

Submission No. 1

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Health Service Executive

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HSE SUBMISSION REPORT.

Environmental Health Service Consultation Report.

(As a Statutory Consultee (Planning and Development Acts 2000,
& Regs made thereunder)

Report to: Mr. Patrick Geoghegan
Programme Officer
Environmental Licensing Programme
Office of Environmental Sustainability
Environmental Protection Agency
Headquarters, PO Box 3000
Johnstown Castle Estate
Co. Wexford.



Type of Consultation: Integrated Pollution Prevention & Control Licence.
Reference No. P1024-02.

Planning Authority: Tipperary County Council.

Reference number: P1024-02.

Our Reference number: EH17/01.

Applicant: Doon Enterprises Ltd. Doon Araglin, Co. Tipperary.

Proposed Development: Application to Environmental Protection Agency for an Integrated Pollution Prevention and Control Licence for the rearing of pigs in an installation where the capacity exceeds 2000 places for the production of pigs which are each over 30 kg in weight. The application relates to an existing farm complex located at Doon, Araglin Kilworth Co. Tipperary.

1) General Introduction.

This report only comments on Environmental Health (EH) Impacts of the proposed development as outlined in this Environmental Report (ER) and the adequacy of the ER from an EH perspective. We have made observations on the following specific EH areas.

A) Noise/Vibration. B) Air Quality. C) Water Quality. D) Pest Control. E) Legionella Control.

2) Assessment of Principle & Description of the Project.

The proposed development involves an extension to an existing facility for the rearing of pigs which currently accommodates 500 sows and their progeny to final finishing weight. The extension sought is specifically designed to provide for the rearing of pigs for sale to the meat processing industry for the production of pig meat for human consumption. The purposes of the new structures are to provide (1) extra accommodation for sows (loose housing and farrowing) in order to comply with pending animal welfare regulations, (2) to provide for an increase in floor area for weaners and finishers to comply with animal welfare regulations and to meet the requirements of pig meat processors who are now looking for a heavier pig and finally (3) to provide for a greater "down time" for washing/disinfecting of pens between batches of pigs as currently recommended best practice for pig health and hygiene purposes. The location of the proposed development is in a rural farming area in Doon, Araglin, Co. Tipperary approximately 2 miles from Araglin/Lismore road. The facility is on level ground elevated about 50 metres below the adjacent access road which is approximately 300 metres away.

The proposed development comprises of steel framed structures with insulated concrete or steel side cladding to enclose pens in which pigs will be accommodated and fed ad lib. Slurry from the individual houses is collected in underground tanks and stored pending dispatch to local farmers. The main structures will have a total floor space of approximately 7185 metres square. The applicant's parents dwelling live approximately 150 metres from the site and there are no other residential dwellings within 600 metres of the facility. The existing farm complex consists of dry sow, farrowing and weaner and fattening houses. In addition there is an onsite milling plant, feed storage silos, underground slurry tank, and an assortment of service buildings. The applicant Mr Charlie Ryan has spent a number of years modernising the existing facility into a financially viable pig rearing and fattening unit. There are currently 3 fulltime stock men employed on site and the farm also provides employment in the form of maintenance contracts for repairs, slurry application to land and professional services such as veterinarians, accountants and agricultural consultants on an ongoing basis. The process at the facility involves sows being impregnated and once the sows have farrowed the piglets' progress through a two stage weaner phase. The weaners are eventually transferred to fattening units in order to achieve a slaughter weight of approximately 120 kg. The fattened pigs are sold to meat processing plant in Roscrea and also a plant located in Northern Ireland. The pig farm has been inspected and accredited for the Bord Bia Code of Practice and the daily operation of the farm follows the Bord Bia Code of Practice for pig rearing.

3) Assessment of the Environmental Impact Statement.

I have since had an opportunity to look at the Environmental Impact Statement in detail which was submitted as part of the licence application. I visited the facility on Friday the 21st of April 2017 and spoke to the applicant Mr. Charlie Ryan who escorted me around the site. Mr. Ryan outlined the pig production process and his proposals to increase the herd at the facility and also comply with the current legislative requirements for animal welfare. The applicant stated that he had inherited the farm from his parents and had devoted considerable time to upgrading the farm buildings and improving the pig herd over the last several years. The activities on site involve the normal management and monitoring of stock for the production of meat.

The current facility is compact, modern and appeared to be very well managed and maintained to a high standard at the time of visit. Feeding and ventilation systems are fully automated and there is an onsite feed milling/mixing unit. All feedstuffs are fed dry and ad lib and comprise of a low protein diet. Documentation is in place and includes the following: A) List of farmers supplied with slurry from the facility and includes dates and volumes of slurry removed. B) Waste removal including dead carcasses for removal to rendering plants. C) Water sampling programme for private water supply. D) Records for calibration of ventilation monitoring sensors located in individual pig housing units. The Environmental Impact Statement adequately addressed most of environmental concerns, however in order to fully address all concerns from an Environmental Health perspective I should like to make the following comments and recommendations.

(A) Noise & Vibration (Construction & Operational Phase)

Construction Phase.

During any construction works of the proposed development it is likely that increased noise and vibration levels will be generated by plant and equipment and increased traffic movements. Mitigation measures must be put in place to eliminate the risk of nuisance to nearby noise sensitive premises. These include limiting the hours of operation on the construction site to 07.30 am to 19.00 hours Monday to Friday and 08.00am to 13.00 hours on Saturdays. No working on Sundays or Public Holidays.

All construction plant and equipment must be sited, operated and maintained in accordance with BS.5228 Noise & Vibration Control on Construction and Open Sites. It is advisable that a buffer zone be constructed around the construction site comprising of earth bunding. This will help minimise the risk of any potential noise nuisance and can be removed once construction works have been completed.

Operational Phase.

In order to mitigate against any potential noise nuisance from the facility it is strongly recommended that the following measures be adopted.

- Once the extended piggery has been completed and becomes operational it is strongly recommended that a noise survey be undertaken. The survey should be undertaken by a competent qualified acoustics consultant to establish the predicted noise levels from fixed plant and equipment such as ventilation fans, motors, pumps etc. The noise survey should be undertaken in accordance with B.S 4142 Noise from Industrial sources affecting residential premises. Where noise levels are likely to exceed background levels, all fixed noise generating plant and equipment associated with the operation of the piggery should be incorporated into suitable acoustic enclosures where practicable, or alternatively be adequately insulated and fitted with suitable noise attenuation /anti-vibration devices in order to minimise the risk of noise nuisance to nearby residential premises.
- The peak noise on pig farms are generally at feeding times when pigs compete for space and food at the feeding trough. The piggery should have a feeding system in place where all growing and finishing pigs are fed ad lib. The peak noise levels can therefore be avoided as the pigs are more content and do not have to compete for food and can feed throughout the day. In addition, all new buildings should be insulated to a high standard thus further reducing any potential noise from pigs.
- All deliveries such as pigs and feedstuffs, and exports such as pigs and pig manure should not take place any earlier than 07.00 a.m and no later than 20.00 hours Monday to Saturday. This will help minimise the risk on noise nuisance from traffic movements.

(B) Air Quality (Construction & Operational Phase).

Construction Phase

Dust generation during construction works of the proposed development has the potential to affect air quality especially during dry weather conditions. Measures must be put in place to mitigate against dust emissions. These measures include erection of mesh screening around the construction areas to help prevent dust migration, water spraying access roads/tracks, minimising speed of construction vehicles and plant on site. In addition, vehicles transporting granular material to or from site must be adequately covered to prevent the generation of airborne dust.

Operational Phase.

During the operational phase of the extended piggery there are two aspects which relate to air quality i.e. odour from on site activities and odour off site from land spreading of pig manure. The odour from the piggery arises from the day to day operations such as slurry agitation; washing down passageways and units within the piggery etc. In order to mitigate against odour emissions from the facility it is strongly recommended that the following measures be adopted.

- All new building units housing pigs should be on slatted floors. The individual pens should be washed, disinfected and rested on a regular basis between batches of pigs.
- Computerised temperature control systems should be installed in the new buildings housing pigs to maintain adequate ventilation, and create optimum air movement which will assist in mitigating against any odour potential.
- It is strongly recommended that all pigs are fed low protein diets which are stated to assist in the reduction of odour by up to 30%.
- Removal of pig manure from the facility should be by vacuum leak proof tanker and agitation of slurry should be kept to an absolute minimum in order to minimise odour release.
- External slurry tanks should be adequately covered to reduce/eliminate the release of odour from pig manure.
- All dead carcasses should be stored in a sealed container and removed for disposal by a licensed contractor to an approved licensed facility on a regular basis.

Pig slurry application to land

The pig slurry produced on the farm is used as a fertilizer by customer farms in the locality. A register of all pig slurry exported to other farms must be maintained on site with date, volume exported, farmers name and herd number recorded. The pig slurry must be applied to agricultural land in accordance with the Nitrate Directive Regulations (S.I No. 610 of 2010) and Teagasc Code of Good Practice for application of slurry to land.

In order to mitigate against any potential odour nuisance during application of pig slurry to land it is strongly recommended that the following measures be adopted.

- All pig slurry should be injected directly into the soil, or alternatively tankers should be fitted with low trajectory splash plates or band spreader to minimise aerosol formation.
- Pig slurry should not be applied any closer than 100 metres to residential dwellings to eliminate risk of odour complaints and contamination of private water supply.
- No application of pig slurry to land during windy conditions to prevent carry over of odour/ aerosol to any nearby residential dwellings or main roads.
- Pig slurry should only be applied to land between the periods of 15th of January to the 15th of October in accordance with the directive.

(C) Water Quality (Construction & Operational Phase)

Construction Phase.

Any excavation works associated with the construction of the proposed development should not have a negative impact on ground water or aquifers that are likely to be used in the future for drinking water supply. There is potential for contamination of ground water from fuel spillages from re-fuelling activities. Any fuel /oil spillages must be cleared up immediately, and adequate stocks of approved spillage absorbent material must be stocked on site. Any temporary fuel/oil tanks must be properly bunded to 110% of their capacity. In order to mitigate against any potential pollution of ground water from construction activities, the construction works must be carried out in accordance with a recognised international standard for protecting the Environment such as The Control of Water Pollution from Construction Sites.

Operational Phase

The main potential threat to the contamination of ground water is the large volume of pig manure stored on site. In order to mitigate against any potential groundwater contamination it is recommended that the following measures be incorporated into the proposals.

- The slurry tanks should be designed to the specification in accordance with the Department of Agriculture, Food & Rural Development for construction of farm buildings. All slurry tanks should be covered and the tanks should be installed by reputable competent approved contractors.
- The slurry storage capacity should be calculated based upon the BATNEEC Guidance Note for Pig Production Sector (Revision 1-February 1998).
- A leak detection system should be incorporated into all new slurry tanks to help eliminate the risk of ground water contamination. The leak detection systems should be inspected on a regular basis and any samples obtained at

leak detection sites should be analysed by an independent accredited laboratory to determine the nature of any contamination.

- All pig manure applied to agricultural land should be in accordance with the Nitrate Directive Regulations previously mentioned.
- The pig unit is in the catchment area of the river Araglin. It flows from east to west and the direction of ground water flow is from the crests of the hills towards the river in the lowlands. Uncontaminated rain water from the roofs of various buildings at the piggery is collected via the storm water collection system and is eventually discharged to field drainage. It is strongly recommended that water samples are obtained from the water course upstream and downstream of the piggery on a regular basis (at least on a quarterly basis) and analysed by an independent accredited laboratory to ensure no contamination from the piggery enters the watercourse.
- The farm has its own private water supply by means of a private bored well. It is strongly recommended that samples are obtained from the well at least twice annually and submitted to an independent laboratory for analysis.
- As mains drainage is not accessible on site, a septic tank is provided to accommodate staff W/C facilities and staff canteen. The Septic Tank should be inspected on a regular basis, serviced and de-sludged in accordance with the manufactures re-recommendations. The outfall should be sampled at least annually and sent to an independent laboratory for analysis to ensure it complies with the loading rates for commercial premises as outlined in the Waste Water Treatment Manual produced by the Environmental Protection Agency.

(D) Pest Control

The very nature of the farm environment tends to attract rodents such as rats and mice and insects such as flies i.e. blue bottles and cluster flies etc. They have a food and water supply, warmth and shelter readily available. It is virtually impossible to completely pest proof farm buildings as livestock require adequate ventilation therefore giving pests a pathway to enter buildings. It is therefore strongly recommended that the services of a reputable, competent Pest Control Contractor be appointed to control rats, mice and flying insects. The Pest Control Contractor should carry out regular inspections at least quarterly and more regularly if infestations are heavy. A map of all bait points throughout the farm should be provided and a record of all inspections/comments should be available for inspection at all times.

(E) Legionella Control.

Day to day activities at pig farms involve the use of large volumes of hot and cold water for washing down and disinfection of pig houses. It is therefore imperative that all plant used for the distribution of heating/cooling of water supplies (e.g. water tanks, pipe work, cooling towers, pumps, valves etc) should be properly maintained and serviced to eliminate the risk and spread of Legionella. All new equipment should be designed as far as possible to eliminate the production of aerosols. The temperature and

quality of the water used should be such that it will not support the growth of Legionella. The plant and equipment should be cleaned, flushed and disinfected on a regular basis and preferably have residual disinfection at all times. Regular temperature surveillance monitoring of the water system should be undertaken and microbiological samples obtained for analysis to detect the presence of Legionella. It is recommended that all staff are trained and educated in the prevention and spread of Legionella.

Conclusion

The applicant Mr Charlie Ryan currently operates Doon Farm Enterprises and has considerable experience in pig production. He has operated and improved the existing facility over a period of several years. He informed me that he has never received any complaints from local residents in respect of noise or odour from the existing piggery. The farm is compact and modern and incorporates best available techniques to minimise emissions from the facility. The farm is accredited for Bord Bia Code of Practice and is inspected on a regular basis to ensure it complies with the Code of Practice for pig rearing welfare. The proposed development comprises of an activity to which an Integrated Pollution Prevention and Control Licence (IPPC) under Part IV of the Environmental Protection Agency 1992 as amended is required, and the applicant is currently in the process of applying for a licence. The license conditions generally are very stringent and address most environmental concerns from an Environmental Health perspective. However, in addition, I strongly recommend that those mitigation measures outlined under **items A to E above are also implemented as part of the licence conditions**. I therefore have no additional or adverse comments to make in respect of the proposed application.

Signed:



Date: 4th May 2017

All correspondence or any queries with regard to this report including acknowledgement of this report should be forwarded to Mr. Ray Parle (Principal Environmental Health Officer) Environmental Health Department, Community Care Buildings, Western Rd. Clonmel, Co, Tipperary.

