

**Supporting Information for application to vary environmental permit
EPR/BP3334CB/V006 Falcons Hall Farm Poultry Unit, Falcons Hall Farm,
Finninhgam Road, Rickingham, Diss, Norfolk, IP22 1LP**

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Q2 Summary of proposed change

1. Application to vary environmental permit to extend installation boundary to enclose approx. 2.9ha greenfield agricultural land to erect 4no additional poultry houses B1,B2,B3&B4 approx. 280m to northeast of 5no. existing houses. For rearing pullets for replacement breeder stock same as existing houses. Existing parts of the installation and operator's details unchanged including company name, registered address, and company number.
2. Poultry houses designed and operated in accordance with the SGN EPR 6.09 and Best Available Techniques (BAT) Conclusions Document. Modern clear span portal construction over concrete floors poured over a continuous damp proof membrane to prevent water ingress and insulated walls and roofs. Forced ventilation via side inlets, extraction fans and uncapped outlets on the roof - medium velocity (Vents greater than 3.5m high, fan efflux velocity greater than 2m/s), actually efflux velocity greater than 7m/s but outlets only 5.2m high. Ventilation is computer controlled to remove moisture under all weather and seasonal conditions minimising ammonia, odour and dust release while meeting the physiological needs of the chickens.
3. Uncontaminated roof-water runoff intercepted in stone-filled French drains under the eaves with perforated pipes acting as soakaways. Infiltration drainage is limited owing to low permeability of ground, so most flows through solid pipes into an attenuation basin without any lining being required. Uncontaminated surface water runoff the concrete apron (excluding during periods for litter removal and washing-out) also conveyed in solid pipes into the basin. The surface water is discharge offsite at a controlled rate into an unnamed, natural watercourse via a flow control so as not to increase the risk of flooding onsite. The watercourse is a tributary of the Little Ouse, a main river approx. 3km to the north.
4. The surface water drainage system will drain uncontaminated surface water runoff only. When the poultry houses and apron are cleaned, a diverter valve will direct the washdown water into a package, below ground dirty water tank for offsite disposal. Dirty water will be regularly collected by a registered carrier for spreading on farmland. The pollution control measures prevent liquid washings from escaping to minimise risk of pollution in the watercourse and downstream environment, underlying geology, and groundwater.
5. Prior to the arrival of day-old chicks from a hatchery, the concrete floors in each house are covered with a mixture of dust extracted wood shavings and chopped straw to a suitable depth and houses pre-warmed to 31°C using liquid petroleum gas fired heaters. As birds grow, the ventilation rate increases, and house temperatures are gradually reduced until the heating can be switched off. Two cycles per year of rearing day-old chicks up to 19 weeks of age, almost up to point of lay, then removed and transported on to breeding farms elsewhere. Each cycle takes 26 weeks including a 3-week washdown period and 5-week rest period before restocking.
6. Feed purchased and delivered from a feed mill and stored onsite in fully enclosed package silos located in between the houses to protect them from collision damage. Diets formulated according to birds' requirements and stage of growth. Protein and phosphorous levels are reduced over the growing period. Water is provided via nipple drinkers which are designed to minimise spillage. Together with good environmental control in the houses

helps to maintain good litter conditions and reduce ammonia and odour. Water use in each house is monitored daily by meters. Low energy lighting is used throughout the site and a package, diesel-fired back-up generator to provide electricity for equipment on which chickens depend.

7. Bird mortalities are removed daily, and numbers recorded. Carcasses stored in secure, covered containers to minimise odour and flies and frequently collected by an approved transporter under the National Fallen Stock Scheme. At end of the growing period, all the birds are removed from the houses and the used litter taken away from site for spreading on land to confer agricultural benefit in accordance with a manure management plan or supplied as fuel for local power generation. Houses and equipment will be pressure washed, disinfected, and dried, before restocking.
8. Westhall Wood and Meadow Site of Special Scientific Interest (SSSI) and Burgate Wood SSSI are designated sites for nature conservation within 5km. Modelling predicts that the process contribution to annual mean ammonia and nitrogen deposition rates from the existing and proposed poultry houses would be well below the Environment Agency's lower threshold percentage (20% for a SSSI) of the relevant Critical Level or Critical Load at Westhall Wood and Meadow SSSI. Surrounding land is predominantly agricultural, undeveloped with some dwelling houses.

Q4 Summary of environment management system

9. EMS in accordance with SGN EPR 6.09 How to comply; Version 2; January 2010.

10. Normal operations

Daily records will be kept on all aspects of the farm's operation including:

- Water consumption
- Feed consumption and deliveries
- Bird mortalities
- Poultry house temperature and humidity
- Waste collections.

Daily inspection by staff around the site to ensure equipment is operating correctly.

11. Maintenance schedule and records

- A programme of planned preventive maintenance will be carried out on all plant and equipment including the ventilation fans, feeding and water systems.
- Inspection and maintenance schedules based on manufacturer's recommendations.
- Back-up generator will be tested weekly to ensure it is working properly.
- Buildings and equipment on site will be regularly inspected and checked for visual signs of leakage, corrosion, structural damage, security, and correct operation.
- A record of all faults and maintenance work and inspections will be kept in the site office.

12. Incidents and abnormal operations

Measures will be in place to identify incidents and abnormal operations. Staff will be trained to be able to detect abnormal operation and investigate its causes and get back to normal operation and ensure the problem does not reoccur.

13. Complaint system

Complaints will be logged and referred to the Site Manager for investigation and follow-up action. A record will be kept of any remedial action to prevent or minimise the causes and we will respond to concerns raised by the local community as appropriate.

14. Accidents

Site has an accident management plan which will be implemented if an accident occurs. Events or failures that could damage the environment have been identified using the H1 environmental risk assessment for accidents. The format of the site Accident Management Plan is in accordance with the Environment Agency's accident prevention and

management plant at <https://www.gov.uk/guidance/develop-a-management-system-environmental-permits#accident-prevention-and-management-plan>.

15. Training

- All staff are suitably qualified to work at the installation.
- All staff will receive formal training from both the Site Manager and an external training provider.
- All staff will receive formal training on health and safety, the accident management plan and will be trained about the requirements of the environmental permit and pollution prevention.
- New staff will be mentored as part of their on-the-job training.
- Staff and contractors will have defined roles.
- Training and instruction of staff and contractors will be recorded in the training plan.

16. Site security

- Site does not have a secure perimeter fence although it is well hidden from the nearby road by earth banks.
- Poultry houses are securely locked at night.
- Site gates locked at night to prevent pedestrian and vehicle access out of hours.
- The fuel oil and LPG tanks will be secure and locked.
- There is no public footpath through any part of the site.

17. Site closure plan

A site closure plan will be created and reviewed in pursuance of any conditions in the Permit or inspection scheme. Such a plan will include removal of any potentially polluting substances and decommissioning and removing equipment, plant, buildings, hard standing and underground structures.

18. Certification

The installation will be operated in accordance with a poultry assurance certification scheme including the EMS.

Q8a Technical standards to control emissions from 4no. bespoke poultry houses B1,B2,B3&B4 for rearing pullets

19. Technical standards in accordance with SGN EPR 6.09 How to comply; Version 2, January 2010. No necessary improvements have been identified to meet compliance requirements.

Summary of main measures used to control emissions from poultry houses B1-B4

20. Selection and use of feed

Operator will be able to use a nutritional strategy to reduce levels of nitrogen excreted and consequently, ammonia and phosphorous excretion while meeting the nutritional needs of the chickens.

Package feed delivery equipment - storage silos, augers, pipes, and feeders, etc will be designed to accommodate the required feeding regime for rearing pullets for replacement breeding stock, otherwise feeding pullets on the floor via feed spinners.

21. Housing design and management

(a) Housing

Poultry houses designed and constructed to modern specifications – clear span portal construction on concrete floors poured over a continuous damp proof membrane, concrete panel walls and insulated walls and roofs with steel cladding. Walls and roofs fully insulated with a U-Value of approximately 0.4 W/m²/°C to reduce condensation and heat loss.

(b) Litter

Litter will be kept loose and friable and regularly inspected to ensure it does not become excessively wet or dry and steps taken to rectify any changes to the quality of the litter.

(c) Temperature

Temperature in the houses will meet the health and welfare needs for the age and number of chickens. Liquid petroleum gas heaters will be regularly spaced in the houses to prevent cold spots and extremes of temperature. Extraction fans will be fitted with back draught shutters to prevent draughts and unnecessary heat loss. Houses will be accessed via a control room/vestibule area, which prevents draughts.

(d) Ventilation

Package computer-controlled ventilation systems will be installed to control ventilation rates, so they are appropriate to the age, weight, and health and welfare needs of the chickens:

- Operated to achieve optimum humidity levels for the stage of production in all weather and seasonal conditions.
- Control of minimum ventilation rates planned to avoid build-up of moisture.
- Houses will be managed to maintain litter as dry and friable as possible.
- Dust controlled through the management of litter and air quality.
- Medium velocity (Vents greater than 3.5m high, fan efflux velocity greater than 2m/s), actually efflux velocity greater than 7m/s but outlets only 5.2m high.
- Uncapped outlets on the ridge of the roofs will avoid dust deposition on the roofs and contamination of rainwater runoff.
- Uncontaminated runoff water from roofs and open concrete apron (excluding during periods of depopulating and washing out) will be conveyed into an offsite, natural, watercourse.

(e) General management

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

(f) Livestock numbers and movements

A system will be in place to record the number of bird places and bird movements on and off the site. These records will be available for inspection.

(g) Slurry spreading and manure management planning – offsite activity

- Litter will not be stored at the installation.
- Litter will not be spread on land belonging to the operator.
- Litter will be exported from the installation. Records will be kept of the quantities and the date of transfer, for example to a power station for recovery or third party for spreading on land and the names and addresses of the receiving farms.
- The receiver of the litter will confirm the litter is spread to land in accordance with the Code of Good Agricultural Practise or that the spreading will be in accordance with a manure management plan for the receiving land.

(h) Fugitive emissions

Appropriate measures for preventing and minimising fugitive emissions will be in place with provisions for:

- Buildings and equipment will be well maintained and kept in good repair

- Areas around buildings will be kept free from build-up of litter and spilt feed
- Drainage from the poultry houses and water from cleaning out will be collected in a package underground storage tank shown on the drainage plan
- Diverter valve shown on the drainage plan will be used during wash down periods to prevent the contamination of surface water systems and to divert the wash water into the dirty water tank. Clean drainage systems will not be contaminated.
- Drainage from yards contaminated by litter or wash water will be collected in the dirty water tank.
- The dirty water collection systems and package storage tank will be designed to deal with the volumes of wash water generated and manufactured to conform to the specification in SGN EPR6.09. Footbaths will be managed so that they do not overflow and spent disinfectants will be emptied into the dirty water tank.
- Wheel washings will be prevented from entering into surface or groundwater.

(i) Dust

The H1 Environmental Risk Assessment submitted with the application shows dust sources have been identified as having potentially moderate and minor significance.

At Falcons Hall Farm Poultry Unit there are 2 dust sensitive receptors including a residential dwelling and commercial premises within 100m of the existing boundary. There are no additional sensitive receptors result of extending the boundary to erect 4no additional poultry houses. Dust & bio-aerosol management plan in place, and mitigation and management measures are in accordance with SGN EPR6.09:

- Poultry feed will be stored in package feed silos with augers and pipes and protected from collision damage by careful siting relative to traffic flows – in between the poultry houses, or with measures such as provision of kerbs or other markers to stop reversing vehicles or use of barriers in more vulnerable locations.
- Feed will be delivered directly from suppliers and blown directly into silos.
- Feed will be delivered into the houses by package augers and pipes.
- No milling or mixing of feed will take place at the farm.
- Used litter will not be stored onsite.

(j) Carcase management

Carcasses of dead chickens will be disposed of in accordance with Animal By-Products Regulations, stored in secure, covered containers and frequently collected by an approved transporter under the National Fallen Stock Scheme.

(k) Flies

Appropriate actions will be implemented to prevent, and control flies should problems occur.

(l) Measures for bunding and containment

i. Agricultural fuel oil and other chemical storage

A package, diesel-fired back-up generator with integrally bunded fuel tank will be installed for houses B1,B2,B3&B4 and will meet the requirements of the Water Resources (Control of Pollution)(Silage, Slurry and Agricultural Fuel Oil) Regulations 2010 (SSAFO Regulations). The generator will be regularly inspected.

Pesticides and veterinary medicines will be kept in stores that are resistant to fire, dry, frost-free, and secure against unauthorised access and capable of retaining any spillage.

ii. Feedstuffs

Poultry feedstuffs will be stored in package feed silos with augers, pipes with careful siting relative to traffic flows – in between the houses, or with measures such as provision of kerbs or other markers to stop reversing vehicles or use of barriers in more vulnerable locations.

(m) Odour

The H1 Environmental Risk Assessment submitted with the application shows odour sources have been identified as having potentially moderate and minor significance.

At Falcons Hall Farm Poultry Unit there is one sensitive receptor a commercial premises within 400m of the existing boundary. There are no additional sensitive receptors result of extending the boundary to erect 4no additional poultry houses. Falcons Hall Farm Cottages are 260m from the extended boundary to the north but leased to the operator and occupied by workers on the poultry unit so not sensitive receptors. Odour management plan in place, and mitigation and management measures which are in accordance with SGN EPR6.09.

(n) Noise and vibrations

The H1 Environmental Risk Assessment submitted with the application shows noise sources have been identified as having potentially moderate and minor significance.

At Falcons Hall Farm Poultry Unit there is one sensitive receptor a commercial premises within 400m of the existing boundary. There are no additional sensitive receptors result of extending the boundary to erect 4no additional poultry houses. Falcons Hall Farm Cottages are 260m from the extended boundary to the north but leased to the operator and occupied by workers on the poultry unit so not sensitive receptors. Noise management plan in place and mitigation and management measures which are in accordance with SGN EPR6.09.

Q8a Technical standards contd. Review of best available techniques (BAT) to control emissions from 4no. bespoke poultry houses B1,B2,B3&B4

22. The Environment Agency initiated variation following the Intensive Farming BAT compliance permit review on 28/01/2021 which concluded the operator will be compliant with the Environmental Permitting Regulations/Industrial Emissions Directive if they are compliant with their existing permit as varied including updated permit conditions and schedules. Reproduced their conclusions below on account they are very applicable to demonstrating compliance onsite for the application to vary the permit.

BAT	Description	How is the site demonstrating compliance
BAT 1	<p>EMS</p> <p><i>In order to improve the overall performance of farms, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features [in the BAT conclusions document].</i></p>	<p>Operator already holding a written management system comprising a suite of documents to help identify and minimise the risk of pollution. These include an accident management plan, maintenance plan, staff training and where necessary odour and noise management plans. This is a requirement of the existing general management condition in the permit.</p> <p>By 21 February 2021, the operator will be required to update their management system to include an environmental policy statement and demonstrate their commitment of their management to the EMS. This will be checked during routine compliance inspections. For application EPR/BP3334CB/V006 checked operator has Cranswick plc, Group Environmental & Energy policy in place.</p>
BAT 2	<p>Good housekeeping</p> <p><i>In order to prevent or reduce the environmental impact and overall performance, BAT is to use all the techniques given [in the BAT conclusions document].</i></p>	<p>The operator is already required to manage their operation as set out in the existing general management and operating techniques conditions in the permit. In complying with these conditions, we expect the operator to use most of the techniques identified in BAT2:</p> <ul style="list-style-type: none"> • Proper location in order to ensure adequate distances from sensitive receptors not wholly unavoidable. Developing existing land and poultry houses will be upwind of sensitive receptors most of the time. • Educating and training staff – Operators and stockmen have formal qualifications. • Prepared an emergency plan for dealing with unexpected emissions and incidents such as pollution of water bodies – including a drainage plan, H1 Environmental Risk Assessment, and equipment for dealing with a pollution incident for example diverter valve, spill kit equipment.. • Regularly checking, repairing, and maintaining structures and equipment such as water and feed supply systems, ventilation systems and temperature sensors, silos, and transport equipment, cleanliness, and pest management.

		<ul style="list-style-type: none"> • Storing dead animals in such a way as to prevent or reduce emissions.
Nutritional management		
BAT 3	<p><i>In order to reduce total nitrogen excreted and consequently ammonia emissions while meeting the nutritional needs of the animals, BAT is to use a diet formulation and nutritional strategy which includes one or a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>Operator already required to have a nutritional strategy to reduce nitrogen and phosphorous. This requirement is incorporated into the existing operating techniques condition in the permit.</p> <p>In addition, the variation included a new condition requiring the operator to report annually the levels of nitrogen and phosphorous excretion per animal place to demonstrate compliance with the BAT-associated total nitrogen and phosphorous excreted. The operator will now need to submit monitoring to demonstrate they are compliant. If they are not compliant with the BAT-associated total nitrogen and total phosphorous excreted they will be in breach of the permit and will need to revisit their nutritional management techniques. Based on our review, and engagement with industry, we expect all operators to meet the BAT-associated excretion levels.</p> <p>Where the BAT-associated total nitrogen and total phosphorous excreted level is not met the operator will be required to consider and adopt alternative diets or feed additives which enable them to meet the level.</p> <p>Checked for application EPR/BP3334CB/V006 operator has a diet formulation and nutritional strategy in place for rearing pullets from hatching to point of lay which includes a combination of the techniques given:-</p> <ul style="list-style-type: none"> • Reducing crude protein content using a N-balanced diet based on the energy needs and digestible amino acids – flaked soya bean will be added into the feedstuffs during milling to increase crude protein and supplement otherwise low natural levels in wheat grains, especially in first diets. Percentage of flaked soya will be reduced as chickens grow. • Multiphase feeding with a diet formulation adapted to the specific requirements of the production period – 2 separate diets will be provided which contain an increasingly lower percentage of crude protein as the chickens grow. • Addition of controlled amounts of essential amino acids to a low crude protein diet – amino acid analogues will be added into all of the feedstuffs during milling, including lysine, methionine, threonine, and valine to supplement otherwise low natural levels in wheat grains. • Use of authorised feed additives which reduce total nitrogen excreted, specifically xylanase enzyme, will be added into all

		of the feedstuffs during milling, for breaking down macromolecules and antinutritional factors such as non-starch polysaccharides for example cellulose in wheat grain into absorbable nutrients in feedstuffs.
BAT 4	<i>In order to reduce total phosphorous excreted while meeting the nutritional needs of the animals, BAT is to use a diet formulation and nutritional strategy which includes one or a combination of the techniques given [in the BAT conclusions document].</i>	<p>As BAT 3.</p> <p>Checked for application EPR/BP3334CB/V006 operators have a diet formulation and nutritional strategy in place for rearing pullets from hatching to nearly point of lay which includes a combination of the techniques given:-</p> <ul style="list-style-type: none"> • Multiphase feeding with a diet formulation adapted to the specific requirements of the production period – 2 separate diets will be provided which contain an increasingly lower percentage of phosphorous. • Use of authorised feed additives which reduce the total phosphorous excreted, specifically 6-phytase enzyme will be added into all the feedstuffs during milling. The enzyme degrades the phytate phosphorous in grain during digestion, making more naturally occurring phosphorous and other nutrients available to the chickens. • Use of highly digestible inorganic phosphates for the partial replacement of conventional sources of phosphorous in the feed, specifically calcium hydrogen orthophosphate/ calcium phosphate will be added into all the feedstuffs during milling.
BAT 5	<p>Efficient use of water</p> <p><i>In order to use water efficiently, BAT is to use a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>Operator is already required to minimise the use of water as set out in the existing efficient use of raw materials in the permit.</p> <p>Checked for application EPR/BP3334CB/V006 in order to use water efficiently the operator is using a combination of the techniques given:-</p> <ul style="list-style-type: none"> • Keep a record of water use • Detect and repair water leakages • Use high pressure cleaners for cleaning poultry housing and equipment <p>Select and use suitable equipment for example nipple drinkers for rearing pullets while ensuring water availability (ad-libitum).</p>

Emissions from waste water		
BAT 6	<i>In order to reduce the generation of waste water, BAT is using a combination of the techniques given [in the BAT conclusions document].</i>	<p>These requirements are fulfilled through existing permit conditions on general management, the efficient use of raw materials and emissions of substances not controlled by emissions limits.</p> <p>Checked for application EPR/BP3334CB/V006 in order to reduce generation of waste water the operator is using a combination of the techniques given:-</p> <ul style="list-style-type: none"> • Keep the fouled yard areas as small as possible • Minimise use of water • Segregate uncontaminated rainwater from waste water streams that require treatment.
BAT 7	<i>In order to reduce emissions to water from waste water, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i>	<p>The operator is already required to minimise emissions of waste water through existing permit conditions on general management, operating techniques and emissions of substances not controlled by emissions limits.</p> <p>Where appropriate the operator is already expected to have dedicated slurry and/or wash water storage which is compliant with BAT standards (equivalent to the standards set out in The Silage Slurry and Agricultural Fuel Oil Regulations (SSAFO). These requirements also apply to reception pits, channels, underground tanks, and pipework and requires that slurry is collected and contained.</p> <p>Checked for application EPR/BP3334CB/V006 in order to reduce emissions from waste water the operator is using one of the techniques given:-</p> <ul style="list-style-type: none"> • Drain waste water to dedicated containers.
BAT 8	<p>Efficient use of energy</p> <p><i>In order to use energy efficiently in a farm. BAT is to use a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>The operator is already required to minimise the use of energy through existing permit conditions on general management and energy efficiency.</p> <p>Checked for application EPR/BP3334CB/V006 in order to use energy efficiently the operator is using a combination of the techniques given:-</p> <ul style="list-style-type: none"> • High efficiency heating/cooling using package LPG heating and cooling equipment – medium velocity (Vents greater than 3.5m high, fan efflux velocity greater than 2m/s), actually efflux velocity greater than 7m/s but outlets only 5.2m high.

		<ul style="list-style-type: none"> • Optimisation of heating/cooling and ventilations systems with package computer controlled environmental systems • Insulated walls and ceilings of animal housing • Use energy efficient lighting.
Noise emissions		
<p>BAT 9</p>	<p><i>In order to prevent, or where that is not practicable, to reduce noise emissions, BAT is to set up and implement a noise management plan, as part of the environmental management system (see BAT 1).</i></p> <p><i>BAT 9 is only applicable to cases where a noise nuisance at sensitive receptors is expected and/or has been substantiated.</i></p>	<p>A noise management plan (NMP) is in place when there are relevant receptors within 400m of the installation boundary or there have been substantiated complaints. This reflects our current approach, and no change is required.</p> <p>This conclusion is only applicable where we expect noise pollution, or it has been substantiated. We anticipate the potential for noise pollution within 400m of sites, and require operators with receptors located within this distance, or at sites where noise complaints have been substantiated at receptors outside this distance, to have an NMP. This is already detailed in the existing permit condition on noise and vibration in the permit. This condition allows for us to require a NMP if not previously in place. In the event of noise complaints or other evidence of risk of noise pollution beyond the installation boundary.</p> <p>The NMP needs to be regularly updated and reviewed to prevent noise pollution and ensure compliance.</p> <p>Checked the updated H1 Environmental Risk Assessment submitted with application EPR/BP3334CB/V006 shows noise sources have been identified as having potentially moderate significance.</p> <p>At Falcons Hall Farm Poultry Unit there are noise sensitive receptors including dwelling, commercial and agricultural premises within 400m of the existing boundary. There are no additional sensitive receptors result of extending the boundary to erect 4no additional poultry houses. Falcons Hall Farm Cottages are 260m from the extended boundary to the north but leased to the operator and occupied by workers on the poultry unit so not sensitive receptors. Not warranted any changes to the noise management plan, mitigation and management measures which are in accordance with SGN EPR6.09 and includes:</p> <ul style="list-style-type: none"> • A protocol containing appropriate actions and timelines • A protocol for conducting noise monitoring • A protocol for response to identified noise events. <p>Operator has no recollection of having substantiated any historical noise incidents, concerns, or complaints so a noise</p>

		reduction programme to implement elimination and/or reduction measures is not considered necessary.
BAT 10	<i>In order to prevent, or where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i>	<p>Noise minimisation has been considered in equipment location and operation in the permit determination stage.</p> <p>The operator is already required to prevent and minimise noise through the existing permit conditions on general management, operating techniques and noise and vibration. The existing operating techniques permit condition already allows us to require the operator to update the NMP to introduce additional BAT measures to minimise the risk of noise pollution beyond the installation in the event of substantiated noise complaints at local receptors.</p> <p>Checked for application EPR/BP3334CB/V006 noise minimisation has been considered in redevelopment of the site including for relocation of new poultry houses, equipment, and changes to operational measures. Operator is using a combination of the techniques given:-</p> <ul style="list-style-type: none"> • Equipment location for example installed package feed bins in between the houses in pairs so as to minimise the movement of vehicles onsite and minimised the length of feed delivery equipment - installed in between and largely inside the poultry houses for noise abatement. • Operational measures for example equipment operated by experienced staff, avoidance of noisy activities at night and during weekends, operating augers full of feed, • Low noise equipment for example high efficiency fans, and water pumps. • Noise control equipment for example sound proofed the houses with thermal insulation. <p>The BAT measures have also been identified in the NMP.</p>
BAT 11	<p>Dust emissions</p> <p><i>In order to reduce dust emissions from each animal house, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>Techniques are already in place to reduce dust generation inside sheds such as ad-libitum feeding.</p> <p>The operator is already required to minimise dust emissions through existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits.</p> <p>Checked the updated H1 Environmental Risk Assessment submitted with application EPR/BP3334CB/V006 shows dust</p>

		<p>emissions have been identified as having potentially minor and moderate significance.</p> <p>At Falcons Hall Farm Poultry Unit there are 2 dust sensitive receptors including a residential dwelling and commercial premises within 100m of the existing boundary. There are no additional sensitive receptors result of extending the boundary to erect 4no additional poultry houses. Dust & bio-aerosol management plan in place, with mitigation and management measures in accordance with SGN EPR6.09. Using a combination of the techniques given to reduce dust generation inside the buildings:-</p> <ul style="list-style-type: none"> • Using a proprietary mixture of chopped straw and coarser wood shavings (rather than only chopped straw). • Applying fresh litter using a low-dust littering technique for example supplied in wrapped bales and applied by hand. • Crumb for chicks up to 12 days of age, then pellets. • Installed package cyclone dust separators on silos to catch dust during pneumatic feed delivery. <p>Diet and nutrition will be restricted for rearing pullets for breeding while still meeting the health and welfare needs for the age and number of birds. It is industry standard. compared to ad-libitum feeding of broiler chickens for meat.</p>
Odour emissions		
BAT 12	<p><i>In order to prevent, or where that is not practicable, to reduce odour emissions from a farm, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes the following elements [in the BAT conclusions document].</i></p>	<p>An odour management plan (OMP) is in place when there are relevant receptors within 400m of the installation boundary or there have been substantiated complaints. This reflects our current approach, and no change is required.</p> <p>This conclusion is only applicable where we expect odour pollution, or it has been substantiated. We anticipate the potential for odour pollution within 400m of sites, and require operators with receptors located within this distance, or at sites where odour complaints have been substantiated at receptors outside this distance, to have an OMP. This is already detailed in the existing permit condition on odour in the permit. The condition allows for us to require an OMP if not previously in place, in the event of odour complaints or other evidence of risk of odour pollution beyond the installation boundary.</p> <p>The OMP needs to be regularly updated and reviewed to prevent odour pollution and ensure compliance.</p>

		<p>Checked the updated H1 Environmental Risk Assessment submitted with application EPR/BP3334CB/V006 shows odour sources have been identified as having potentially moderate significance.</p> <p>At Falcons Hall Farm Poultry Unit there is one sensitive receptor a commercial premises within 400m of the existing boundary. There are no additional sensitive receptors result of extending the boundary to erect 4no additional poultry houses. Falcons Hall Farm Cottages are 260m from the extended boundary to the north but leased to the operator and occupied by workers on the poultry unit so not sensitive receptors. Odour management plan in place, with mitigation and management measures in accordance with SGN EPR6.09., and also includes:-</p> <ul style="list-style-type: none"> • A protocol containing appropriate actions and timelines • A protocol for conducting odour monitoring, if required • A protocol for response to identified odour events. <p>Operator has no recollection of having substantiated any historical odour incidents, concerns, or complaints. So routine odour monitoring is not considered necessary or setting up a reduction programme to implement elimination and/or reduction measures.</p>
BAT 13	<p><i>In order to prevent, or where that is not practicable, to reduce odour emissions and/or odour impact from a farm, BAT is to use a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>Odour minimisation has been considered in equipment location and operation in the permit determination stage.</p> <p>The operator is already required to prevent and minimise odour through the existing permit conditions on general management, operating techniques, and odour. The existing operating techniques permit condition already allows us to require the operator to update the OMP to introduce additional BAT measures to minimise the risk of odour pollution beyond the installation in the event of substantiated odour complaints at local receptors.</p> <p>Checked for application EPR/BP3334CB/V006 odour minimisation has been considered in further development of the site including for relocation of new poultry houses, equipment, and changes to operational measures. Operator is using a combination of the techniques given:-</p> <ul style="list-style-type: none"> • Using a housing system which implements a combination of the techniques for example keeping the chickens and the surfaces dry and clean, and keeping the litter dry and under aerobic conditions.

		<ul style="list-style-type: none"> Optimising the discharge conditions of exhaust air from the poultry houses using a combination of the techniques for example maximised outlet heights – exhaust air above roof level, stacks with uncapped outlets, air exhaust through the ridge instead of through the low part of the walls, increasing the vertical outlet ventilation velocity. Installed package high velocity ventilation in all the poultry houses where fan efflux velocity is greater than 7m/s and highest outlets 5.2m. No gable end extraction fans. <p>The BAT measures have also been identified in the OMP.</p>
Emissions from solid manure storage		
BAT 14	<i>In order to reduce ammonia emissions to air from the storage of solid manure, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i>	<p>The operator is already required to prevent and minimise emissions of ammonia from solid manure through the existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits.</p> <p>Checked for application EPR/BP3334CB/V006 no used litter will be stored onsite.</p>
BAT 15	<i>In order to prevent, or where that is not practicable, to reduce emissions to soil and water from the storage of solid manure, BAT is to use a combination of the techniques given [in the BAT conclusions document].</i>	<p>The operator is already required to prevent and minimise emissions to soil and water through the existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits.</p> <p>Checked for application EPR/BP3334CB/V006 no used litter will be stored onsite.</p>
Emissions from slurry storage		
BAT 16	<i>In order to reduce ammonia emissions to air from a slurry store, BAT is to use a combination of the techniques given [in the BAT conclusions document].</i>	<p>The operator is already required to prevent and minimise emissions of ammonia from slurry through the existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits.</p> <p>Checked for application EPR/BP3334CB/V006 underground drainage to convey dirty water during washing out the poultry houses end of each rearing cycle into an underground package dirty water storage tank will be installed in accordance with The Water Resources (Control of Pollution) (Sludge, Slurry and Agricultural Fuel Oil) (England) Regulations 2010.</p>

BAT 17	<i>In order to reduce ammonia emissions to air from an earth-banked slurry store (lagoon), BAT is to use a combination of the techniques [in the BAT conclusions document].</i>	Not applicable, no earth banked slurry stores onsite
BAT 18	<i>In order to prevent emissions to soil and water from slurry collection, piping and from a store and/or an earth-banked storage (lagoon), BAT is to use a combination of the techniques given [in the BAT conclusions document].</i>	<p>Existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits will ensure this requirement is met.</p> <p>Checked for application EPR/BP3334CB/V006 underground drainage to convey dirty water during washing out the poultry houses end of each rearing cycle into an underground package dirty water storage tank has been installed in accordance with The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010 so operator is using a combination of the techniques given:-</p> <ul style="list-style-type: none"> • Using a store that is able to withstand mechanical, chemical, and thermal influences. • Selected a storage facility with sufficient capacity to hold the slurry during period in which land spreading is not possible. • Constructed leak-proof facilities and equipment for collection and transfer of slurry for example concrete channels and plastic drainage pipes.
BAT 19	<p>On farm processing of manure</p> <p><i>If on farm processing of manure is used, in order to reduce emissions of nitrogen, phosphorous, odour and microbial pathogens to air and water and facilitate manure storage and/or land spreading, BAT is to process the manure by applying one or a combination of the techniques given [in the BAT conclusions document].</i></p>	Not applicable, there will be no onsite processing of manure

Manure land spreading		
BAT 20	<i>In order to prevent or, where that is not practicable, to reduce emissions of nitrogen, phosphorous, odour and microbial pathogens to soil and water from land spreading BAT is to use all the techniques given [in the BAT conclusions document].</i>	<p>Spreading of manure and slurry on land outside of the installation boundary is not considered to part of the permitted installation. In the rare circumstances where spreading occurs within the installation boundary the requirements are covered by the existing operating techniques permit condition.</p> <p>Checked for application EPR/BP3334CB/V006 used litter and slurry will not be spread on any land belonging to the operator and operator is using a combination of the techniques given and measures described in EPR 6.09 SGN How to comply:-</p> <ul style="list-style-type: none"> Records will be kept of the quantities and date of transfer, for example to a power station for recovery or third party for spreading on land and the names and addresses of the receiving farms. The receiver of the manure and litter will confirm it is spread to land in accordance with the Code of Good Agricultural Practise or that the spreading will be in accordance with a manure management plan for the receiving land to reduce emissions of nitrogen, phosphorous and microbial pathogens to soil and water.
BAT 21	<i>In order to reduce ammonia emissions to air from slurry land spreading, BAT is to use a combination of the techniques given [in the BAT conclusions document].</i>	<p>Spreading of manure and slurry on land outside of the installation boundary is not considered to part of the permitted installation. In the rare circumstances where spreading occurs within the installation boundary the requirements are covered by the existing operating techniques permit condition.</p> <p>Checked for application EPR/BP3334CB/V006 used litter and slurry will not be spread on any land belonging to the operator and operator is using a combination of the techniques given and also described in EPR 6.09 SGN How to comply:-</p> <ul style="list-style-type: none"> Records will be kept of the quantities and the date of transfer, for example to a power station for recovery or third party for spreading on land and the names and addresses of the receiving farms. The receiver of the manure and litter will confirm it is spread to land in accordance with the DEFRA Code of Good Agricultural Practise or that the spreading will be in accordance with a manure management plan for the receiving land to reduce emissions of nitrogen, phosphorous and microbial pathogens to soil and water.

BAT 22	<i>In order to reduce ammonia emissions to air from manure land spreading, BAT is to incorporate the manure into the soil as soon as possible.</i>	<p>Spreading of manure and slurry on land outside of the installation boundary is not considered to part of the permitted installation. In the rare circumstances where spreading occurs within the installation boundary the requirements are covered by the existing operating techniques permit condition. The time delay between land spreading and incorporation into the soil is now a maximum of 12 hours.</p> <p>Checked for application EPR/BP3334CB/V006 used litter and slurry will not be spread on any land belonging to the operator and described in EPR 6.09 SGN How to comply:-</p> <ul style="list-style-type: none"> Receiver of the manure and litter will confirm it is spread to land in accordance with the DEFRA Code of Good Agricultural Practise and will be incorporated into the soil within 12 hours.
BAT 23	<i>In order to reduce ammonia emissions from the whole production process for the rearing of pigs (including sows) or poultry, BAT is to estimate or calculate the reduction of ammonia emissions from the whole production process using the BAT implemented on the farm.</i>	An operator complying with the relevant existing conditions in the permit will meet this BAT conclusion in so far as they will have reduced ammonia emissions compared to those they would have produced had they not implemented BAT. The operator is not required to report they are meeting the BAT-AELs annually.
Monitoring of emissions and process parameters		
BAT 24	<i>BAT is to monitor the total nitrogen and total phosphorous excreted in manure using one or more of the following techniques [in the BAT conclusions document] with at least the frequency given [in the BAT conclusions document].</i>	<p>The operator will now be required to comply with a new permit condition which sets out a requirement to monitor nitrogen and phosphorous levels in livestock manure.</p> <p>This can be carried out using a mass balance of nitrogen based on the feed intake, dietary content of crude protein and animal performance or estimation by using manure analysis for total nitrogen content and the equivalent for phosphorous.</p> <p>Checked for application EPR/BP3334CB/V006 Environment Agency initiated variation was issued on 28th January 2021 so the operator will start monitoring this year, most probably using estimation by manure analysis, and submit annual reporting first-time in January 2022 on the levels of nitrogen and phosphorous excretion per animal place.</p>

		Environment Agency concluded in BAT 31 there are no BAT-AELs for broiler breeders or pullets, but the operator is still required to report emissions.
BAT 25	<i>BAT is to monitor ammonia emissions to air using one of the following techniques with at least the frequency given [in the BAT conclusions document].</i>	<p>The operator will now be required to comply with a new permit condition setting out a requirement for annual reporting on ammonia emissions. This should not represent a new requirement as they already submit this in their Pollution Inventory return.</p> <p>We expect all operators will demonstrate compliance using emissions factors (one of the identified techniques) however they may choose to monitor ammonia emissions using a suitable and agreed monitoring protocol.</p> <p>Checked for application EPR/BP3334CB/V006 operator will continue using emission factors published by the Environment Agency for their Pollution Inventory return.</p>
BAT 26	<i>BAT is to periodically monitor odour emissions to air.</i>	<p>Routine monitoring (e.g., subjective 'sniff testing') is not expected in most cases, as we would expect the odour management plan to minimise and prevent any odour pollution. It will only be expected as part of ongoing odour management at sites where there have been substantiated odour complaints.</p> <p>Checked the updated H1 Environmental Risk Assessment submitted with application EPR/BP3334CB/V006 shows odour sources have been identified as having potentially moderate significance.</p> <p>At Falcons Hall Farm Poultry Unit there is one sensitive receptor a commercial premises within 400m of the existing boundary. There are no additional sensitive receptors result of extending the boundary to erect 4no additional poultry houses. Falcons Hall Farm Cottages are 260m from the extended boundary to the north but leased to the operator and occupied by workers on the poultry unit so not sensitive receptors. Noise management in place, with mitigation and management measures in accordance with SGN EPR6.09., and also includes:-</p> <ul style="list-style-type: none"> • A protocol containing appropriate actions and timelines • A protocol for conducting odour monitoring, if required • A protocol for response to identified odour events. <p>Operators have no recollection of having substantiated any historical odour incidents, complaints, or concerns. So routine odour monitoring is not considered necessary or setting up a</p>

		reduction programme to implement elimination and/or reduction measures.
BAT 27	<i>BAT is to monitor dust emissions from each animal house using one of the following techniques with at least the frequency given [in the BAT conclusions document].</i>	<p>The operator will now be required to comply with a new permit condition setting out a requirement for annual reporting of dust emissions. For poultry this should not represent a new requirement as they already submit this in their Pollution Inventory return. For pigs this is a new requirement.</p> <p>We expect all operators will demonstrate compliance using the emissions factors techniques.</p> <p>Checked for application EPR/BP3334CB/V006 operator will continue using the emission factors published by the Environment Agency for their Pollution Inventory return.</p>
BAT 28	<i>BAT is to monitor ammonia, dust and/or odour emissions from each animal house equipped with an air cleaning system by using all of the following techniques with at least the frequency given [in the BAT conclusions document].</i>	Not applicable, no air scrubber or cleaning system in place.
BAT 29	<p><i>BAT is to monitor the following process parameter at least once every year:-</i></p> <ul style="list-style-type: none"> • <i>Water consumption</i> • <i>Electric energy consumption</i> • <i>Fuel consumption</i> • <i>Number of incoming and outgoing animals</i> • <i>Feed consumption</i> • <i>Manure generation.</i> 	<p>The operator is already required to keep records for these parameters in their current permit through existing permit conditions on energy efficiency, efficient use of raw materials and operating techniques. These will be checked during routine compliance inspections.</p> <p>Checked for application EPR/BP3334CB/V006 operator is keeping records in their Crop Information Charts and waste records.</p>
BAT 30	<p>Ammonia emissions from pig houses</p> <p><i>In order to reduce ammonia emissions to air from each pig house,</i></p>	Not applicable, rearing pullets at Falcons Hall Farm Poultry Unit.

	<p><i>BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i></p>	
BAT 31	<p>Ammonia emissions from houses for laying hens, broiler breeders or pullets</p> <p><i>In order to reduce ammonia emissions to air from each house for laying hens, broiler breeders or pullets, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>We are confident that laying hen, broiler breeder and pullet farm installation will be able to comply with the objective of BAT 31 via the usage of existing housing and operating techniques.</p> <p>This is based on the operator using techniques listed in this conclusion and achieving the BAT-AELs or by demonstrating the method used produces an equivalent level of protection. 'Equivalence' will need to be confirmed through emissions monitoring to show compliance with the BAT-AELs. Our review of housing types in England indicated that all operators should already be compliant with the techniques set out in BAT31. This will be checked during routine compliance monitoring.</p> <p>The operator is required to comply with new permit condition to carry out annual monitoring and reporting. For laying hens, the results will need to meet the associated BAT-AELs. There are no BAT-AELs for broiler breeders or pullets, but the operator is still required to report emissions. We expect the operator will demonstrate compliance using emission factors.</p> <p>Compliance with AELs is covered under a new condition and associated process monitoring table.</p>
BAT 32	<p>Ammonia emissions from houses for broilers</p> <p><i>In order to reduce ammonia emissions to air from each house for broilers, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i></p>	<p>Not applicable, rearing pullets at Falcons Hall Farm Poultry Unit.</p>

BAT 33	<p>Ammonia emissions from houses for ducks</p> <p><i>In order to reduce ammonia emissions to air from each house for ducks, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i></p>	Not applicable, rearing pullets at Falcons Hall Farm Poultry Unit.
BAT 34	<p>Ammonia emissions from houses for turkeys</p> <p><i>In order to reduce ammonia emissions to air from each house for turkeys, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].</i></p>	Not applicable, rearing pullets at Falcons Hall Farm Poultry Unit.

Q10a Basic measures for improving how energy efficient the activities are

23. Energy usage for poultry houses B1,B2,B3&B4 at Falcons Hall Farm Poultry Unit

Energy source	Use
Electricity	Lighting, ventilation system including extraction fans and computer systems, feed augers and spinners, winches, water pumps and pressure washers.
Liquid petroleum gas	Space heating in the poultry houses
Gasoline (red diesel)	Backup diesel-fired generator

24. Heating

The correct environment for the birds will be maintained in the poultry houses using ventilation systems with high velocity extraction fans. Installed package high velocity ventilation in all the poultry houses where fan efflux velocity is greater than 7m/s and highest outlets 5.2m located along the roof ridge of the poultry houses.

Each house will be monitored by a computer system, which automatically controls and records the humidity and temperature.

Space heaters will be equally distributed through the housing to prevent cold spots and sensors triggering and activating the heaters unnecessarily.

Control sensors will be checked regularly and kept clean, so they are able to detect the temperature at stock level.

Ventilation rates will be computer controlled to minimise, as far as the indoor requirements allow heat losses from the houses.

Extraction fans will be fitted with back draft shutters to reduce heat loss.

The poultry houses will be maintained in good condition, cracks and open seams will be repaired.

The houses will be fully insulated with a U-value of approximately 0.4 W/m²/°C to reduce condensation and heat loss.

The houses will be constructed with a continuous damp-proof membrane installed under all the concrete floors preventing moisture being drawn up from the ground to ensure the litter is dry and friable and reduce the need to heat the houses to keep the litter dry.

The concrete flooring will be maintained, and cracks will be repaired.

Nipple drinking systems will reduce water spillages.

25. Electricity

The ventilation extraction fans in the poultry houses have been selected so that they are the appropriate power and sizes for the houses.

The computer control systems will control the ventilation for maximum efficiency i.e., one fan operating at full capacity rather than two operating at half their capacity.

The fans are low energy per m³ of air.

The fans will be regularly maintained and cleared of debris.

Low energy light bulbs will be used in the control/vestibule areas, the office, and stores.

Fluorescent lights will be used in the poultry houses.

We will operate a variable lighting period during the crop cycle.

26. Fuel Oil

Back-up generator will be regularly maintained by professional contractors in accordance with the manufacturer's instructions to ensure it operates efficiently.

27. A breakdown of delivered and primary energy consumption will be recorded and provided to the Environment Agency annually in the following format:

Energy source Delivered MWh	Energy consumption Primary MWh	% Of total
Electricity		
Liquid petroleum gas		
Diesel		
Other (Operators to specify)		
Exported energy	MWh	Source
	N/a	N/a

Q10c How we avoid producing waste in line with Council Directive 2008/98/EC on waste

28. Waste solid litter, dirty water, and packaging waste arising from the poultry rearing activities will be treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive. Waste will be segregated and securely stored for export offsite for recycling, recovery by land treatment to confer agricultural or ecological benefit or used as fuel.
29. Carcasses of dead chickens will be treated in accordance with EU 142/2011 Commission Regulation implementing Regulation 1069/2009 of The European Parliament and of the Council laying down health rules as regards animal by-products 'The EU Implementing Regulation. Animal by-products will be segregated from waste and securely stored for export off-site by an approved transporter under the National Fallen Stock scheme.