Summary, Technical Standards & Controls for EPR/TP3330QY/V003, Old Hall Farm, Burston, Diss, Norfolk, IP22 5TF

December ~~November~~ 2025

Contents

2 About your proposed change

Q2b Summary of proposed change

Application for Administrative Variation

1. Note, we have previously submitted a separate application for an administrative variation to remove the names of persons who have left the farming partnership and ceased to be operators of day-to-day intensive pig rearing activities at Old Hall Farm under the permit. To remove Mr Stuart Geoffrey Calton having left the farming partnership to pursue other ventures, Mr Geoffrey Hugh Richard Calton (retired), and Mrs Rosemary Calton (retired). Mr Karl Calton continues to be the operator trading as 'Calton Brothers'.

Application for transfer

2. Note, we have previously submitted a separate application for transfer to a new operator owing to having added a new partner who has day-to-day responsibility for intensive pig rearing activities at Old Hall Farm under the permit. Applied to transfer permit to Mr Karl Calton and Mr William Calton and continue trading as Calton Brothers.

Application Variation V003

3. Application to vary permit to increase the installation boundary for additional houses and places for pigs and existing features omitted in the original permit application: -

    - Erect 2no pig houses F7&G6 for rearing pigs >30kg including finishers and growers
    - Addition of house F6 for rearing finishers >30kg as built in 2021 (retrospective)
    - Increase capacity for production pigs >30kg to 6,320, up from 3,000 places
    - Increase capacity for pigs <30kg to 4,500, up from 3,000 places (DAA)
    - Addition of existing drainage features including a ditch acting as a soakaway for uncontaminated roof and surface water runoff and existing concrete apron used for scraping (retrospective)
    - ~~Addition of emergency back-up generator (thermal input 0.142MW) (retrospective).~~

4. New pig houses G6 for rearing growers <30kg and F6 and F7 for finishers >30kg designed to be operated in accordance with SGN EPR 6.09 and Best Available Techniques (BAT) Conclusions Document – 4.7.5.9 Straw flow system on a solid concrete floor with natural, side ventilation, no ridge ventilation. Concrete floors poured over a continuous damp proof membrane, steel portal frame construction with low-pitched insulated roofs covered with steel cladding, precast concrete grain wall panels and a concrete apron for access.

5. Existing pig houses will continue to be used as described in the permit without changes in capacity or operation - 13no. houses numbered W1-W3 for 7-15kg pigs (weaners), G1-G5 for 15-30kg pigs (growers) and F1-F5 for pigs over >30kg (finishers). Houses designed to be operated in accordance with SGN EPR 6.09 and Best Available Techniques (BAT) Conclusions Document – 4.7.4.14 Full litter system (in case of solid concrete floor) for weaners and growers and .7.5.9 Straw flow system on a solid concrete floor for finishers.

All have natural, side ventilation, no ridge ventilation. Weaners delivered from breeding farms elsewhere for rearing onsite and transport to a local abattoir.

6. Straw bedding spread over lying areas prior to pigs being moved into any houses. Use sufficient straw to bind all the dung and urine to prevent ponding and minimise ammonia and odour. Dunging & laying areas pushed out regularly and replaced with new straw. Drinking water provided via non-leaking drinkers to keep bedding dry to minimise ammonia and odour, and water consumption will be monitored.

7. Feed all the pigs a four-stage pelleted diet appropriate to pigs' nutritional requirements at each stage of growth. A lower percentage crude protein and phosphorous in each diet will be supplemented with essential amino acids, inorganic phosphates, and authorised additives to minimise nitrogen and phosphorous excretion and odour. Store feedstuffs in fully enclosed package silos and feed delivery equipment to minimise waste, dust, and odour and with kerbs or barriers as required to protect them from collision damage.

8. Separate surface water and slurry drainage to prevent cross-contamination and pollution in any watercourse, underlying geology, or groundwater. Sustainable urban drainage system (SuDS) for clean roof water including rainwater harvesting to be installed on houses F7&G6 to supplement mains water for all the houses and French drains filled with stones act as soakaways to infiltrate any surplus into the ground. Gutters and downpipes on most pig houses and other buildings convey clean roof water runoff via solid underground pipes and discharge into offsite ditches, tributaries of the River Waveney.

9. The concrete apron gets dirty when pushing out solid manure and straw and when washing houses after destocking. There is a separate slurry drainage system via sloping concrete, catch-pits and pumped via solid underground pipes into an earth-banked slurry lagoon - covered with a fixed plastic membrane to minimise ammonia emissions and odour. ~~Emergency back-up generator (thermal input 0.142MW).in event of any power outage.~~ Solid manure and straw stored on heaps on the concrete apron with collection channels for slurry runoff. Slurry and solid manure exported offsite for spreading on land owned by the operators or a third party to confer agricultural benefit in accordance with a manure management plan in NVZ and the Code of Good Agricultural Practise. The existing slurry lagoon and manure heaps have sufficient storage capacity for the additional pig places.

10. Pig mortalities removed from houses daily and recorded. Carcasses stored in secure, covered containers to minimise odour and flies and frequently removed offsite by an approved transporter under the National Fallen Stock Scheme.

11. Shelfanger Meadows Site of Special Scientific Interest (SSSI) within 5km and three local wildlife sites within 2km. Computer dispersion modelling of ammonia from pigs predicted no adverse impact on any of the wildlife sites. Residential dwellings and agricultural premises are sensitive receptors for dust, odour and noise within 400m.

4 Management systems

Table 1: Summary of environment management system for Old Hall Farm

EMS	• Implementing Environment Agency (2010) EPR 6.09 Sector Guidance Note: How to comply – Intensive Farming Version 2. • Stock movements and pig numbers onsite recorded as per statutory requirements in Nitrate Pollution Prevention Regulations 2015, and Pigs (Records, Identification and Movement) Order 2011. • Manure management complies with Nitrate Pollution Prevention Regulations. • Storage facilities comply with the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010 (SSAFO). • AHDB Model Template B3.5 6a Environmental Risk Assessment • AHDB Model Template B3.5 8b Odour Management Plan • AHDB Model Template B3.5 8c 1 Noise Management Plan • AHDB Model Template B3.5 8c 2 Bioaerosol Management Plan • Staff are trained and aware of their own and contractors' responsibilities.
Normal operations	• Daily records are kept on all aspects of the farm's operation including: o Pig movements o Feed consumption and deliveries o Delivery of goods and materials o Medication o Mortalities o Temperatures of areas within pig housing. • Weekly records of water and fuel consumption are kept. • Staff carry out daily inspections to ensure all plant is operating correctly. • Operators frequently review information and operations with staff to identify any unexpected or abnormal changes in operation and agree suitable remedial action, if necessary.
Maintenance schedule and records	• A programme of planned preventive maintenance is carried out on all plant and equipment including: o ventilation equipment o sensors and detectors o feed and water systems. • Inspection & maintenance schedule based on manufacturer's recommendations. • Buildings and equipment on site are inspected weekly and checked for visual signs of leakage, corrosion and structural damage, security, and correct operation. ~~• Emergency backup diesel-fired generator in place at Old Hall Farm to guarantee sufficient air renewal for chicken welfare and benefit pig rearing installation including the slurry pumps. Thermal input 0.142 MW (165 KVA) less than 1 MW so not a specified generator under the Environmental Permitting Regulations and not in scope of Medium Combustion Plant Directive. Operated for the purpose of testing for not more than 50 hours per year or operated for not more than 500 hours per year averaged over three years, including testing.~~ • A record of all faults, maintenance work and inspections is kept in the farm office.

Incidents and abnormal operations	• Measures are in place to identify incidents and abnormal operations such as breakdowns, damage, etc. • Staff are trained to notice and respond to abnormal changes in operations by investigating the causes. They then either take steps to get back to normal operation and ensure the problem does not reoccur or report issues that cannot be immediately addressed. • A copy of the permit is available and accessible for staff to read. • Staff have been given training on the potential environmental impacts of the unit and their role in ensuring environmental impacts are minimised.
Complaints system	• Complaints relating to the farm's activity are logged and referred to the Operators for investigation and follow-up action (a copy of the forms to can be found in the Dust, Odour and Noise Management Plans). • A record is kept of any remedial action to prevent or minimise the causes, and staff also respond to concerns raised by the local community, as appropriate. • On receipt of the environmental permit, we will place a site identification notice at the entrance of the site clearly visible from a public highway in accordance with 'How to comply with your environmental permit for intensive farming Version 2; 2010 (EPR 6.09 SGN). The sign will notify neighbours and members of the public about the nature of the farm and who they can contact for further information or to notify a concern.
Accidents	• The 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 in the Environmental Risk Assessment. • All staff are aware of the location and content and their responsibilities in event of an accident.
Training and qualifications	• All staff are suitably qualified to work at the installation. • All staff receive formal training from both operators and external training providers, which includes making them aware of their (and contractors) roles and responsibilities. • All staff will have received formal training on health and safety, the accident management plan and will be trained in the requirements of the environmental permit and pollution prevention. • New staff are mentored as part of their on-the-job training. • Staff and contractors have defined roles and understand what is required of them and what others will carry out. • Training and instruction of staff and contractors is recorded in the training plan which is kept in the farm office. • As a Red Tractor Assured farm, key staff are registered members of the Piig Industry Professional Register (PIPR).
Site security	• The site does not have a secure perimeter fence but is hidden from the nearby road by trees, hedgerows and other farm buildings. Located at some distance from the public highway and accessed via a private roadway. • Pig houses, sheds, stores, tanks, and equipment are securely locked at night. • The site gates locked at night to prevent pedestrian and vehicle access out of hours. • The fuel oil tanks are secure and locked.

	• Signs are placed around perimeter to warn people against entering the site. • There is no public footpath through any part of the site.
Site closure/ decommissioning plan	• This plan indicates how buildings, infrastructure and any remaining manures and wastes will be dealt with when a site if closed or decommissioned. • The plan also includes a record of any pollution incidents, such as spillage of oil, leaking stores, etc that have occurred during the operation of the permitted site, together with he steps taken to remedy that pollution at the time. This will help to establish whether the site is in a satisfactory state when the permitted Schedule 1 Activity (pig production) ceases and the permit is surrendered. • A Site Closure/decommissioning Plan will be created to apply to surrender the permit.

7 Emissions to air, water, and land

Table 2 Emissions (releases) at Old Hall Farm

Emission point description and location	Source
Point source emissions to air	
A1 Natural side ventilation as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Pig houses F1-F7, G1-G6 & W1-W3
A2 Vent as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Diesel tank
~~A3 Exhaust outlet as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002~~	~~Emergency backup diesel-fired generator~~
~~A4 Vent off fuel tank as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002~~	~~Diesel tank for backup generator~~
Point source emissions to water	
W1 Outlet at NGR TM 1317 8453 into offsite ditch east of boundary, a tributary of the River Waveney as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Uncontaminated roof water runoff from pig houses G4&G5, W3, straw barn, machinery store and concrete apron (no mucking-out or washing)
W2 Outlet at NGR TM 1318 8426 into offsite ditch south of boundary, a tributary of the River Waveney as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Uncontaminated roof water runoff from pig houses F1, F2&F5, G1-G3, W1&W2, grain store, workshop and diesel store and concrete apron (no mucking-out or washing)
W3 Outlet at NGR TM 1308 8429 into offsite ditch south of boundary, a tributary of the River Waveney as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Uncontaminated roof water runoff from pig houses F3-F4&F6 and concrete apron (no mucking-out or washing)
W5 Outlet at NGR TM 1306 8456 into slurry lagoon as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan	Slurry runoff from inside pig houses F1-F7, G1-G6 & W1-W3, solid manure heaps and runoff the concrete apron used for mucking and washing out

dated 13/11/2025 included with the application for EPR/TP3130QY/V002	
W6 Outlet at NGR TM 1305 8456 into slurry lagoon as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Slurry runoff concrete apron for loading slurry
Point source emissions to land	
L1 French drain filled with stones act as soakaway as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Uncontaminated roof water runoff from pig house W3
L2 Ditch act as soakaway as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Uncontaminated roof water runoff from pig houses F5, G1-G3, W1&W2 and concrete apron in between F5&G1 and F5&G2 (no mucking-out or washing)
L3 French drains filled with stones act as soakaways as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Uncontaminated roof water runoff from pig houses F5&G1 (no mucking-out or washing)
L4 French drains filled with stones act as soakaways as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Uncontaminated roof water runoff from pig houses F3-F4 (no mucking-out or washing)
L5 French drain filled with stones act as a soakaway as shown on the Groundsure Old Hall Farn, Burston, Norfolk, IP22 5TF block plan dated 13/11/2025 included with the application for EPR/TP3130QY/V002	Uncontaminated roof water runoff from pig houses F7&G6 (overspill from rainwater harvesting system)
Point source emissions to sewer, effluent treatment plants or other transfers offsite	
None	

8 Operating techniques

Table 3 Technical Standards for Old Hall Farm

Schedule 1 activity	• Section 6.9; Part A(1)(a) Rearing poultry or pigs intensively at installation with more than – (ii) 2,000 places for production pigs (over 30kg)
Technical guidance	• Environment Agency (2010) EPR 6.09 Sector Guidance Note: How to comply – Intensive Farming Version 2. • Best Available Techniques (BAT) Reference Document for the Intensive Rearing of Poultry or Pigs 2017.

Table 4 Main measures to control emissions from Old Hall Farm

Selection and use of feed Technical standard: you must take appropriate measures to provide a diet which minimises the excretion of nitrogen and phosphorous.	<u>Nitrogen & Phosphorous</u> • Protein and phosphorous levels in the rations are matched to the animals' needs by providing at least two different feed formulations. • Nutritionist to regularly review and reformulate diets - optimise production and minimise excretion of nutrients. • More detail on techniques used to minimize nitrogen and phosphorous excretion under Nutritional Management for BAT3 & BAT4 (below). <u>Buildings and associated infrastructure&</u> • All buildings and associated infrastructure, i.e., feed storage bins will be package bins, designed to allow at least a two-stage feeding regime.

Pig housing design and management.
 	
Technical standard: you must take appropriate measures in the design and management of housing to minimize the emissions from those systems
	<u>Appropriate measures for design</u>
	• Package nipple drinkers designed to prevent leakage (waste).
	• Solid floor system comprising:
	  ○ Scraped areas that prevent ponding or build of urine.
	  ○ Dung passages and bedding areas are sloped to drain urine and prevent ponding.
	
	<u>Appropriate measures for management</u>
	• Dunging and lying areas are clearly differentiated to ensure that the lying areas are kept clean and dry.
	• Scraped areas will be operated to prevent ponding or buildup of urine.
	• Dunging areas will be cleaned out by scraping regularly.
	• Bedded areas will have sufficient straw or other bedding material to keep the lying areas clean and dry, and to bind nitrogen to reduce ammonia emissions.
	• Floors will be kept free from urine or slurry puddles, either through:
	  ○ Provision of additional bedding material to soak it up, or
	  ○ Management to address puddles as they arise by scraping.
	
	<u>Ventilation</u>
	• Draughts will be avoided in lying areas.
	• Dunging areas in naturally ventilated buildings sited beneath air inlets.

	Temperature • The minimum temperature such that pigs do not need to huddle together will be maintained. General management • Package drinkers will be operated to prevent leakage. • Floors and walls will be kept clean. Keeping the pigs clean will help keep the walls clean. • Cracks and damaged areas of walls will be repaired.
Livestock numbers and movements	• Keeping a record of the capacity of the installation. • Record animal movements on and offsite and will be available on request.
Slurry spreading and manure management planning – offsite activity	*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.* • Solid manure and slurry will be exported offsite for: - • Spreading on land owned by the operator and a third party to confer agricultural benefit in accordance with a management plan in an NVZ. • We will maintain written evidence of the arrangements including: • Records of the quantities and date of transfers • Names and addresses and land acreage available where manure and slurry will be exported for spreading to land • Alternatively, where any third party accepts liability for removing manure or slurry from the installation, we will provide acceptable confirmation that: as a minimum, the third party will ensure the manure 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 • There are contingency arrangements in place should the land become unavailable.
Slurry spreading and manure management planning – onsite activity	• No manure of slurry will be spread onsite.
Waste sent offsite	• Waste collected by a registered carrier with transfer documentation.
Fugitive emissions	Appropriate measures for preventing and minimising fugitive emissions. General building and site maintenance • We will maintain buildings in good repair to minimise water leaks into the houses which may increase the moisture content of the manure. • We will keep areas around buildings free from build-up of manure, slurry, or spilt feed. • We will maintain impervious surfaces and containment kerbs where these may be contaminated with potentially polluting substances. For example,

	concrete areas around buildings will be kept free from cracks (cracks in concrete yards can pose a risk to groundwater). <u>Management of drainage systems and runoff</u> • All drainage systems will be identified on the drainage plan submitted with Application Variation V003. • Clean water systems will not be contaminated. Under no circumstances will slurry (including seepage from solid manure) be allowed to enter surface water drains or enter the ground. • Contamination of the yard area will be minimised to reduce the amount of contaminated water that requires disposal. This will include: o Keeping yards visibly clean o Keeping drainage channels clear o Cleaning up accumulations of spilt feed and dust. • Drainage from animal housing and water from cleaning out is slurry and will be collected in the earth-banked slurry lagoon prior to land spreading. • Drainage from yards likely to be contaminated by manure or slurry will be collected in the slurry lagoon. • The collection system is constructed to deal with the volumes contained. <u>Disinfectant footbaths</u> • Disinfectant footbaths are designed not to overflow. • Spent disinfectants from footbaths will be added to the manure or slurry and exported offsite. <u>Feedstuff</u> • Store potentially dusty feedstuffs in package purpose-built silos. • Use package transfer systems with augers and pipes to automatically transfer feedstuffs from the storage silos direct into feeders in the houses. <u>Housing ventilation</u> • Ventilation systems will be operated to achieve optimum air quality conditions at each stage of growth in all weather and seasonal conditions. • Ventilation will be appropriate to the age, weight and health of the animal. <u>Slurry storage (including pig slurry and wash water)</u> • Will continue to use existing slurry drainage system and earth-banked slurry lagoon, no enlargement required for Application Variation V002 for more houses and places for pigs. • Slurry system conforms with the technical measures detailed in the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) Regulations 2010, amended. • Slurry lagoon is covered with a fixed, floating plastic membrane. • Minimum slurry lagoon storage capacity is six months in a NVZ including allowance for rainwater. <u>Manure storage</u> • Will continue to store solid manure in the yard on the concrete apron providing an impermeable base, no enlargement required for Application Variation V003 for more houses and places for pigs.

	• Provided a collection and containment system for the liquid runoff (slurry). Conforms with the technical measures detailed in the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) Regulations 2010, amended. <u>Carcase management</u> • Carcasses will be stored in secure, covered containers to minimise odour and flies and frequently removed offsite by an approved transporter under the National Fallen Stock Scheme. <u>Appropriate measures for bunding and containment</u> <u>Agricultural fuel oil and other chemical storage</u> • Agricultural fuel oil, pesticides, and veterinary medicines will be contained in areas capable of retaining any spillage. • Agricultural fuel oil storage facilities will be bunded. Package, fuel oil storage tank will meet requirements of the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) Regulations 2010, amended • Pesticides and veterinary medicines will be kept in a store that is resistant to fire, dry, frost-free, and secure against unauthorised access. • Vermin control chemicals are brought onsite by a registered contractor for use as needed. <u>Dust & bio-aerosols, noise and odour</u> • The H1 Environmental Risk Management submitted with Application Variation V003 for more houses and places for pigs identified sources of dust & bio-aerosols, noise, and odour with potential to cause annoyance for sensitive receptors within 100 and 400m, respectively. Updated the dust & bioaerosols, noise and odour management plans to support the overall EMS.

Q8a Technical standards contd. EC (2017) Best Available techniques (BAT) Reference Document for the Intensive Rearing of Poultry or Pigs at Old Hall Farm

Environment Agency issued the permit EPR/TP3330QY in 2019, following the adoption of the Best Available Techniques (BAT) Reference Document for the Intensive Rearing of Poultry or Pigs 2017. Concluded the operator will be compliant with the Environmental Permitting Regulations/Industrial Emissions Directive if they are compliant with their permit including modern permit conditions and schedules. Included the Agency's typical permitting decisions (*italic*) in how the site is demonstrating compliance in Table 5: -

Table 5 Measures in accordance with EC (2017) Best Available techniques (BAT) Reference Document

BAT	Description	How is the site demonstrating compliance
BAT 1	**EMS** *In order to improve the overall performance of farms, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all the following features [in the BAT conclusions document].*	*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.* *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.* Operator has an Environmental Policy statement in place.
BAT 2	**Good housekeeping** *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].*	*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.* Operator is using all of the techniques given: - • Proper location of the plant/farm and spatial arrangements of the activities in order to: o Reduce transport of animals and materials (including manure) o Take into account prevailing climatic conditions (e.g., wind and precipitation). o prevent the contamination of water. • Educating and training of staff, in particular for: o relevant regulations, livestock farming, animal health and welfare, manure management, worker safety, and operator and stockmen have formal qualifications. o manure transport and land-spreading o planning of activities o emergency planning and management o repair and maintenance of equipment.

		• Prepared an emergency plan for dealing with unexpected emissions and incidents such as pollution of water bodies. This includes: o a plan of the farm showing the drainage systems and water /effluent sources o plans of action for responding to certain potential events for example fire, uncontrolled run-off from manure heaps, oil spillages, etc. o available equipment for dealing with a pollution incident for example spill kit for oil spillages. • Regularly check, repair, & maintain structures & equipment such as: o slurry stores for any sign of damage, degradation, leakage o slurry pumps o water and feed supply systems o silos, and transport equipment, o cleanliness of the farm, and pest management. • Storie dead animals in such a way as to prevent or reduce emissions.
Nutritional management		
BAT 3	*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].*	*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.* *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.* *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.* Operator is using a combination of the techniques given: - • Reduce the crude protein content using a N-balanced diet based on the energy needs and digestible amino acids. Soya bean meal added into feedstuffs during milling to increase crude protein and

		supplement otherwise low natural levels in cereal grains. Percentage of soya reduced as pigs grow. • Multiphase feeding with a diet formulation adapted to the specific requirements of the production period – four separate diets will be provided which contain an increasingly lower percentage of crude protein as pigs grow. • Addition of controlled amounts of essential amino acids to a low crude protein diet – highly digestible amino acid analogues will be added into all feedstuffs during milling, including lysine, methionine, threonine, and valine to supplement otherwise low natural levels in cereal grains.
BAT 4	*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].*	*As BAT 3.* Operator is using a combination of the techniques given: - • Multiphase feeding with a diet formulation adapted to the specific requirements of the production period – four separate diets will be provided which contain an increasingly lower percentage of phosphorous as pigs grow. • Use of authorised feed additives which reduce the total phosphorous excreted. Specifically, 6-phytase enzyme will be added into all the feedstuffs during milling, otherwise pigs normally lack sufficient intestinal phytase. The enzyme degrades the bound phytate phosphorous in wheat grains and soya during digestion, making more of this naturally occurring phosphorous and other nutrients available to the pigs. • Use of highly digestible inorganic phosphates for the partial replacement of conventional sources of phosphorous in the feed. Specifically, dicalcium phosphate will be added during milling into the first of the four diets for younger pigs.
BAT 5	**Efficient use of water** *In order to use water efficiently, BAT is to use a combination of the techniques given [in the BAT conclusions document].*	*Operator is already required to minimise the use of water as set out in the existing efficient use of raw materials in the permit.* Operator is using a combination of the techniques given: - • Keep a record of water use. • Detect and repair water leakages. • Use high pressure cleaners for cleaning animal housing and equipment. • Select and use suitable equipment e.g. package nipple drinkers ensuring water availability (*ad-libitum*). • Re-use uncontaminated rainwater as cleaning water.

Emissions from wastewater		
BAT 6	*In order to reduce the generation of wastewater, BAT is using a combination of the techniques given [in the BAT conclusions document].*	*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.* Operator is using a combination of techniques given: - • Keep the fouled yard areas as small as possible. • Minimise use of water. • Segregate uncontaminated rainwater from wastewater streams that require treatment.
BAT 7	*In order to reduce emissions to water from wastewater, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].*	*The operator is already required to minimise emissions of wastewater through existing permit conditions on general management, operating techniques and emissions of substances not controlled by emissions limits.* *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.* Operator is using a combination of the techniques given: - • Drain wastewater to a dedicated container or to a slurry store • Land spreading wastewater [offsite].
BAT 8	**Efficient use of energy** *In order to use energy efficiently in a farm. BAT is to use a combination of the techniques given [in the BAT conclusions document].*	*The operator is already required to minimise the use of energy through existing permit conditions on general management and energy efficiency.* Operator will be using a combination of the techniques given: - • Insulation of the walls, floors and/or ceilings of animal housing. • Use of energy efficient lighting. • Apply natural ventilation.
Noise emissions		
BAT 9	*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).*	*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.* *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.*

	BAT 9 is only applicable to cases where a noise nuisance at sensitive receptors is expected and/or has been substantiated.	*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.* *The NMP needs to be regularly updated and reviewed to prevent noise pollution and ensure compliance.* Dwelling houses and agricultural premises within 400m of Old Hall Farm Pig are sensitive receptors. Submitted an updated NMP for Application Variation V002 for more places and houses for pigs which includes the following elements: • A protocol containing appropriate actions and timelines • A protocol for conducting noise monitoring • A protocol for response to identified noise events. Operator has no records or recollections of having substantiated any noise concerns or complaints, so a noise reduction programme to implement elimination and/or reduction measures is not considered necessary.

BAT 10	*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].*	*Nose minimisation has been considered in equipment location and operation in the permit determination stage.*
		
		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.
		
		Operator will be using a combination of the techniques given: -
		
		• Equipment location for example installed package feed bins on every house to minimise the length of feed delivery pipes and minimise movement of vehicles on the farm.
		• Operational measures include:
		  o Equipment operated by experienced staff
		  o Avoidance of noisy activities at night and during weekends wherever possible
		  o Provisions for noise control during maintenance activities
		  o Operating augers full of feed
		  o Keep outdoor scraped areas to a minimum in order to reduce noise from scraper tractors.
		• Low noise equipment. This includes equipment such as:

		○ Pumps and compressors ○ feeding system which reduces the pre-feeding stimulus including use of package feeders and ad-libitum feeding in place. The BAT measures have also been identified in the NMP.
BAT 11	**Dust emissions** *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].*	*Techniques are already in place to reduce dust generation inside sheds such as ad-libitum feeding.* *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.* Operator will reduce dust generation inside livestock buildings. For this purpose, a combination of the following techniques will be used: - • Use coarser long barley or wheat straw for bedding • Applying fresh straw bedding by hand • Ad-libitum feeding • Pelleted feed • Equip dry feed stores which are filled pneumatically with dust separators • Designed and operate ventilation system with low air speed inside the pig houses.
Odour emissions		
BAT 12	*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].*	*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.* *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.* *The OMP needs to be regularly updated and reviewed to prevent odour pollution and ensure compliance.* Dwelling houses and agricultural premises within 400m of Old Hall

		Farm Pig are sensitive receptors. Submitted an updated NMP for Application Variation V002 for more places and houses for pigs. which includes the following elements: • A protocol containing appropriate actions and timelines • A protocol for conducting odour monitoring • A protocol for response to identified odour events. Operator has no records or recollections of having substantiated any odour concerns or complaints, so an odour reduction programme to implement elimination and/or reduction measures is not considered necessary.
BAT 13	*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].*	*Odour minimisation has been considered in equipment location and operation in the permit determination stage.* *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 up date 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.* Dwelling houses and agricultural premises within 400m of Old Hall Farm Pig are sensitive receptors. Submitted an updated OMP for Application Variation V002 for more places and houses for pigs. which includes using a combination of the techniques given: - • Use a housing system which implements a combination of the principles including keeping pigs and the surfaces dry and clean (e.g. avoid feed spillages) • Use a combination of the techniques for storage of manure including cover slurry during storage and minimise stirring of slurry • Use a combination of the techniques for manure landspreading include a band spreader, shallow injector or deep injector for slurry landspreading and incorporate manure as soon as possible. The BAT measures have also been identified in the OMP.
Emissions from solid manure storage		
BAT 14	*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*	*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.* Operator will be using one of the techniques given: -

	BAT conclusions document].	• Reduce the ratio between the emitting surface and the volume of the solid manure heap.
BAT 15	*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].*	*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.* Operator will be using a combination of the techniques given: - • Store solid manure on solid impermeable floor equipped with a drainage system and a collection tank for the runoff • Selected a storage facility with a sufficient storage capacity to hold the solid manure during periods in which landspreading is not possible • Store solid manure in field heaps placed away from surface and/or underground watercourses which liquid runoff might enter.
Emissions from slurry storage		
BAT 16	*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].*	*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.* Operator will be using and earth-banked slurry store (lagoon) (BAT17)
BAT 17	*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].*	*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.* Operator will be using a combination of the techniques given: - • Minimise stirring of slurry • Cover the earth-banked slurry store (lagoon) with a flexible plastic sheet.
BAT 18	*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].*	*Existing permit conditions on general management, operating techniques and emissions of substances not controlled by emission limits will ensure this requirement is met.* Operator will be using a combination of the techniques given: - • Use stores that can withstand mechanical, chemical and thermal influences. • Select a storage facility with sufficient capacity to hold the slurry during periods in which landspreading is not possible • Construct leak-proof facilities and equipment for collection and transfer of slurry (e.g. catchpits, channels, drains, pump stations)

		• Store slurry in earth-banked store (lagoon) with an impermeable base and walls e.g. with clay lining • Check structural integrity of stores at least once every year.
BAT 19	**On farm processing of manure** *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].*	No on-farm processing of manure.
Manure land spreading		
BAT 20	*In order to prevent or, where that is not practicable, to reduce emissions of nitrogen, phosphorous, and microbial pathogens to soil and water from manure land spreading BAT is to use all the techniques given [in the BAT conclusions document].*	*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.* No manure land spreading onsite.
BAT 21	*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].*	*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.* No slurry land spreading onsite.
BAT 22	*In order to reduce ammonia emissions to air from manure land*	*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*

	spreading, BAT is to incorporate the manure into the soil as soon as possible.	*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.* No solid manure or slurry land spreading onsite.
BAT 23	*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.*	*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	*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].*	*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.* *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.* Operator is monitoring total nitrogen and phosphorous excreted in manure using one the techniques with at least the frequency given: • Calculation by using a mass balance a mass balance of nitrogen and phosphorous based on the feed intake, crude protein content of the diet, total phosphorous and animal performance. For annual reporting from January 2025 for the 2024 calendar year use the Pig Excreta Mass Balance Model. Available at https://ahdb.org.uk/knowledge-library/environmental-permitting-regulations
BAT 25	*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].*	*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.* *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. Operator is monitoring ammonia emissions to air using one the techniques with at least the frequency given: • Estimation by using emission factors For annual pollution inventory reporting use government emission factors. Available at https://www.gov.uk/guidance/ammonia-emission-factors-for-pig-and-poultry-screening-modelling-and-reporting
BAT 26	*BAT is to periodically monitor odour emissions to air.*	*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.* Dwelling houses and agricultural premises within 400m of Old Hall Farm Pig are sensitive receptors. Submitted an updated OMP for Application Variation V003 for more places and houses for pigs. which includes 'sniff-testing' (as required).
BAT 27	*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].*	*The operator will now be required to comply with a new permit condition setting out a requirement for annual reporting of dust emissions. For pigs this is a new requirement.* *We expect all operators will demonstrate compliance using the emissions factors techniques.* For pigs, particulate matter is not normally expected. Unless operators have information to the contrary they can leave the column blank in the pollution inventory according to advice on the government website. Available at https://www.gov.uk/government/publications/pollution-inventory-reporting-guidance-notes/intensive-farming-pollution-inventory-reporting#part-2-releases-to-air
BAT 28	*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].*	*If an air scrubber or cleaning system is in place, the operator will be required to comply with this BAT conclusion. Air abatement systems are not common as they are costly and only work with closed housing systems so are not appropriate for a retrofit to older housing. Where such abatement is in place (for ammonia or odour abatement) the criteria has been met via process monitoring.* No air cleaning systems are proposed.

BAT 29	*BAT is to monitor the following process parameter at least once every year: -* • *Water consumption* • *Electric energy consumption* • *Fuel consumption* • *Number of incoming and outgoing animals* • *Feed consumption* • *Manure generation.*	*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.* Operator is keeping records on all the specified process parameters.
BAT 30	**Ammonia emissions from pig houses** *In order to reduce ammonia emissions to air from each pig house, BAT is to use one or a combination of the techniques given [in the BAT conclusions document].*	*We are confident that pig farm installations will be able to comply with the objective of BAT 30 via the usage of existing housing and operating techniques.* *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 indicates that all operators should already be compliant with the techniques set out in BAT30. This will be checked during routine compliance inspections.* *The operator is required to comply with the new permit condition to carry out annual monitoring and reporting. The results will need to meet the associated BAT-AELs. We expect the operator will demonstrate compliance using emission factors.* *Compliance with AELs is covered under a new condition and associated process monitoring table.* Operator is using a combination of techniques which apply the principles to increase the frequency of slurry (manure) to external storage and keep litter clean and dry: - • Full litter system (in case of a solid concrete floor) for weaners (7-15kg) and fattening pigs (growers) (15-30kg) • Straw flow system (in case of a solid concrete floor) for housing production pigs (>30kg)
BAT 31	**Ammonia emissions from houses for laying hens, broiler breeders or pullets**	Not applicable at Old Hall Farm

	*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].*	
BAT 32	**Ammonia emissions from houses for broilers** *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].*	Not applicable at Old Hall Farm
BAT 33	**Ammonia emissions from houses for ducks** *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].*	Not applicable at Old Hall Farm
BAT 34	**Ammonia emissions from houses for turkeys** *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].*	Not applicable at Old Hall Farm

8 Operating Techniques

Proposed changes for Application Variation V003 for more houses and places for pigs will not significantly change the raw materials inventory.

Table 6 Raw materials inventory for Old Hall Farm

Raw materials inventory	Quantity stored onsite (litres/kg)	Quantity used per year (litres/kg)	Justification for use of this material
Biocides (includes disinfectants, wood preservatives, slimicides)			
Disinfectants for housing and equipment	tbc	tbc	Defra Disinfectants Approved for use in England, Scotland, and Wales.
Pesticides (including herbicides, vertebrate control products, biological pesticides)			
Rodenticide baits, often in proprietary bait boxes	tbc	tbc	HSE UK List of Authorised Biocidal Products
Veterinary medicines (excluding dietary additives)			
Provided only in accordance with a veterinary prescription as required	tbc	tbc	Pig welfare/disease/pest control
Bedding types			
Barley straw generally preferred subject to availability, or wheat straw.	tbc	tbc	UK industry standard, readily available, efficacy & cost. Barley straw is softer, more palatable and less dusty.
Fuels and oils			
Gasoline (red diesel) for tractors	tbc	tbc	Agricultural industry standard, efficacy & cost

Inventory will be reviewed every 4 years and updated if alternative products are available.

10 Resource efficiency and climate change

Proposed changes for Application Variation V003 for more houses and places for pigs will not significantly change energy use or the basic measures for improving energy efficiency.

Table 7 Energy use at Old Hall Farm

Energy source	Use
Grid electricity	Lighting, feed augers, water pumps, slurry pumps.
Red diesel	Tractors & scrapers.

Table 8 Basic measures for improving how energy efficient activities are at Old Hall Farm

Activity	Basic energy efficiency measures
Lighting	• Low energy LED lighting installed/proposed across the whole site
Tractors & scrapers.	• Planned preventive maintenance with professional engineers in accordance with manufacturer's instructions and keeping records.
Monitoring	• Supplier invoices, electricity meter readings for kWh used. • Supplier invoices for red diesel litres delivered. • Keeping records.
Climate change agreement	• Not proposing to enter into a climate change agreement on account use relatively low electricity kWh. Not cost effective on account of the high entry and annual administration fees in a CCA versus the savings from climate change levy discount on invoices.

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

12. Proposed changes for Application Variation V003 for more houses and places for pigs will not change how we avoid producing waste.

13. Solid manure, slurry, and packaging waste arising from the pig 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 and recovery by land treatment to confer agricultural or ecological benefit.

14. Carcasses of dead pigs 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 segregated and securely stored for export offsite by an approved transporter under the National Fallen Stock Scheme