**Appendix 6 Technical Standards**

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| **Installation Name: Red House Farm** |
| **Schedule 1 Activity or DAA description** | **Relevant Technical Guidance note** |
| Section 6.9A (1) (a) (ii) | How to comply EPR 6.09 Version 2 |
| Pig production |  |
| Pig feed storage and preparation  |  Selection and use of feed is in accordance with SGN EPR6.09 ‘How to comply with your environmental permit for intensive farming’  Feed is stored in purpose built, covered, feed silos as shown in Appendix 4. Bulk delivery and storage of dry pelleted feed ingredients takes place on site. Feed is blown directly from the delivery lorry into the relevant storage silos. Feed is piped in sealed system to the sheds. Fall distance of feed from pipes to feeders is minimised to reduce aerosol creation. Feed is fed ad-lib and feed troughs and average intakes are monitored to reduce wastage. Indications of pigs wasting feed can point towards a problem with the feed formulation or manufacture, reducing palatability. In this situation, samples would be taken and feedback given to the mill, to enable correction of issue.  Feed storage vessels are protected from collision damage by curbing and barriers.  No liquid feed storage.  No milling and mixing on site.  Yard areas are kept clean and any feed spill would be promptly removed All feed rations are formulated to match the requirements of the pigs at different stages. A nutritionist regularly reviews and reformulates diets in order to optimise production and minimise excretion of nutrients.  |
| Slurry and manure storage |  Slurry is stored on site in above ground circular concrete store, with rigid cover, and in a slurry lagoon (associated with the bunded muck store) with floating cover, both of which meet SSAFO regulations. Between the underslat pits (allowed to hold up to 10 weeks’ worth of slurry production) and these two separate storage areas, the total storage capacity of the site is 8.5 months’ worth of slurry production (including slurry from the buildings, wash water, effluent from the muck store and rainwater on to contaminated concrete; and allowing for freeboard plus contingency margin). Please refer to the slurry calculation document attached. Slurry is tankered to the above ground store. There is no pipework connecting the store with the underslat pits. Effluent and contaminated rainfall from the muck pad drains directly to the lagoon. The only solid manure that will be produced will be a minimal amount from Shed 2, linked directly to the bunded muck pad. Approximately 150 tonnes will be held on this muck pad at any one time. The size and location of the pad ensures that rainfall on to contaminated concrete is reduced to a minimum. There is a plan to roof over the muck store and lagoon, thereby excluding rainwater from this area and reducing total slurry production.  Slurry and manure is applied to operator owned and managed land. The total storage capacity of the site allows for 10 weeks’ worth of production to be held underslats. Having a total capacity which allows for 8 months + of storage gives sufficient flexibility to:1. Allow for 6 months’ worth of storage capacity to cover closed period rules under Nitrate Vulnerable Zone regulations
2. Allow contingency margin for problems outside of closed periods to allow slurry to be applied where there is sufficient crop need and the ground, weather and crop conditions are suitable for access and application.

 All contaminated water (including rainwater on to muck pad and lagoon, effluent from muck, wash water from buildings) is captured in to the slurry system. All roof and yard water is uncontaminated and drains to soakaways.  Contents of footbaths are also disposed of via the slurry system. The slurry storage facilities conform to the technical measures detailed in the ‘Water resources control of pollution (silage, slurry and agricultural fuel oil) regulations 2010 (England) and as amended 2013’ (SSAFO). The base of slurry storage and all part of the drains and reception pits are impermeable.  Fully slatted buildings have frequent slurry removal by vacuum system. Slurry levels are maintained below 800mm depth and slurry will be removed at a frequency up to a maximum of every 10 weeks.  |
| Slurry spreading and manure management |  Manure and slurry are all applied to land owned and managed by the operator. Techniques for application are chosen for reduction of bioaerosol creation – i.e. low trajectory, dribble bar, injection, as appropriate. A Manure Management Plan is in place and is in line with best practice and NVZ regulations.  Manure and slurry will be stored and applied to land in accordance with the Defra Code of Good Agricultural Practice and NVZ regulations and the spreading will be in accordance with a manure management plan for the receiving land.  We keep records of stock counts and the tonnage/litres of slurry and FYM applied. |
| Fuel oil & chemical storage, low capacity non SRM |  There is one 5000 litre fuel store outside of the installation boundary (diesel). This store conforms with SSAFO regulations and has a bund with capacity of 110%. Its primary use is for the arable enterprise. The only use for diesel on site for vehicle/equipment primarily used for the pig enterprise is for the muck tractor, used to muck out Shed 2. The tank, bund, fittings and security arrangements will be inspected in line with the inspection and maintenance schedule (see Appendix 3).  The fixed generator is located outside of the installation boundary in building adjacent to Shed 1 (pig building at North end of installation). Being tractor driven, it does not have its own fuel storage. The generator is not primarily used for the pig enterprise, but as back-up for the whole farm.  Chemicals including disinfectants, rodenticides and veterinary medicines are stored in a store compliant with current regulations – see Veterinary medicines and pest control section below. Pens are cleaned and disinfected between batches of pigs, with Defra approved disinfectants.  All deadstock is stored in a lockable container before being incinerated on site in an APHA approved unit, included within the installation boundary. Incinerator ash is incorporated in to FYM before application to land, under a U15 waste exemption. The incinerator and deadstock store are inspected in line with the inspection and maintenance schedule and manufacturer’s instructions.  |
| Housing | Housing design and management is in accordance with SGN EPR6.09 ‘How to comply with your environmental permit for intensive farming’  The buildings and associated drainage have all been built to BAT standards, with a strong focus on resource saving and efficiency. Refer to the building inventory (page 7) for more detail on housing and systems. Other than Shed 2 which is solid floor, straw bedded and naturally ventilated, all other housing is fully slatted with a mixture of natural ventilation, side fan ventilation and roof ventilation. The housing is well insulated and the sheds have a damp-proof course which helps to reduce heat loss and condensation.  LED lighting will be installed throughout  No heating is applied, as there are no piglets on site.  There is a heat alarm system in case of power cuts or other reason for ventilation failure. A fixed generator is available for power back-up.  All buildings and structures on site are maintained in good repair. In accordance with the management system. There is a programme of inspection and planned preventative maintenance for the housing, drainage and all equipment. Floors and walls are kept clean. Any cracks and damaged areas of yards and walls are repaired. The slat systems remain fairly clean without accumulation, allowing slurry and urine to transfer quickly to the pits underneath.  The straw-based accommodation is managed so as to optimise binding of dust and liquid. See Slurry and Manure Storage section above. Dirty, wet areas of bedding removed frequently, to prevent build up of ammonia and ponding of effluent.  Good quality bedding used to reduce risks of dust and bioaerosols.  Nipple drinkers are used to minimise water wastage. The drinkers are monitored twice daily to prevent leakage to minimise the amount of dirty water going to the slurry storage. Water will be from borehole (with Mains supply available as backup). Borehole housed and located outside of the installation boundary. Water use is recorded and monitored.   Service checks are carried out on the ventilation system in accordance with the manufacturer’s instructions.  |
| Low capacity non SRM |  Approved installation and monitored by APHA Incineration on site improves biosecurity Incinerator ash is incorporated in to FYM before application to land, under a U15 waste exemption. |
| Drainage |  Refer to the drainage plan (Appendix 4). A copy of the drainage plan is also kept with the accident management plan.  The clean water drainage systems are not contaminated. Slurry is not allowed to enter soakaways or other clean water pathways. The site surfacing is stone. There is a soakaway at the northern end of Shed 1 taking uncontaminated water from roof and yard areas associated with Shed 1. Uncontaminated water from roof areas (via gutters and downpipes) from sheds 2, 3, 4 & 5 and yard areas (via drain inlets and pipework) ultimately drains into the nearby drainage ditch located on the western boundary of the installation. Yard areas are kept visibly clean, drainage channels are kept clear and spilt feed and dust are cleaned up  Drainage from the animal housing and water from cleaning out is treated as slurry and directed to the slurry stores.  Disinfectant footbaths are designed not to overflow. Used disinfectant is added to the slurry store.  Effluent and rainwater contained within the bunded muck store, drains to the associated lagoon. |
| Borehole (i.e. groundwater) protection |  To protect the borehole (a direct pollution pathway) from any risk of contamination from the site, the following measures are employed:* Protection against risk of backflow
* The borehole is housed and is not located within the installation boundary or at any direct risk of slurry contamination by overground flow.
* Trays placed under slurry connection pipes
* Minimum of annual water tests (independently tested), taking samples as close as possible from source, checking total TVC and coliform levels.

 Risk of spillages and leaks mitigated by frequent inspection and maintenance of all equipment, vehicles and infrastructure.  Staff trained in Emergency Action Plan and materials and equipment readily available to contain spills. |
| Livestock numbers and movements  | A system is in place to record the number of animals on the farm at any one time. Animal movements on and off the farm are also recorded; these records will be available for inspection.  |
| Deadstock disposal | Fallen stock is disposed of in accordance with the current Animal By-Products Regulations. It is incinerated on -site in an APHA approved gas-powered incinerator. Until incineration, deadstock is stored in sealed and secure containers. Should there be a problem with the incinerator, deadstock would be collected by a licenced contractor. Deadstock collection vehicles would be kept to the perimeter of the site to reduce disease risk.  |
| Veterinary medicines and pest control | Chemicals, rodenticides and veterinary medicines are kept in a store capable of retaining spillage, resistant to fire and are kept dry, frost free and secure.  |
| Pollution Prevention Measures |  All operations are assessed annually for opportunities to reduce pollution risk and implementation schedules developed as appropriate.  All staff are trained in pollution risk identification, minimisation and emergency procedures for general site activity and activity relating to their work duties.  There is an accident management plan in place with a procedure to review incidents.  |
| Hazardous waste  | Veterinary waste is removed by the vet for safe disposal. Other hazardous waste, such as waste oil, aerosols, etc. are removed by a licensed contractor with an adequate audit trail, meeting the requirements of the Environmental Permitting Regulations.  |

**Buildings Inventory**

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| **Building name and ref on plan** | **No of places** | **Type of ventilation\*\*** | **Ventilation details**  | **Floor type** | **Slurry/manure management** |
| Shed 1 | 480 >30kg finishing pig places | Side fans  | 5 fans     | FSF | Shallow slurry pit, frequently emptied |
| Shed 2 | 300 >30kg finishing pig places | Natural Ventilation  | / | Solid floor | Straw bedded |
| Shed 3 | 1000 >30kg finishing pig places | Side fans  | 18 fans (3 per room)    | FSF | Shallow slurry pit, frequently emptied |
| Shed 4 | 720 >30kg finishing pig places | Natural Ventilation  | / | FSF | Shallow slurry pit, frequently emptied |
| Shed 5 | 600 >30kg finishing pig places | Roof fans | 5 fans (1 per room)    12" diameter and 1370 rpm. As the height above ground of the roof fan emission is 4 metres, height alone would categorise these roof fans in the medium velocity column for screening purposes (over 3.5m but under 5.5m). | FSF | Shallow slurry pit, frequently emptied |
| Feed silos  | Storage of dry pelleted feed |
| Office, chemical and vet med store and showers | Secure and compliant storage |
| Diesel tank | 5000 litre capacity. Plastic bunded tank. *Outside of installation boundary and not primarily related to the pig enterprise.*  |
| Fixed Generator | Diesel powered, with integrated and bunded diesel storage. *Outside of installation boundary and not primarily related to the pig enterprise.* |
| Incinerator | Approved facility |
| Above ground circular slurry store  | Capacity of 1900m3 (41,800 gallons) – which is the net volume allowing for 300mm freeboard required by BS5502. This store has a rigid cover. The surface area of the slurry is 283.5 m2. |
| Slurry lagoon | 144m3 capacity, 72 m2 surface area. Floating cover (clay balls). |
| Muck pad  | Maximum of 150t of FYM stored on site at any one time. Effluent is drained to the associated lagoon (see above). |
| Borehole  | *Outside of installation boundary and not primarily related to the pig enterprise.* |
| Welfare Office | Staff changing room, office and welfare facilities |

**Emissions**

**Table of Emission Points within the installation boundary**

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| **Emission Point Reference**  | **Emission Point Description and Location** | **Source** |
| **Air** |
| App 4, feed silos | Feed delivery/storage | Dry pelleted feed ingredients intake and storage |
| App 4, incinerator | Incinerator chimney exhaust output  | Exhaust fumes  |
| App 4, various | Side and roof fan outlets and natural ventilation | Outlets on all pig buildings as located in App 4 and listed in the Buildings Inventory |
| App 4, slurry tank, slurry lagoon and underslat shallow pits | Above ground slurry store (rigid cover), storage under buildings and sealed system for extraction.Lagoon with floating cover. | Slurry  |
| App 4, FYM store | FYM on bunded muck mad. | FYM |
| Off installation  | Slurry and FYM spreading - outside installation boundary – on to land owned and managed by the operators. | Slurry and FYM application |
| **Water** |
| App 4, clean water drainage | Stone surfacing. There is a soakaway at the northern end of Shed 1 taking uncontaminated water from roof and yard areas associated with Shed 1. Uncontaminated water from roof areas (via gutters and downpipes) from sheds 2, 3, 4 & 5 and yard areas (via drain inlets and pipework) ultimately drains into the nearby drainage ditch located on the western boundary of the installation.All waste water and used footbath contents directed to slurry storage.Borehole protected | Roof water from all buildingsClean water from uncontaminated yards |
| **Land** |
| Clean water drainage | Soakaways on site | Clean water as above |
| Off installation  | Slurry and FYM spreading - outside installation boundary – on to land owned and managed by the operators. | Slurry and FYM application |
| Off installation | Incinerator ash is augered into a sealed container before incorporation with FYM and application to land (under U15 exemption) | Incinerator ash disposal |

# **Carcass management**

Fallen stock is disposed of in accordance with the current Animal By-Products Regulations. Carcasses are incinerated on site in an approved facility, or collected by a licenced contractor.

# **Flies**

There have been no incidents of fly nuisance at the farm. Appropriate actions will be put into place to prevent and control flies should a nuisance arise e.g. use of pesticides, traps and electric fly killers. The farm manager undertakes regular inspections of the site.

# **Odour**

# There are neighbours (sensitive receptors) within 400 m of the farm and, therefore, an up-to-date Odour Management Plan (Appendix 8) is in place. This conforms with the SGN EPR6.09 ‘How to comply with your environmental permit for intensive farming’ and the H1 Environmental Risk Assessment (Appendix 5). There is no history of odour complaints resulting from current activities on the unit.

# **Noise and vibration**

# There are neighbours (sensitive receptors) within 400 m of the farm and, therefore, an up-to-date Noise Management Plan (Appendix 9) is in place. This conforms to SGN EPR6.09 ‘How to comply with your environmental permit for intensive farming’ and the H1 Environmental Risk Assessment (Appendix 5). There is no history of noise complaints resulting from current activities on the unit.

**Bioaerosol and dust**

# There are neighbours (sensitive receptors) within 100 m of the farm and, therefore, an up-to-date Bioaerosol and Dust Management Plan (Appendix 10) is in place. This conforms with the SGN EPR6.09 ‘How to comply with your environmental permit for intensive farming’ and the H1 Environmental Risk Assessment (Appendix 5). There is no history of bioaerosol or dust complaints resulting from current activities on the unit.