comply with your environmental permit for intensive farming'.

Three additional purpose designed broiler poultry buildings will be constructed. The buildings will be of portal framed construction with insulated box profile metal sheeting to the walls and box metal profile sheeting roofs. The internal flooring will be smooth, easily washable, concrete floor on a damp proof membrane. The walls will be on a poured concrete foundation.

The roof construction typically consists of an internal steel box profile 'ceiling' with a minimum of 140mm but potentially up to 280mm fibreglass insulation between timber purlins with steel box profile sheeting external roof covering. Walls will be timber framed panels/battens with 100mm fibreglass insulation with external steel box profile sheeting. The sheds will be fully insulated with a U-Value of approximately 0.4 W/m<sup>2</sup>/°C. This will eliminate condensation on the inner lining of the buildings and minimise any solar heat gain.

The ventilation for the buildings will be ridge and gable end fans. This ventilation system for the sheds will include 15 ridge fans and gable end fans. The ventilation management system will control the ventilation rates depending on the health and welfare needs of the birds and the outside weather conditions. A computer automatically controls ventilation and heating so that heat is not wasted by being drawn out of the building.

Temperature in the sheds will meet the health and welfare needs for the age and number of the birds. The existing on-farm AD unit will be used to provide heat to the poultry buildings with back up gas heaters for emergencies. Anaerobic digestion (AD) is a natural biological process which transforms biomass (feedstock) into useful bio-fertiliser (digestate). Organic waste, including animal manure, contains valuable nutrients and a significant amount of nitrogen locked up in unavailable forms. As a fully enclosed in-vessel process AD facilitates the retention of all nutrients, converting them into available forms whilst preventing unwanted pollution.

The production of renewable energy results from the capturing of biogas, comprising 60% methane and 40% carbon dioxide, which is released throughout the AD process. The biogas produced can be used in a number of ways, including use in a conventional boiler, the upgrading and injecting of biogas directly into the local grid network, or use as fuel for a Combined Heat and Power (CHP) engine which produces electricity as is the case at Argoed Farm.

The bedding in the existing and proposed buildings is wood shavings to a depth of around 2cm. This complies with the Red Tractor Assurance Scheme standard and will allow the floor to 'breathe'. Litter will be kept loose and friable. The quality will be regularly inspected to ensure it does not become excessively wet or dry. Steps

as described in SGN EPR6.09 Version 2 'How to comply with your environmental permit for intensive farming' will be taken to rectify any changes to the quality of the litter.

Nipple drinkers will be used in the new poultry buildings, as they provide water on demand but minimise wastage. They also have benefits in terms of management, hygiene and odour control, with limited spillages meaning the bedding keeps dry. Water pressure will be checked frequently and any wet litter around the drinkers addressed.

The buildings will have a low-wattage, low intensity light above the door openings. During hours of darkness the buildings will be lit internally to around 0.4 lux for bird welfare. There will be no light spill outside of the buildings. The doors will be shut and windows shuttered at night to stop light escape.

## 4. General Management

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The management of the site will be overseen by Mr R. Hughes. All staff working on the site will be suitably trained and experienced in working on a poultry site.

In accordance with the management system at the farm, the buildings will be regularly inspected and maintained. The floors and walls of the sheds will be kept clean.

The site will be regularly inspected and well maintained.

## 5. Livestock Numbers and Movements

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A system is in place to record the number of animal places and animal movements.

These records will be available for inspection.

## 6. Slurry spreading and manure management planning – off site-activity

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Litter will not be stored at the installation site. It will be transported off site and taken to the Anaerobic Digestion (AD) Plant. All of the chicken manure produced in the poultry buildings will be utilised by the farms own AD plant.

Benefits of using the chicken muck in the AD process include that the AD process breaks down the total volume by over 50% as well harnessing the methane gas which is what normally causes the odours associated with muck spreading. Following clear-out of the buildings the muck will be stored in a storage building at the AD site.

The methane gas is burnt off in the engine unit to produce renewable energy leaving a by-product of digestate which is an odourless fibre. Having been broken down by the digestion process the digestate is more readily available for plants to take up than unprocessed chicken muck. Nutrients can be easily utilised by the plants therefore reducing nutrient run-off.

A manure management plan has been produced as part of the permitting process.

## 7. Improvements programme

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Each year a review of the housing and drainage systems will be carried out to identify an improvement programme. This will identify any areas that need improvement, possible solutions, the anticipated cost and projected timescale.

## 8. Emissions and Monitoring

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The following table sets out the emission points from the installation:

Emission point description/source and location	Source
<b>Air</b>	
Ridge fan outlets	15 no. of ridge fans for the 4 sheds.
Gable end fan outlets	gable end fans for the 4 sheds
Exhaust from generator	Generator
Oil tank	Vent
Back up gas tanks	Heating for houses
<b>Land</b>	
Clean water as identified on site drainage plan	Roof water from broiler sheds and yard area – via stone trenches

Water	
Outlet from attenuation discharging to watercourse	Stone trenches treating roof water from poultry houses

There are no emissions to groundwater.

## 9. Fugitive Emissions

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Appropriate measures for preventing and minimising fugitive emissions will be put in place in accordance with the SGN EPR6.09 'How to comply with your environmental permit for intensive farming'

All building and infrastructure will be maintained in good repair.

Areas around buildings to be kept free from build-up of manure, slurry and spilt feed. Footbaths will be managed so that they do not overflow.

Drainage from animal housing and water from cleaning will be collected in 2 x twin walled underground storage tanks. Diverter bungs and drain mats to be used during wash down periods to prevent the contamination of surface water systems and to divert the wash water to the dirty water tanks. Drainage from yards contaminated by litter or wash water is collected in a dirty water tank.

The underground tank will be located underneath the yard area will be sized to adequately accommodate the volumes of water used in each production cycle. When cleaning out is taking place the dirty washing water and any contaminated rain water will be directed via drains into the dirty water tanks. The proposed underground tank will be built to conform to specifications in SGN EPR6.09 'How to comply with your environmental permit for intensive farming'. Spent disinfectants are added to the dirty water collection tanks. There will be a level indicator to allow the capacity of the tanks to be monitored.

Clean drainage systems are not contaminated. To ensure that no dust enters the watercourse through clean water drainage this will be diverted through stone trenches running along each building before discharge. Details can be seen on the Site Drainage Plan.

## 10. Dust

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Feed will be stored in purpose built covered feed bins located in batches between the poultry buildings. Feed will be blown directly from the bulk feed HGVs into the

feed bins. Feed will then be piped from the bins to the sheds minimising dust emissions.

Ventilation systems are operated to achieve optimum humidity levels for the stage of production in all weather and seasonal conditions. Control of minimum ventilation rates is planned to avoid the build-up of moisture in the house. Ventilation is appropriate to the age and weight of the animal. The sheds are fan ventilated with a fully littered floor equipped with non-leaking drinking systems.

The sheds will be managed to maintain the poultry litter in as dry and friable condition as possible. Dust is controlled through the management of litter and air quality. Litter will not be stored on the site.

Rainwater run-off will be routed via stone trenches running along the sides of the buildings to the attenuation system. The trenches will be constructed to treat the lightly contaminated rainwater runoff from the shed roofs. The slow movement of water along the trenches through stones, encourages deposition of the solids washed off the roof and helps to remove nutrients such as phosphorus before it enters the attenuation pond as shown on the site drainage plan.

## 11. Carcase Management

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Fallen stock will be disposed of in accordance with the current Animal By-Products Regulations. The dead birds are stored in vermin proof containers to await collection by Animal Health Approved contractors, which will be undertaken on a regular basis.

## 12. Flies

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Control measures and mitigation methods will be in place to limit the effect of flies. Appropriate actions will be put into place to prevent and control flies should a nuisance arise.

## 13. Bunding and Containment

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### 13.1 Agriculture Fuel Oil and Other Chemical Storage

There are existing fuel / oil storage facilities which are located within the farmyard at Argoed Farm. Back up supplies will be kept on the poultry site. The fuel oil storage facilities are bunded. The bunds meet the requirements of the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) Regulations 2010 (SSAFO Regulations). The tanks are regularly inspected.



Pesticides and veterinary medicines are kept in a store capable of retaining spillage, resistant to fire, dry, frost free and secure.

### 13.2 Foodstuffs

Feed is kept in feed bins, located in batches between the poultry buildings. No liquid feed is stored at the site.

The feed bins are to be sited away from site traffic.

## 14. Odour

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There are sensitive residential receptors within 400m of the site, accordingly, an Odour Impact Assessment has been carried out as part of the permit and planning application.

In accordance with the SGN EPR6.09 'How to comply with your environmental permit for intensive farming' and the H1 assessment refer to Appendix 9 of this application - Odour Management Plan.

## 15. Noise and Vibration

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There no sensitive residential receptors within 400m of the site. In accordance with the SGN EPR6.09 'How to comply with your environmental permit for intensive farming' and the H1 assessment please refer to Appendix 10 of this application - Noise Management Plan.