

***This Report has been cleared for submission to the Board/Director by Programme Senior Inspector Niamh O'Donoghue***

**Signed:** 

**Date:** 29 August 2024



**OFFICE OF ENVIRONMENTAL SUSTAINABILITY**

**INSPECTOR'S REPORT ON AN INDUSTRIAL EMISSIONS LICENCE APPLICATION, LICENCE REGISTER NUMBER P0446-03**

**TO: DIRECTOR**

**FROM: Philip Stack, ICER Inspector**

**DATE: 29 August 2024**

Applicant:	Mr Michael Monagle
CRO number:	N/A
Location/address:	Annakisha North, Doneraile, County Cork
Application date:	17 May 2023
Classes of activity (under EPA Act 1992 as amended):	6.2: The rearing of pigs in an installation where the capacity exceeds: (a) 750 places for sows, or (b) 2,000 places for production pigs which are each over 30kg.
Categories of activity under IED (2010/75/EU):	6.6(b) Intensive rearing of pigs with more than 2,000 places for production pigs (over 30kg), or 6.6(c) Intensive rearing of pigs with more than 750 places for sows.
Main CID:	CID (EU) 2017/302 (15 February 2017). Establishing (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs.
All relevant CIDs, BREF documents and legislation are listed in appendices of this report.	
Activity description/background: An existing licensed activity for the rearing of pigs in an installation increasing the capacity to 854 sows and 4,920 production pigs from 780 and 3,900 respectively.	
Additional information received:	Yes (04 July 2024, 29 March 2024, 12 June 2023)
No of submissions received:	Two
Environmental Impact Assessment required: Yes	Stage 2 Appropriate Assessment required: Yes
Environmental Impact Statement submitted (EIS): Yes (17 May 2023)	Natura Impact Statement (NIS) submitted: Yes (03 July 2024)
Site visit: 20 July 2023	Site notice check: 23 June 2023

## 1. Introduction

This is an assessment of an application for an Industrial Emissions Directive (IED) licence to carry on an activity under Part IV of the Environmental Protection Agency Act 1992, as amended (hereafter referred to as the EPA Act).

Mr Michael Monagle was originally granted a licence (ref. P0446-01) in 1999 for the installation at Annakisha North, Doneraile, County Cork, with a capacity of 780 sows and 3,900 production pigs. Details of the current and proposed site capacity and infrastructure are provided in Table 1.1 below. A previous licence review application was withdrawn by the application (ref. P0446-02).

The review application includes additional buildings, a new storm water discharge point, and changes to the site boundary. There will also be additional licence conditions to bring the activity into compliance with the Commission Implementing Decision (CID).

**Table 1.1. Application details.**

	<i>Existing (licensed)</i>	<i>Proposed</i>
<i>No. of pig houses</i>	7	7
<i>Pig categories</i>		
<i>Dry Sows</i>	649	690
<i>Farrowing sows</i>	131	164
<i>Boars</i>	20	8
<i>Weaners</i>	2,668	4,400
<i>Maiden gilts</i>	94	NA <sup>Note 1</sup>
<i>Production pigs</i>	3,900	4,920
<i>Total no. animals</i>	7,462	10,182

Note 1: This category is now included with production pigs.

For the purposes of the IED categorisation this equates to 854 sows and 4,920 production pigs.

The licensee is currently operating the installation at above the capacity permitted by their current licence and has been the subject of OEE enforcement action.

A map of the site layout is included in Appendix 1 of this report.

## 2. Description of activity

The installation is located in a rural location, with most development near the installation consisting of dwelling houses and farmyards. Pig farming has been carried out on this site since the 1980s. The present enterprise employs six people.

The main activities at this installation occur during normal working hours between 08:00 and 19:00. Stock inspections are carried out every day, including weekends and bank holidays and additional essential activities may be undertaken outside of core working hours. The installation currently operates in accordance with the requirements of the Department of Agriculture, Food and the Marine.

The pig production process on this farm is typical of many other Irish units. The installation will consist of seven pig houses sub-divided to cater for the different pig categories on-site, along with slurry collection and storage tanks, a feed mill and ancillary structures and equipment necessary for the accommodation, management and husbandry of the animals, and administration of the unit. The process involves the

rearing of stock bred from the on-site sows for meat production. Pigs will be reared at the installation until they reach the required finishing weight of approximately 100 kg. All houses will be fully cleaned out after each group of pigs is removed.

The type of houses used for this activity is a concrete panelled construction, with mass concrete tanks under the ground level under slatted floor. The houses will be thermally insulated, with a mechanical-controlled ventilation system and artificial lighting. Automatic feeding and ventilation systems operate on a 24-hour basis. The flooring of each house is and will be bedded with chopped straw over its entire area immediately prior to housing. The principal inputs to the operation are bedding, feed, water, veterinary medicines and energy (electricity, diesel for back-up generator, and gas for heating). The main outputs are pig and pig manure. These are discussed in further detail below.

### **3. Planning Status**

A number of planning applications have been made by the licensee for the area within the installation boundary (ref. 12/5086, 12/5695 and 14/5815) since the existing licence was granted.

On 19 September 2012, Cork County Council granted planning permission (Ref: 12/5086) for the construction of a dry sow house and a weaner house. This planning permission was replaced by planning permission ref. 12/5695, granted by Cork County Council on 30 October 2012, for the construction of a dry sow house and dry sow service house.

On 14 July 2015, Cork County Council granted planning permission (Ref: 14/5815) for the construction of a pig fattening house and associated feed mixing room and a pig walkway. This development work has been completed.

Details of these planning applications and permissions have been provided in the application form.

The licensee has submitted the EIS associated with planning permission ref. 14/5815. Having reviewed the planner's reports for previous planning permissions, it is considered that the EIS submitted with the licence application, along with the licence application and the further information received, contains adequate information to inform the Agency's assessment and that the EISs relating to previous planning permissions are not required for the Agency's assessment. The Agency has had regard to the reasoned conclusions reached by the planning authority in undertaking its environmental impact assessment of the activity.

Schedule A of the RD limits the number of pigs housed on-site to those numbers give in Table 1.1. This is the capacity that is specified in the application, in the EIS submitted in support of the application, and in the planning permissions granted for the installation.

### **4. Environmental Impact Assessment (EIA) Screening**

In accordance with section 83(2A) of the EPA Act 1992 as amended, the Agency must ensure that before a licence or revised licence is granted, that the application is made subject to an EIA, where the activity meets the criteria outlined in section 83(2A)(b) and 83(2A)(c).

In accordance with the EIA Screening Determination, the Agency has determined that the activities are likely to have a significant effect on the environment, and accordingly is carrying out an assessment for the purposes of EIA.

The activity exceeds the following threshold in Part 1 of Schedule 5 of the Planning and Development Regulations 2001, as amended:

- 17 Installations for the intensive rearing of pigs with more than - (b) 3,000 places for production pigs (over 30 kilograms).

An EIS was submitted to the Agency as part of the application on 17 May 2023. This is dealt with in the EIA Section later in this report.

## **5. Best Available Techniques and CID**

BAT for the installation was assessed against the BAT conclusions contained in Commission Implementing Decision of 15 February 2017 establishing BAT conclusions for the intensive rearing of poultry or pigs (2017/302/EU) and in any other relevant BREF documents specified in the appendices of this report. A detailed BAT assessment was carried out by the licensee and is included in Section 4.7 of the application form. Additional conditions have been incorporated into the RD to address BAT Conclusions and these are detailed throughout this report. Any relevant BAT-AELs have been specified in the emissions sections of this report.

I consider that the applicable BAT Conclusion requirements are addressed through the technologies and techniques as described in the application, as well as the conditions and limits specified in the RD.

## **6. Emissions**

### **6.1 Emissions to Air**

This section addresses emissions to air from the installation and the environmental impact of those emissions.

#### **6.1.1 Channelled Emissions to Air**

There are no main emission points to air from the installation.

#### **6.1.2 Fugitive Emissions**

The only fugitive emissions from this sector are dust, odour and ammonia. These are discussed below. The nearest third-party dwellings potentially affected by fugitive emissions are detailed below (Table 6.1).

**Table 6.1: Nearest third-party residential dwellings**

<b>Distance from Site</b>	<b>Direction from Site</b>
170 m and 260 m	North
270 m, 480 m, and 540 m	Northwest
370 m	Northeast
480 m and 510 m	East

#### **6.1.3 Dust**

Dust may arise from the expulsion of warm air from ventilation systems on-site, vehicle movements, removal of organic fertiliser, milling of animal feed, filling of meal storage bins and the loading and unloading of animals during periods of dry weather. Pigs are to be housed on fully slatted floors, therefore negating the need for a bedding material,

and consequently limiting dust from bedding. Minimal dust impact may occur locally within the installation boundary during site operations.

No complaints or submissions were received in relation to dust for this site by the Agency or by the licensee.

The licensee has stated that good housekeeping at the installation will minimise dust from the installation. The RD specifies the following to prevent the generation and emission of dust:

- To use one or a combination of the techniques listed in BAT 11 to prevent or reduce dust emissions from the animal houses (Condition 6).

Dust is not expected to be a significant issue beyond the installation boundary.

#### **6.1.4 Odour**

The pig houses will be cleaned at the end of each batch. Organic fertiliser is stored under the slatted animal houses and is directly removed by vacuum pump to a slurry tanker to be taken off-site to recipient farmers. Agitation of the slurry is to be minimised. Houses will be stocked at optimum levels and adequately ventilated, to minimise odour emissions.

No complaints or submissions relating to odour have been received by the Agency, the HSE, or by the licensee.

The odour impact potential of the installation has been assessed in accordance with the EPA's recently published *Instruction note regarding odour emissions from intensive agriculture pig installations*<sup>1</sup>. The licensee has submitted a site-specific air dispersion model to assess the potential impacts of odour emissions from the installation on nearby sensitive receptors. The odour assessment was conducted in accordance with recognised techniques for dispersion modelling specified in EPA's Air Dispersion Modelling Guidance Note (AG4). The dispersion model, CALPUFF, was used to predict ground-level concentrations of odour from the pig farm across the model domain.

The maximum ground level concentration of odour predicted by the model at the closest sensitive receptor to the installation was 3.9 OU<sub>E</sub>/m<sup>3</sup> (98<sup>th</sup> percentile, 1-hr average) for the worse case meteorological year. The worst affected sensitive receptor was DR8, to the east of the installation, with a predicted concentration of 4.9 OU<sub>E</sub>/m<sup>3</sup> (98<sup>th</sup> percentile, 1-hr average). Both of these predicted values are less than the limit of 6 OU<sub>E</sub>/m<sup>3</sup> (98<sup>th</sup> percentile, 1-hr average) for existing intensive agricultural installations licensed prior to 2001. Therefore, odour is not expected to be a significant issue.

The RD specifies the following odour control conditions:

- That odour from the activities shall not result in an impairment of, or an interference with amenities or the environment beyond the installation boundary (Condition 5).

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<sup>1</sup> <https://www.epa.ie/publications/licensing--permitting/industrial/ied/EPA-Instruction-note-for-the-assessment-of-odour-emissions-from-Intensive-Agriculture-pig-installations.pdf>

- To use a diet formulation and nutritional strategy to reduce the total nitrogen and phosphorus excreted, as per BAT 3 and BAT 4 (Condition 6). The crude protein content of the feed is limited to 14.5% for sows, 17.5% for weaners, and 15% for production pigs. The crude protein concentration represents a weighted average for the diets fed to each individual pig class, as concentrations will be higher for younger animals and lower for older animals (Condition 6 and Schedule C).
- To use a combination of the techniques listed in BAT 13 to prevent/reduce odour emissions/impact from the site (Condition 6).
- That carcasses stored on-site will be stored in covered leak-proof containers and transported off-site in covered, leak proof containers at least fortnightly (Condition 8).

### 6.1.5 Ammonia

The report "*Ireland's Informative Inventory Report 2024*"<sup>2</sup> (EPA, 2024) identifies agriculture as the primary contributor (99.4%) of Irish ammonia emissions in 2021, emitting a total of 127.8 kilotonnes (kt) of ammonia in that year. According to that report, ammonia emissions from the pig sector in 2021 accounted for 6.1 kt. The Department of Agriculture, Food and the Marine (DAFM) has published a '*Code of Good Agricultural Practice for reducing Ammonia Emissions from Agriculture*'<sup>3</sup>, as required by the National Emission Ceiling Directive (NECD).

This installation will emit approximately 25 tonnes of ammonia per annum.

Ammonia emissions from this activity may have the potential to impact sensitive receptors in the vicinity of the installation. The Agency screened the impact of ammonia emissions and nitrogen deposition at European sites using a screening model (SCAIL Agriculture<sup>4</sup>) which indicated potentially elevated ammonia emissions and nitrogen deposition. The model results indicate the potential for the pig rearing process to contribute to ammonia emissions and nitrogen deposition at European sites. The SCAIL Agriculture screening model is conservative. The screening was based on standard animal housing and did not include the use of low emission housing on-site.

The Agency has issued a guidance document to assist applicants and licensees in undertaking an assessment of the impacts of ammonia and nitrogen titled "*Assessment of the impact of ammonia and nitrogen on Natura 2000 sites from intensive agriculture installations*" (EPA, March 2023<sup>5</sup>). The licensee calculated the emissions of ammonia from the existing and proposed activity, as part of the completion of a Natura Impact Statement (NIS). The licensee submitted a full site-specific model (not a screening model), as part of the completion of a Natura Impact Statement (NIS), using more refined details in accordance with the requirements of AG4<sup>6</sup>. The model indicated no

<sup>2</sup> [https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/IIR\\_Ireland\\_2024v1.pdf](https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/IIR_Ireland_2024v1.pdf)

<sup>3</sup> <https://www.gov.ie/en/publication/9a6c6-code-of-good-agricultural-practice-for-reducing-ammonia-emissions-from-agriculture/>

<sup>4</sup> SCAIL Agriculture is a web-based screening tool available at <http://www.scail.ceh.ac.uk/>

<sup>5</sup> <https://www.epa.ie/publications/licensing--permitting/industrial/ied/Assessment-of-Impact-of-Ammonia-and-Nitrogen-on-Natura-sites-from-Intensive-Agriculture-Installations-2023.pdf>

<sup>6</sup> Air Dispersion Modelling from Industrial Installations Guidance Note (AG4):

<https://www.epa.ie/publications/compliance--enforcement/air/air-guidance-notes/epa-air-dispersion-modelling-guidance-note-ag4-2020.php>

significant impacts in the Carrigeenamronety Hill SAC, Ballyhoura Mountains SAC, Kilcolman Bog SPA, and Blackwater River (Cork/Waterford) SAC. Qualifying interests in European sites will not be affected by ammonia emissions from the installation, due to the distance between the installation and the designated sites, the type and physical characteristics of the designated sites, and associated dispersion/mitigation techniques proposed by the licensee.

This licence review is for the re-development of the site. The upgrade of the site will lead to improved environmental standards and efficiencies.

The licensee proposed the following in order to meet the requirements of BAT, BAT 3 (nutritional strategy to reduce nitrogen excretion) and BAT 30 (reduction of ammonia emissions to air from each pig house):

- Application of nutritional techniques to reduce the amount of nitrogen, and accordingly, ammonia produced by the pigs. BAT 3 requires the licensee to employ at least one of a number of techniques to reduce nitrogen emissions from the animals.
  - The licensee has stated that they will reduce the crude protein content of the animal feed. According to the BREF document for this sectoral CID, for each 1% decrease in the protein content of animal feed, ammonia emissions can be decreased by 5-15%. The crude protein levels of the feed at the installation will be limited to weighted averages of 14.5% for sows, 17.5% for weaners, and 15% for production pigs, approximately 3% lower than standard protein levels in pig feed (Condition 6 and Schedule C).
  - Multiphase feed will also be used by the licensee. The BREF document details various reductions when compared to single phase feeding for both sows (17-22%) and weaners (9-18%) dependent on the number of phases, feed types and growth stage of the animals. The licensee has stated that they will use multiphase feeding (Condition 6).
- In order to meet the BAT 30 requirements, the licensee will use the following techniques in the animal houses:
  - The utilisation of a deep pit combined with the above combination of nutritional management techniques in the existing animal houses.

The licensee has stated that the design of the buildings, adherence to good management practices, and implementation of the required mitigation measures will reduce ammonia emissions from the installation. The RD specifies the following additional ammonia minimisation conditions:

- To establish, maintain and implement an Ammonia Management Programme within three months of the date of grant of the licence and, in accordance with BAT 23, undertake an estimation/calculation of the reduction in ammonia emissions from the activity achieved by implementing BAT (Condition 5).
- To complete an estimation of ammonia emissions from the animal houses in accordance with BAT 25 (Schedule C).

The emission limits in Schedule B.1 are in accordance with those set out in the CID.

The potential for ammonia emissions from the landspreading of pig slurry is covered in the Organic Fertiliser section later in this report.

## **6.2 Emissions to Water and Ground**

### 6.2.1 Emissions to Surface Waters

There are no direct process emissions to surface waters from this activity.

### 6.2.2 Emissions to ground/groundwater

There are no direct process emissions to ground/groundwater from this activity. The licensee states in the application that there has been no historical contamination of groundwater at the site.

### 6.2.3 Other emissions to ground/groundwater

There is an existing septic tank and percolation area on-site. The RD includes a standard condition which requires the licensee maintain a waste water treatment plant for the treatment of sanitary effluent and that the waste water treatment system and percolation area shall satisfy the criteria set out in the Code of Practice Domestic Waste Water Treatment Systems (Population Equivalent  $\leq 10$ ) published by the EPA.

## 6.3 Storm water discharges

Storm water arises on-site from rainwater collected from clean yards and from the roofs of buildings. All clean storm water is diverted away from soiled areas of the site by a storm water collection system around each house and is diverted by gravity for discharge via an existing discharge point (AASW-1) and a proposed discharge point (AASW-2) into a field drain on the eastern boundary of the site. Storm water is directed to a rainwater harvesting tank to be used for washing on-site or discharge via AASW-1. Both discharge points will have a silt trap installed.

The table below gives details on installation's storm water discharges to waters, the type of on-site abatement, as well as details of the receiving water.

**Table 6.2: Stormwater discharge point details**

Discharge Reference	Monitored parameters (monitoring frequency)	Abatement	Drainage areas	Discharging to
AASW-1	Visual (weekly); COD/BOD (as required by the Agency)	Silt trap	Roofs and clean yards	Field drain >> North Caherduggan stream >> River Blackwater
AASW-2	Visual (weekly); COD/BOD (as required by the Agency)	Silt trap	Roof of the Isolation House	Field drain >> North Caherduggan stream >> River Blackwater

The field drains flow to the North Caherduggan stream approximately 430 m downstream of the installation. This stream flows discharges to the River Blackwater approximately 5.0 km downstream of the installation. The River Blackwater currently has a WFD status of 'moderate, (waterbody code: IE\_SW\_18B021900).

The storm water discharged from the installation should be uncontaminated and, therefore, should have no qualitative impact on receiving waters.

The only period during which there is potential for contamination of surface waters is during removal of organic fertiliser (pig slurry) and during the loading or unloading of animals. Most movement of animals is via covered slatted passages and loading directly on to trailers, which separates clean and soiled waters, minimises the quantity of soiled water produced and keeps yard areas clean. The areas around the animal houses where the loading and unloading occurs will be concreted and designed in such



a way that any pig slurry will be diverted to the slurry storage tanks under the houses. All soiled water from the washing of the houses will be diverted to the organic fertiliser storage tanks under the animal houses.

The licensee has stated that the proposed infrastructure, adherence to good management practices, and implementation of the required mitigation measures will mitigate the risk of storm water contamination. The RD requires the following in relation to storm water management:

- That a storm water/rainwater collection and drainage system for all pig houses on-site be provided and maintained (Condition 6).
- That all uncontaminated storm water be diverted to the storm water drainage system (Condition 6).
- That an up-to-date site drainage map be maintained on-site, and that the storm water drainage system be inspected weekly and maintained properly at all times (Condition 6).
- That a silt trap be provided and maintained on all existing storm water discharge points within three months of the date of grant of the licence (Condition 6).
- That the storm water discharge is visually inspected weekly and monitored for Chemical Oxygen Demand (COD) or Biological Oxygen Demand (BOD) as required by the Agency, in accordance with Schedule C.2.3 *Monitoring of Storm Water Discharges*.

The RD contains standard conditions in relation to the storage and management of materials and wastes. The RD also requires that accident and emergency response procedures are put in place. The controls pertaining to accidents and emergencies are addressed in the Prevention of Accidents section later in this report.

#### **6.4 Noise**

The main sources of noise at the installation include the operation of equipment, ventilation systems, the back-up generator, vehicle deliveries/collections, and animals. As mentioned earlier, the nearest third-party residential dwelling is approximately 170m away.

There has been no history of noise complaints at the installation, and none have been received by the Agency or the licensee. No submissions have been received outlining that noise is a cause for concern from the installation.

Noise emissions are primarily minimised by implementing good management practices. Noise conditions and emission limit values, which apply at the noise-sensitive locations have been included in the RD.

- Noise from the installation shall not exceed the limit values set out in Schedule *B.4 Noise Emissions* of the RD at the noise sensitive locations (Condition 4).
- The use of one or a combination of the techniques listed in BAT 10 to prevent/reduce noise emissions from the site (Condition 6).
- A requirement that a noise survey be carried out of the site operations, as required by the Agency (Condition 6).

In accordance with the EPA document *Guidance Note for Noise: Licence Applications, Surveys and Assessments in relation to Scheduled Activities (NG4)* (2016), the daytime ELV has been changed from 55 dB LAeq to 55 dB LAr, to allow for corrections for tonal noise, and an evening time ELV has been introduced.

## 7. Waste Generation

Certain wastes are generated on-site as part of the licensable activity. Waste generated on-site will mainly comprises of spent fluorescent tubes, fallen stock (animal carcasses), veterinary/chemical waste containers and general waste. The total quantities estimated to be generated are given in Table 7.1 below. The licensee employs a number of measures at the installation for the prevention and/or minimisation of waste.

**Table 7.1: Estimated waste generation**

<i>Waste Type</i>	<i>Estimated quantity (tonnes) per annum</i>
Animal Carcasses	69
General Waste	59
Veterinary Waste	0.02
Fluorescent Light Tubes	0.01

In accordance with the hierarchy specified in the IED, waste generated at the site will, in order of priority, be minimised, be prepared for re-use, recycling, recovery or disposal. Conditions relating to waste management have been included in Condition 8 of the RD. Carcasses are stored temporarily on-site in covered skips, before being transported to an appropriately licensed installation.

A fly and rodent control programme is in place to cover the existing installation. The programme as implemented will be in line with Bord Bia and Department of Agriculture, Food and The Marine requirements.

Condition 3 of the RD requires the licensee to establish, maintain and implement a pest control programme in accordance with relevant DAFM guidelines. These guidelines take account of the requirements of the Campaign for Responsible Rodenticide Use (Ireland).

## 8. Organic Fertiliser

The installation will necessarily generate organic fertiliser (pig slurry, including soiled/wash water). Details are given in Table 8.1 below.

**Table 8.1: Organic fertiliser**

	<i>Organic fertiliser</i>
<i>Quantity produced per annum</i>	11,000 m <sup>3</sup>
<i>Number of storage tanks/stores on-site</i>	7
<i>Total storage capacity on-site (ex. freeboard)</i>	14,046 m <sup>3</sup>
<i>No. weeks storage on-site</i>	66
<i>End use off-site</i>	Landspreading by customer farmers

Soiled/wash water is generated by the activity during routine cleaning and at the end of each batch of pig. The farm operates an all-in, all-out batch production system. Once the pigs are removed, the houses are washed down, with the resulting wash water being washed through the slatted floors into the tanks below, adding to the total volume of organic fertiliser produced. After washing, the houses are allowed to dry and then disinfectant applied. The wash water may contain insignificant quantities of disinfectant from the previous washing cycle.

There is an underground wash water tank located on a concreted area adjacent to the weighbridge. This area is used for the washing of animal trailers, with the washings diverted to the tank when washing occurs. Soiled water is also produced by washing of the mix room/grain store. The washings from this tank are diverted back to the slurry tanks under the houses.

Condition 8 of the RD requires that the licensee maintains a record of organic fertiliser sent off-site for use on land in accordance with the requirements of the Nitrates Regulations<sup>7</sup>. The licensee is required under the licence, to submit to DAFM by the 31<sup>st</sup> of December annually, details in relation to the quantity of organic fertiliser (pig slurry) exported (Record 3 form) off-site. The record must also be maintained at the installation for inspection by the Agency, Local Authority or DAFM. DAFM may use the record of export of organic fertiliser to identify the recipient of the organic fertiliser and the quantity received.

The Animal By-product (ABP) Regulations<sup>8</sup> impose legal requirements on the licensee, the 'commercial haulier' and the user of the organic fertiliser. These requirements include use of a 'commercial document' to record details required under the regulations. The licensee is required to receive a completed copy of the 'commercial document' from the transporter confirming the final destination.

There is no landspreading of organic fertiliser conducted or permitted within the installation boundary, and consequently there will be no additional ammonia emissions from landspreading activities within the installation boundary. It is important to note that the IE licence relates to the site of the activity for which the licence application is made and does not extend to the lands on which organic fertiliser may be used as fertiliser. The Nitrates Regulations specify when organic fertiliser can be applied to land and the application rates, and these are enforced by the DAFM and Local Authorities.

The licensee has identified 35 farmers who are available to accept organic fertiliser from the installation as fertiliser for their farms (1,300 usable hectares in the surrounding area of County Cork). The licensee has calculated that these farms have a need for up to 15,361 m<sup>3</sup> organic fertiliser per year based on the nitrogen balance for the farms. This equates to approximately 140% of the estimated volume of organic fertiliser produced on-site.

Under the ABP Regulations, pig slurry is categorised as a category 2 Animal By-product and the options for its disposal/recovery are set out in Article 13 of Regulation 1069/2009, as amended.

The pig slurry produced by the animals is contained in the slatted tanks under each animal house. The areas around the houses will be concreted and designed such that

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<sup>7</sup> S.I. No. 113 of 2022 European Union (Good Agricultural Practice for Protection of Waters) Regulations 2022.

<sup>8</sup> EU Animal By-Product Regulation (EC) No. 1069 of 2009 and Regulation (EU) No. 142 of 2011, given legal effect by The European Union (Animal By-Product) Regulations 2014 (SI No. 187/2014), laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No 1774/2002 (Animal By-Products Regulation) as amended.

any pig slurry produced here during animal loading and unloading is diverted to the slurry storage tanks under the houses. Animal manure is removed by the licensee from the slatted tanks under each pig house directly to tanker and immediately removed off-site. The Nitrates Regulations (Article 10(1)) require that a minimum of 26-weeks' storage capacity for organic fertiliser is provided.

The quantity of nitrogen and phosphorus generated by the activity at the proposed licence capacity is approximately:

- 74,298 kg N per year, and
- 14,518 kg P per year,

based on figures available in the Nitrates Regulations (annual nutrient excretion rates for livestock)

The RD contains the following additional requirements relating to the management of pig slurry:

- To monitor the total nitrogen and phosphorus excreted in manure annually, in accordance with BAT 24 (Condition 6).
- That all storage tanks are integrity assessed at least once every three years (Condition 6).
- That a combination of the techniques listed in BAT 6 be used to reduce the generation of wash water on-site (Condition 6).
- That one or a combination of the techniques listed in BAT 7 be used to reduce the emissions to water from wash water on-site (Condition 6).
- That slurry only be stored under the animal houses or in designated manure stores (Condition 8).
- That any organic fertiliser spilled to ground during loading, shall be collected and returned to storage or to the vehicle into which it was being loaded (Condition 8).
- That a freeboard of at least 200 mm from the top of covered organic fertiliser storage tanks and 300 mm from the top of uncovered organic fertiliser storage tanks is maintained, as a minimum, at all times and that this is clearly indicated in the tank (Condition 6).

## 9. Energy Efficiency and Resource Use

The operation of the installation involves the consumption of fuel, electricity and resources. The proposed quantities to be used at a capacity of 854 sows and 4,920 production pigs are given below.

**Table 9.1: Estimated resource usage**

<b>Resource</b>	<b>Quantity per annum</b>
Electricity	700 MWh
Natural gas	110 m <sup>3</sup>
Water (on-site well)	16,000 m <sup>3</sup>
Water Abstraction registration required:	Yes
Feed	5,500 t
Kerosene/Diesel	Back-up generator only

The licensee employs a variety of technologies to maximise the efficient use of energy within the installation, including regular preventative maintenance of equipment, use of energy efficient lighting systems, and thermal insulation.

The only source of water for the activity are three on-site wells. The RD requires the licensee to carry out monitoring of the wells annually. The installation is located on the Rathmore West groundwater body (IE\_SW\_G\_070), a poorly productive bedrock, which has a WFD status of 'good'.

In accordance with the European Union (Water Policy) (Abstractions Registration) Regulations 2018 (S.I. No. 261 of 2018) those who abstract 25 m<sup>3</sup> of water or more per day are required to register their water abstraction with the EPA. The licensee is required to register their abstraction.

The RD specifies that the licensee undertake the following in relation to energy and resource efficiency:

- Annual maintenance of the animal house heating systems and the back-up generator (Condition 3).
- To install and maintain a water meter on all water supplies (Condition 3).
- To use a combination of the techniques listed in BAT 8 (efficient use of energy) and BAT 5 (efficient use of water) (Condition 7).
- To undertake an assessment of the efficient use of resources and energy in all site operations, undertake an energy audit, repeated at intervals as required by the Agency with the recommendations of the audit being incorporated into the Schedule of Environmental Objectives and Targets as outlined in Condition 2 (Condition 7).

## 10. Prevention of Accidents

A certain amount of accident risk is associated with the licensable activity. For this installation, potential accidents and measures for prevention/limitation of consequences are given in the table below.

**Table 10.1: Potential accidents and measures for prevention/limitation of consequences**

Potential for an accident or hazardous/emergency situation to arise from activities at the installation	<ul style="list-style-type: none"> <li>- Surface water and/or ground/groundwater contamination during pig removal and washing.</li> <li>- Surface water and/or ground/groundwater contamination by spillage of organic fertiliser, fuel or other polluting materials.</li> <li>- Surface water and/or ground/groundwater contamination due to leaks from tanks.</li> <li>- Accidental emissions of noise, dust or odour such as to cause nuisance outside the site boundary.</li> </ul>
Preventative/Mitigation measures to reduce the likelihood of accidents and mitigate the effects of the consequences of an accident at the installation	<ul style="list-style-type: none"> <li>- The provision and maintenance of adequate wash water and slurry storage facilities.</li> <li>- The storage of potentially polluting liquids in bunded areas.</li> <li>- The concreting of yards around houses.</li> <li>- The provision of concrete aprons around wash water areas.</li> <li>- The separation of wash water and clean storm water</li> </ul>
Additional measures provided for in the RD	<ul style="list-style-type: none"> <li>- Integrity assessment and maintenance of the slurry tanks and wash water tank as required (Condition 6).</li> </ul>

	<ul style="list-style-type: none"> <li>- The regular visual examination and inspection of the storm water discharge points and storm water drainage system (Condition 6).</li> <li>- No storage of organic fertiliser on-site, other than what is under the pig houses during the pig rearing cycle at the installation (Condition 8).</li> <li>- Accident prevention and emergency response procedures requirements (Condition 9).</li> <li>- A preventative maintenance programme (Condition 2).</li> </ul>
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The risk of accidents and their consequences, and the preventative and mitigation measures listed above, have been considered in full in the assessments carried out throughout this report. It is considered that the conditions of the RD and the mitigation measures proposed will significantly reduce the likelihood of accidental emissions occurring and limit the environmental consequences of such an event should it occur.

## **11. Cessation of Activity**

A certain amount of environmental risk is associated with the cessation of any licensable activity (site closure). The licensee has provided a list of measures to be taken in the event of site closure/cessation of activity. These measures are listed in attachment 9.1 of the application form. Condition 10 of the RD requires the proper closure of the activity with the aim of protecting the environment.

### Baseline Report

Where an activity involves the use, production or release of Relevant Hazardous Substances, and having regard to the possibility of soil and groundwater contamination at the site of the installation, the IED requires operators to prepare a baseline report. A baseline screening assessment was undertaken by the licensee, in accordance with Stages 1 to 3 of European Commission Guidance<sup>9</sup>.

The screening assessment determined that, considering the type and quantity of substances used as part of the activity, the location of these substances on the site, in view of the soil and groundwater characteristics, and the measures to be taken to prevent accidents and incidents, the possibility of soil and groundwater contamination at the site of the installation is considered to be low. I am satisfied that a full baseline report (stages 4 to 8) is not required.

Nonetheless, upon cessation of the activity, Condition 10 of the RD requires the licensee to take certain measures to ensure that there is, to the satisfaction of the Agency, no remaining risk of environmental pollution at the site.

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<sup>9</sup> European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU on industrial emissions.

## 12. Fit and Proper Person

### Technical Ability

The licensee has held a licence issued by the EPA since 1999, (P0446-01). It is considered that the licensee has demonstrated the technical knowledge required to operate this installation.

### Legal Standing

Neither the licensee nor any relevant person has relevant convictions under the EPA Act, or under any other relevant environmental legislation.

### ELRA, CRAMP and Financial Provision

The licence category and proposed installation were assessed for the requirements of Environmental Liabilities Risk Assessment (ELRA), Closure, Restoration and Aftercare Management Plan (CRAMP) and Financial Provision (FP), in accordance with Agency guidance. Under this assessment it has been determined that ELRA, CRAMP and FP were not required.

### Fit and Proper Conclusion

It is my view that the licensee can be deemed a Fit and Proper Person for the purpose of this review.

## 13. Submissions

While the main points raised in the submissions are briefly summarised in the table below, the original submission should be referred to at all times for greater detail and expansion of particular points.

The issues raised in the submissions are noted and addressed in this Inspector's Report and the submissions were taken into consideration during the preparation of the Recommended Determination (RD).

**Table 13.1: Submissions summary**

1.	<b>Name &amp; Position:</b> Bernadine Scanlan, Principal Environmental Health Officer	<b>Organisation:</b> Environmental Health Service, Health Service Executive (HSE) South	<b>Date received:</b> 14 July 2023
<b>Issues raised:</b> <i>The submission makes a number of observations in relation to the licence application. The issues raised include pig slurry, storm water, surface and ground water, water supply, waste, emissions to air and odour, noise, pest control, and climate action. The HSE also confirmed in their submission that they have not received any complaints relating to odour the installation to date. The submission refers only to those areas within the remit of the HSE.</i>  <i>Specific recommendations and observations highlighted by the HSE include:</i> <ul style="list-style-type: none"><li><i>The HSE notes that potable water is sourced from three on-site wells.</i></li><li><i>The HSE recommends that storm water from roofs and clean yards be collected/harvested in tanks to maximise water efficiency and limit potential discharges that may cause flooding in the local area.</i></li><li><i>The HSE recommends that access to slurry for use in landspreading be restricted to the times of the year when conditions are suitable for slurry spreading, so as to protect surface and groundwater resources</i></li></ul>			

*and minimise odour nuisance. They note the possibility of a cumulative impact if other large sources of slurry in the locality are being utilised at the same time.*

- *The HSE notes that circa 10 domestic dwellings are present in the area surrounding the pig farm. The HSE recommends that noise levels are re-assessed at/near potential noise sensitive locations and mitigation measures put in place, if necessary, to meet permissible noise limits.*
- *The HSE recommends that waste is segregated appropriately for management by appropriately authorised waste contractors. Animal tissues or carcasses should be stored and transported in sealed, leakproof containers.*
- *The HSE recommends an Integrated Vector Management approach to pest/vector control, through actions such as good design and construction of infrastructure such as drains, good waste management practices, such as the management of animal tissues and carcasses plus the application of control measures to vectors in all stages of their life cycle.*
- *The HSE recommends that odour abatement is carried out on site to limit potential impact on odour sensitive locations.*
- *The EHS recommends the applicant to use renewable energy technology if available, to power the facility and to continuously investigate and implement any proven technology/initiative which reduces the production of greenhouse gases. Roof space for example could be utilised to harvest solar energy and deliver energy efficiency.*

**Agency response:**

The main issues raised in the submission are noted and addressed in the relevant sections of the Inspector's Report.

- The RD requires annual monitoring of the on-site wells.
- The licensee currently retains stormwater in a tank on-site for use in washing of the installation.
- Landspreading of organic fertiliser occurs outside of the licensed boundary and is carried out in accordance with the Nitrates Regulations and Animal By-product Regulations. This is enforced by the DAFM and the Local Authorities.
- The 'Noise' section of this report contains further information in relation to noise. The RD includes conditions in relation to noise from the activity.
- The 'Waste' section of this report contains further information in relation to waste generation and management at the installation, including animal tissue waste (carcasses).
- Pest control is addressed in the 'Waste Generation' Section of this report.
- The 'Odour' section of this report contains further information in relation to odour. The RD includes condition in relation to odour from the activity.
- The 'Energy Efficiency and Resource Use' section of this report addresses energy sources for the activity and energy efficiency measures. The RD includes conditions in relation to efficient use of energy and energy audits at the installation.



2.	<b>Name &amp; Position:</b> Mr. Peter Sweetman	<b>Organisation:</b> Peter Sweetman and on behalf of Wild Ireland Defence CLG	<b>Date received:</b> 15 June 2023
<p><b>Issues raised:</b></p> <p><i>The submission:</i></p> <ul style="list-style-type: none"> <li>• States that the EPA must assess the disposal of the waste from these developments;</li> <li>• States that the threshold for Appropriate Assessment is set out in Kelly -v- An Bord Pleanála [2014] IEHC 400 (25 July 2014); and References four CJEU judgements in the context of Article 6 of the Habitats Directive, specifically C-323/17, C-258/11, C-293/17 and C-294/17.</li> </ul> <p><b>Agency response:</b></p> <p>The submitter’s reference to “these developments” refers to pig and poultry industrial emissions licence applications.</p> <p>I am satisfied that I have sufficient information available to complete an Appropriate Assessment Screening, in an appropriate manner, to assess in view of best scientific knowledge and the conservation objectives of the site, if the project individually or in combination with other plans or projects is likely to have a significant effect on a Natura 2000 Site.</p> <p>The Appropriate Assessment section of this report details the results of the appropriate assessment conducted as part of the licence application. The licensee has provided sufficient information regarding the wastes produced by the activities, as well as their disposal off-site. More information on waste can be found in the waste section of this report.</p> <p>The submitter quotes Case C-323/17 where the court noted that “<i>in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site</i>”.</p> <p>I am satisfied that the screening conducted as part of this application to determine whether or not an Appropriate Assessment was required was consistent with case C-323/17 and did not take into account measures that would mitigate any potential impacts on Natura 2000 sites.</p> <p>The submitter quotes Kelly -v- An Bord Pleanála [2014] IEHC 400 which references CJEU case C-258/11 where the court noted that in order for a regulatory body such as the Agency to grant approval “<i>it should be pointed out that it cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned</i>”.</p> <p>I am satisfied that there is sufficient information available to the Agency to conclude beyond reasonable scientific doubt that emissions and discharges from the proposed project will not have any adverse effects on the integrity</p>			

of any European site. The Appropriate Assessment section of this report details the results of the appropriate assessment conducted as part of the licence review. The licensee has provided sufficient information regarding the wastes produced by the activity, as well as their disposal off site. More information on waste can be found in the waste section of this report.

The submitter quotes cases C-293/17 and C-294/17 where the court ruled *"Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that the grazing of cattle and the application of fertilisers on the surface of land or below its surface in the vicinity of Natura 2000 sites may be classified as a 'project' within the meaning of that provision, even if those activities, in so far as they are not a physical intervention in the natural surroundings, do not constitute a 'project' within the meaning of Article 1(2)(a) of Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment."*

Organic fertiliser is something which may be distributed to farmers for use on their farms, but that ultimate use does not form part of the project in respect of which the Agency considers a licence application. Ultimately, the location on which landspreading of organic fertiliser from the installation may occur, can vary across and within any given year. The spreading of organic fertiliser on farms is regulated by the European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2022 (S.I. 113 of 2022) which gives effect to the 5th Nitrates Action Programme (2022 to 2025), published in accordance with the Nitrates Directive.

I am satisfied that the appropriate assessment conducted as part of this application is considered in compliance with the rulings of the Courts of Justice of the European Union judgement for cases C-293/17 and C-294/17.

## **14. Consultations**

### **14.1 Cross Office Consultation**

The Industrial & Carbon Emissions Regulation (ICER) and the Office of Environmental Enforcement (OEE) routinely liaise in relation to the licensing of the intensive agricultural sector. This in part has informed the assessment of this application.

I consulted with OEE Inspector Adrian Farrell in relation to this site. The licensee has received 15 non-compliances in 2023 and 2024 in relation to stock numbers being in non-compliance with the existing licence, an unauthorised storm water discharge point, and unauthorised construction of new pig buildings on-site. The installation has been the subject of one compliance investigation in 2023, in relation to stocking numbers exceeding the licensed capacity and the unauthorised construction and operation of additional pig housing.

### **14.2 Transboundary Consultations**

There were no transboundary consultations undertaken as there were no transboundary impacts identified.

## 15. Appropriate Assessment

Appendix 2 lists the European sites assessed, their associated qualifying interests and conservation objectives along with the assessment of the effects of the activities on the European sites.

A screening for Appropriate Assessment (AA) was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activities, individually or in combination with other plans or projects are likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Sites at Carrigeenamronety Hill SAC (002037), Ballyhoura Mountains SAC (002036), Kilcolman Bog SPA (004095), and Blackwater River (Cork/Waterford) SAC (002170).

The activities are not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, that it cannot be excluded, on the basis of objective information, that the activities, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the activities was required, and for this reason determined to require the licensee to submit a Natura Impact Statement.

- There are potential surface water pathways connecting the installation to European sites, therefore, there is potential for adverse impact of emissions to water and their consequential potential impact on sensitive receptors cannot be ruled out at European sites.
- Air emissions of ammonia (and associated nitrogen deposition) from the installation have the potential for effects on qualifying interest habitats and species in the European Sites listed above due to their proximity to the installation.
- Regard has been had to the EPA's Licence Application Guidance (Assessment of the Impact of Ammonia and Nitrogen on Natura 2000 Sites from Intensive Agriculture Installations, Version 2, March 2023) and the online screening tool SCAIL Agriculture (<http://www.scail.ceh.ac.uk>) as part of this Appropriate Assessment Screening Determination.
- Taking all of the foregoing into account it is considered that significant effects on European Sites and their qualifying interests due to emissions to air from the installation cannot be ruled out at the screening stage and based on the precautionary principle this determination is that a Stage 2 Appropriate Assessment is required.

A final version of the Natura Impact Statement was received by the Agency on 03 July 2024.

An Inspector's Appropriate Assessment has been completed and has determined, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the activities, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular Carrigeenamronety Hill SAC (002037), Ballyhoura Mountains SAC (002036), Kilcolman Bog SPA (004095), and Blackwater River (Cork/Waterford) SAC (002170), having regard to their conservation objectives and will not affect the preservation of these sites at favourable conservation status if carried out in accordance with this RD and the conditions attached hereto for the following reasons:

- The installation is not located within a European site.
- The closest European site is approximately 1.5 km away.
- Storm water run-off from the roof and paved areas will be directed into local watercourses. There will be no other direct discharge to surface waters or groundwater within the installation boundary.
- The storm water collection system will include a silt trap on all storm water lines draining paved areas prior to discharge of the storm water from the site.
- The risk of surface water or groundwater contamination because of accidental emissions during washing activities is minimal, given the downstream distance between the activity and a European site (1.9 km).
- Waste generated on-site will be handled and stored in a manner which will ensure there is no risk to European sites and will only be sent to appropriately authorised facilities.
- It is proposed that slurry will be applied to farmlands in accordance with the Nitrates Regulations. The licence, if granted, relates to the site of the activity for which the licence application is made, i.e. the rearing of pigs within the installation boundary, and does not extend to the lands beyond the installation boundary on which organic fertiliser may be used.
- Activities which can take place within European sites are restricted by legislation. All persons must obtain the written consent from the relevant Minister before performing particular operations on, or affecting, particular habitats where they occur on lands or waters within the SACs and SPAs.
- The closest European site is approximately 1.5 km away from the installation boundary (the Blackwater River (Cork/Waterford) SAC) and is considered to be outside of the zone of influence of noise emissions arising at the installation.
- The installation is in a rural area where the predominant farming activities involve the rearing of livestock. There are no other licensed installations within a 5 km radius of the installation.
- The licence review is for the re-development of parts of the site. The upgrade of this site and reviewed licence will lead to improved environmental standards and efficiencies.
- The licensee has proposed a number of mitigation measures which comply with BAT to minimise emissions of ammonia and therefore, nitrogen deposition at the designated sites.
- Regard has been had to the EPA's Licence Application Guidance (Assessment of the Impact of Ammonia and Nitrogen on Natura 2000 Sites from Intensive Agriculture Installations, Version 2, March 2023) in addition to the online screening tool SCAIL Agriculture as part of this Appropriate Assessment Screening Determination.
- Air emissions were modelled by the licensee (as part of a NIS requested by the Agency) and by the Agency. The modelling concluded that process emissions from the proposed pig numbers at the installation will not contribute significantly to ammonia levels at European sites.

In light of the foregoing reasons no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European Sites Carrigeenamronety Hill SAC (002037), Ballyhoura Mountains SAC (002036), Kilcolman Bog SPA (004095), AND Blackwater River (Cork/Waterford) SAC (002170).

Regard has been had to the submissions received concerning Appropriate Assessment as detailed in the Submissions section of this report.

## **16. Environmental Impact Assessment**

### **16.1 EIA Introduction**

The application was accompanied by an Environmental Impact Statement (EIS). The EIS submitted with this application was the same EIS submitted to the Planning Authority as part of planning permission ref: 14/5815 and was submitted to the planning authority prior to 15 May 2017. Therefore, this assessment is being undertaken in accordance with the requirements of Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

As part of this environmental impact assessment, I have carried out an examination, analysis and evaluation of all the information provided by the licensee (including the EIS), the existing licence, Register Number: P0446-01, information received through consultation, the documents associated with the assessments carried out by Cork County Council and its reasoned conclusion, and the issues that interact with the matters that were considered by that authority and which relate to the activity, written submissions, as well as considering any supplementary information where appropriate. All of the documentation received was examined and I consider that the EIS complies with the provisions of Article 5 of the 2011 EIA Directive when considered in conjunction with the additional material submitted with the application.

I am satisfied that the information contained in the EIS has been prepared by competent experts and that the environmental effects arising as a consequence of the activity have been satisfactorily identified, described and assessed.

Having specific regard to EIA, this Inspector's Report as a whole is intended to identify, describe and assess for the Agency the likely significant direct and indirect effects of the activity on the environment, as respects the matters that come within the functions of the Agency, for each of the following environmental factors: human beings, fauna and flora, soil, water, air, climate, the landscape, material assets and the cultural heritage.

This Inspector's Report addresses the interaction between those effects and the related development forming part of the wider project. The cumulative effects, with other developments in the vicinity of the activities have also been considered, as regards the combined effects of emissions. The mitigation measures proposed to address the range of predicted significant effects arising from the activity have been outlined. This Inspector's Report provides conclusions to the Agency in relation to such effects.

A summary of the submissions made by third parties has been set out above in the 'Submissions' Section of this report.

I am satisfied that the public have been given early and effective opportunity to participate in the environmental decision-making procedure.

## **16.2 Consultation with Planning Authorities in relation to EIA**

Consultation was carried out between Cork County Council and the Agency under the relevant section of the EPA Act.

Cork County Council did not provide any observations to the Agency on the licence application and EIS.

## **16.3 Consultation with other competent authorities**

There was no consultation with other competent authorities in relation to this application.

## **16.4 Alternatives**

The matter of alternatives is addressed in Section 1.7 of the EIS. It examines several alternative sites, layout and design, size, processes, and management of by-products were considered.

As the installation has received significant investment in recent decades, the consideration of alternative locations was not deemed appropriate. The proposed changes on-site are deemed necessary to improve efficiency and biosecurity and to maintain the viability of the installation. The house design is in line with BAT and the scale is sufficient to cover development and operational costs.

In this regard I consider that the matter of the examination of alternatives has been satisfactorily addressed.

## **16.5 Likely Significant Direct and Indirect Effects**

The likely significant direct and indirect effects of the activities on the following factors as set out in Article 3 of the EIA Directive are considered in this section:

- (a) human beings, fauna and flora;*
- (b) soil, water, air, climate and the landscape;*
- (c) material assets and the cultural heritage;*
- (d) the interaction between the factors referred to in points (a), (b) and (c).*

### **16.5.1 Human Beings**

#### **Identification, Description and Assessment of Effects**

Human beings are mainly addressed in Section 2 of the EIS. The potential direct and indirect effects on are associated with emissions to air, dust, odour, noise emissions, emissions to water, waste generation, and accidental emissions. Should emissions cause an exceedance of environmental quality standards, this could have implications for.

The effects identified and described above have been assessed in the following sections of the licence assessment part of this report:

- Emissions to Air;
- Emissions to Water and Ground;
- Noise;
- Waste Generation;
- Organic Fertiliser; and
- Prevention of Accidents.

There is also the potential for accidental emissions to the environment, due to human error or failure of containment infrastructure. Accidental emissions are addressed in the 'Prevention of Accidents' section of this report.

Cumulative effects of the activity in relation to human beings have been assessed and is considered that there is not likely to be a significant cumulative effect from the activity and other activities/developments. There are no likely significant direct, indirect or cumulative effects identified.

### **Mitigation and Monitoring**

Mitigation measures and monitoring in relation to update are detailed in the following sections of this report:

- Emissions to Air;
- Emissions to Water and Ground;
- Noise;
- Waste Generation;
- Organic Fertiliser; and
- Prevention of Accidents.

### **Conclusions**

I have examined all the information on, provided by the licensee, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the RD. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of population and human health.

#### **16.5.2 Fauna and Flora**

##### **Identification, Description and Assessment of Effects**

Flora and fauna are mainly addressed in Section 3 of the EIS. The EIS describes the habitats and species at and in the vicinity of the installation. The developments covered by this licence have occurred adjacent to the existing installation on land which had previously been used as intensive grassland.

The licensee also submitted a Natura Impact Statement (Refer to the Appropriate Assessment section of this report). There are four Natura 2000 sites within 20 km of the installation.

The potential direct and indirect effects on flora and fauna are related to effects on aquatic flora and fauna and their habitats due to effects on water quality, disturbance to fauna due to noise emissions, and effects due to air emissions (e.g. ammonia emissions and nitrogen deposition). The effects identified and described above have been assessed in the following sections of this report:

- Emissions to Air;
- Emissions to Water and Ground;
- Storm Water Discharges;
- Waste Generation;
- Noise;
- Organic Fertiliser; and
- Prevention of Accidents.

There is also the potential for accidental emissions to the environment, due to spillages or human error, which may impact on flora and fauna. Accidental emissions are addressed in the Prevention of Accidents section earlier in this report. Landspreading of organic fertiliser could impact on water quality, however, this occurs outside of the licensed boundary. This must be carried out in accordance with the Nitrates Regulations and Animal By-product Regulations, which are enforced by DAFM and the Local Authorities. In addition, the Government's Food Vision 2030 was published in August 2021 and sets out four high level mission statements for the Agri-Food sector. This document proposes more targeted agri-environmental schemes under the CAP Strategic Plan to protect Ireland's habitats and species from emissions from the agricultural sector. This Agri-Food Strategy (AFS) also included an Appropriate Assessment (AA) which concluded that "the adoption of the AFS would not have significant adverse effects on the integrity of any Natura 2000 sites with the inclusion of the mitigation recommendations."

Cumulative effects of the activity in relation to flora and fauna have been assessed and it is considered that there is not likely to be a significant cumulative effect from the activity and other activities/developments. There are no likely significant direct, indirect or cumulative effects identified.

### **Mitigation and Monitoring**

Mitigation measures and monitoring in relation to biodiversity are detailed in the following sections of this report:

- Emissions to Air;
- Emissions to Water and Ground;
- Storm Water Discharges;
- Waste Generation;
- Noise;
- Organic Fertiliser; and
- Prevention of Accidents

### **Conclusions**

I have examined all the information on flora and fauna, provided by the licensee, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the RD. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of flora and fauna.

#### **16.5.3 Soil**

##### **Identification, Description and Assessment of Effects**

Soil is addressed in Section 4 of the EIS. The expansion to the installation will be located on a greenfield site in a fertile productive agricultural area. This area has a relatively flat to gently undulating topography similar to a significant part of County Cork and surrounding areas. Land use currently in the development area is improved agricultural grassland. Any potential contamination issues are dealt with in the 'baseline report' section of this report.

The potential direct and indirect effects on soil are associated with emissions to air, emissions to water, and accidental emissions. Should emissions cause an exceedance of environmental quality standards, this could have implications for soil. The potential



effects identified and described above have been assessed in the following sections of this report:

- Emissions to Air;
- Emissions to Water and Ground;
- Organic Fertiliser;
- Waste Generation;
- Prevention of Accidents; and
- Cessation of Activity.

There is also the potential for accidental emissions to the environment, due to spillages or human error, which may impact on soil. Accidental emissions are addressed in the 'Prevention of Accidents' section earlier in this report. Landspreading of organic fertiliser could impact on soil, however, this occurs outside of the licensed boundary. This must be carried out in accordance with the Nitrates Regulations and Animal By-product Regulations, which are enforced by DAFM and the Local Authorities.

Cumulative effects of the activity in relation to soil have been assessed and it is considered that there is not likely to be a significant cumulative effect from the activity and other activities/developments. There are no likely significant direct, indirect or cumulative effects identified.

### **Mitigation and Monitoring**

Mitigation measures and monitoring in relation to land and soil are detailed in the following sections of this report:

- Emissions to Air;
- Emissions to Water and Ground;
- Organic Fertiliser;
- Waste Generation;
- Prevention of Accidents; and
- Cessation of Activity.

### **Conclusions**

I have examined all the information on soil, provided by the licensee, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the RD. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects on soil.

#### **16.5.4 Water**

##### **Identification, Description and Assessment of Effects**

Water is mainly addressed in Section 5 of the EIS. The site is above the Rathmore West groundwater body (Ref: IE\_SW\_G\_070) which has a Water Framework Status of 'good' and a vulnerability of high to extreme.

The site lies within the Blackwater (Munster) catchment area and Blackwater[Munster]\_SC\_090 sub-catchment. Storm water from the roof and yard area will discharge via a silt trap or similar to a field drain towards the Caherduggan Stream which is approximately 430 m south of the site.

There are no emissions to water or ground from the site. The potential direct and indirect effects on water relate to storm water discharges, and sanitary facility

emissions. Should the emissions/discharges cause an exceedance of Water Quality Standards in the receiving water, this could have potential effects on water quality, aquatic biodiversity and human health. The effects identified and described above have been assessed in the following sections of this report:

- Emissions to Water and Ground;
- Storm Water Discharges;
- Organic Fertiliser; and
- Prevention of Accidents.

There is also the potential for accidental emissions to water or groundwater to occur. The likelihood of accidental emissions to water is considered low in light of the measures outlined in the 'Prevention of Accidents' section above and in light of the conditions in the RD. This is addressed in Prevention of Accidents section of this report.

The site is in a rural area with most of the developments in the vicinity of the installation being dwelling houses and farmyards. There are no other intensive agriculture EPA licensed installations within 5 km of the installation and no other significant industrial developments. Due to the absence of other significant industrial activities/developments, it is considered that there will be no significant cumulative effect from emissions and storm water discharges from the activity and from other activities/developments in the area.

Landspreading of organic fertiliser, which occurs outside of the licensed boundary, could cause pollution of surface waters or groundwater. To prevent this, the application of fertilisers to land is controlled by the Nitrates Regulations. These give legal effect in Ireland to the Nitrates Directive and to our Nitrates Action Programme (NAP) and controls the management and application of livestock manure and other fertilisers. The NAP is required to be reviewed every four years. In 2022, the Department of Housing, Local Government and Heritage undertook an Appropriate Assessment of the current NAP (5<sup>th</sup> NAP 2022-2025), which included a Natura Impact Statement (February 2022) for Irelands NAP and concluded that the NAP would not result in adverse effects on European site integrity either alone or in combination with other plans and programmes.

As mentioned earlier, the AFS sets out four high level mission statements for the sector. One of its mission statements is to become a 'Climate smart, environmentally sustainable Agri-food sector'. This target is underpinned by seven goals one of which, to "Protect High Status Sites and Contribute to Protection & Restoration of Good Water Quality and Healthy Aquatic Ecosystems". The report identified five actions under this goal including protecting water from agricultural pollution and reduce use of agricultural pesticides. Its associated AA concluded "the adoption of the AFS would not have significant adverse effects on the integrity of any Natura 2000 sites with the inclusion of the mitigation recommendations."

The National River Basin Management Plan (2018-2021) was published in April 2018. Over the period of this river basin planning cycle, there are measures being undertaken to meet the environmental objectives of the WFD. These include measures such as implementation of the Nitrates Action Programme (Nitrates Regulations) and associated inspection regime. Targeted monitoring as envisaged under the Plan allied with multi-party enforcement (EPA/Local Authority/DAFM) provides an early warning of potential problems/improvements and of the possible need to adapt the Plan to ensure protection of our waters.

Cumulative effects of the activity in relation to water have been assessed and is considered that there is not likely to be a significant cumulative effect from the activity and other activities/developments. There are no likely significant direct, indirect or cumulative effects identified.

### **Mitigation and Monitoring**

Mitigation measures and monitoring in relation to water are detailed in the following sections of this report:

- Emissions to Water and Ground;
- Storm Water Discharges;
- Organic Fertiliser; and
- Prevention of Accidents.

### **Conclusions**

I have examined all the information on water (including Storm Water, Emissions to Water and Groundwater) provided by the licensee, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the RD. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects on water.

#### **16.5.5 Noise**

##### **Identification, Description and Assessment of Effects**

Noise is mainly addressed in Section 7 of the EIS. The installation is located in a rural area, dominated by intensive agriculture. The nearest sensitive receptor is a residential dwelling 170 m from the installation. The potential direct and indirect effects of noise associated with the operation of the activity is the potential to cause nuisance for those living near the activity or to affect noise sensitive species near the site. The effects have been assessed in the 'noise' section of this report.

There is also the potential for accidental noise emissions. This is addressed in the 'Prevention of Accidents' section of this report.

Cumulative effects of the activity in relation to noise have been assessed and is considered that there is not likely to be a significant cumulative effect from the activity and other activities/developments. There are no likely significant direct, indirect or cumulative effects identified.

### **Mitigation and Monitoring**

Mitigation measures and monitoring in relation to noise are detailed in the 'Noise' section of this report.

### **Conclusions**

I have examined all the information on noise provided by the licensee, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the RD. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of noise.

### 16.5.6 Air

#### Identification, Description and Assessment of Effects

Air is mainly addressed in Section 6 of the EIS. The potential direct and indirect effects on air are associated with emissions to air of ammonia, dust and odour from the pig housing, and dust from the installation yard. Should emissions cause an exceedance of air quality standards or critical levels/loads, this could have implications for air quality, human health and biodiversity within and beyond the site boundary. General site dust and odour emissions have the potential to impact human health and cause nuisance.

The effects identified and described above have been assessed in the following sections-of this report:

- Emissions to Air;
- Organic Fertiliser; and
- Prevention of Accidents.

There is also the potential for accidental emissions to the environment. This is addressed in the 'Prevention of Accidents' section of this report.

In relation to cumulative effects, it is noted that there are no EPA-licensed intensive agriculture installations or other EPA licensed activities within 5 km of the installation.

As stated previously, the Agency has issued a guidance document to assist applicants in undertaking an assessment of the impacts of ammonia and nitrogen, including cumulative assessments, titled "Assessment of the impact of ammonia and nitrogen on Natura 2000 sites from intensive agriculture installations" (EPA, March 2023).

Modelling of odour emissions was undertaken by the licensee and concluded that there should be no impacts on any odour-sensitive locations nearby. In addition, site specific modelling of the ammonia emissions from the installation was undertaken, which took into account the background levels of ammonia, and it is considered that there is not likely to be a significant cumulative effect on sensitive receptors, with the controls in place and controls recommended in the RD, as a result of the ammonia emissions from the installation and those generated by other activities/developments in the area.

According to *'Ireland's Informative Inventory Report 2024'* (EPA 2024), which contains the most recent data, ammonia emissions in 2022 from the pig sector were 6.1 kt (or 4.8% of Ireland's National emissions). This installation will emit 25 tonnes per annum. In December 2020, the Government issued *'Ag Climatise – A Roadmap towards Climate Neutrality'*. This is a roadmap of actions for agriculture to cut GHG emissions as well as ammonia emissions significantly over the next decade, and up to 2050. The road map lists actions aiming to reduce the cumulative impact of ammonia emissions from the sector as a whole.

As mentioned earlier, the AFS sets out four high level mission statements for the sector one of which is to become a 'Climate smart, environmentally sustainable Agri-food sector'. Another of its seven goals is to develop a climate neutral food system by 2050 and improve air quality. As stated, its associated AA concluded "the adoption of the AFS would not have significant adverse effects on the integrity of any Natura 2000 sites with the inclusion of the mitigation recommendations."

As detailed previously in the 'Emissions to Air' section of this report, Ireland is addressing ammonia emissions (including emissions from landspreading) in

accordance with the NECD and S.I. No. 232/2018, European Union (National Emission Ceilings) Regulations 2018. The Code of Good Agricultural Practice as referred to earlier in this report contains guidelines on topics including *inter alia* low emission spreading and fertiliser management, as well as animal feed and housing.

Approximately 4.0% of the ammonia emissions that originate from landspreading in Ireland come from the pig sector. This equates to 1.1% of Ireland's total ammonia emissions. The organic fertiliser generated by the activity represents a negligible quantity relative to the total quantity of organic fertiliser arising from the livestock sectors in Ireland (cattle, sheep, pigs and poultry).

Cumulative effects of the activity in relation to air have been assessed and it is considered that there is not likely to be a significant cumulative effect from the activity and other activities/developments. There are no likely significant direct, indirect or cumulative effects identified.

### **Mitigation and Monitoring**

Mitigation measures and monitoring in relation to air, including ammonia, dust and odour, are detailed in the following sections of this report:

- Emissions to Air;
- Organic Fertiliser; and
- Prevention of Accidents.

### **Conclusions**

I have examined all the information on Air (including ammonia, dust and odour) provided by the licensee, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the RD. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of Air (including ammonia, dust and odour).

### **16.5.7 Climate**

#### **Identification, Description and Assessment of Effects**

Section 6 of the EIS addresses Climate. Climate change is a significant global issue which affects weather and environmental conditions (air, water and soil) which consequently affects population and human health, material assets, cultural heritage, the landscape and biodiversity. Climate change is caused by warming of the climate system by enhanced levels of atmospheric greenhouse gases (GHG) due to human activities. GHGs are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF<sub>3</sub>) and sulphur hexafluoride (SF<sub>6</sub>). The EIS estimates that the expansion of the installation will increase methane and nitrous oxide emissions from the installation and subsequent offsite landspreading of slurry by approximately 31% and 25% respectively.

The installation does not operate under a GHG Emissions Permit in accordance with the European Communities (Greenhouse Gas Emissions Trading) Regulations 2012, (S.I. 490 of 2012 and amendments). Therefore, this site is not subject to the European Communities (Greenhouse Gas Emissions Trading) Regulations 2012, (S.I. 490 of 2012 and amendments) (the EU ETS). It is therefore a requirement of the IED to investigate how direct emissions of CO<sub>2</sub> might be minimised.

Indirect emissions of CO<sub>2</sub> may arise due to the use of electricity from the national grid. These emissions are covered under the EU ETS at the generating plant, but the licensee is also required to address electricity usage as part of energy efficiency management.

In December 2022, the Irish Government released the 'Climate Action Plan 2023', under the 'Climate Action and Low Carbon Development (Amendment) Act 2021', which will support Ireland's transition to Net Zero and achieve a climate neutral economy by no later than 2050.

The potential direct and indirect effects on climate are associated with storage and spreading of organic fertiliser (slurry) (nitrous oxide) and usage of fossil fuels (carbon dioxide). However, any discussion of GHG emissions must be extended to national and global climate impact.

As part of the non-ETS (Emissions Trading Scheme) sector the GHG emissions from this site are covered by Ireland's commitments under the Effort Sharing Decision (Decision No 406/2009/EC) and the Effort Sharing Regulation (Regulation (EU) 2018/842) from 2021.

Given the small quantity of climate altering substances that could be released from the activity, in a national context, I consider that the impact of any emissions from the installation on climatic considerations should be minimal.

It is considered that the likelihood of accidental emissions occurring which could affect climate is low in light of the measures outlined in the 'Prevention of Accidents' section above and the proposed conditions in the RD. Therefore, there are no likely significant direct, indirect or cumulative effects identified.

### **Mitigation and Monitoring**

Mitigation measures and monitoring in relation to climate are detailed in the following sections of this report:

- Emissions to Air;
- Organic Fertiliser;
- Prevention of Accidents; and
- Energy Efficiency.

Conditions 2 and 7 of the RD deal with energy efficiency matters at the installation.

### **Conclusions**

I have examined all the information on climate provided by the licensee, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the RD. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of climatic factors.

## **16.5.8 The landscape**

### **Identification, Description and Assessment of Effects**

The potential direct and indirect effects on the landscape are described in Section 10 of the EIS. Any disturbance of the landscape has the potential to impact on human beings and their enjoyment of the surrounding area due to visual impacts. These matters are dealt with in the decision of the planning authority to grant planning permission for the developments on-site and are not controlled by the Agency. The planning authority has considered the effects to be acceptable.

The installation is located in a rural, predominantly agricultural area. Emissions from the operation of the activity will not affect the agricultural landscape of the area.

No significant cumulative effects on the landscape have been identified. Therefore, there are no likely significant direct, indirect or cumulative effects identified.

### **Mitigation and Monitoring**

There are no specific mitigation measures or monitoring proposed in the RD.

### **The Landscape Conclusions**

The Planning Authority has identified, described and assessed the likely significant direct and indirect effects of the development on the landscape. Their assessment concluded that "the proposed structure is in keeping with the appearance and scale of the existing pig farm and, given the natural screening on site I am satisfied that there will be no meaningful, negative impact in terms of visual amenity on neighbouring residences or on views in the wider landscape".

The RD does not propose to include any additional mitigation measures in relation to landscape.

## **16.5.9 Material Assets and Cultural Heritage**

### **16.5.9.1 Material Assets (including resource use and waste generation)**

#### **Identification, Description and Assessment of Effects**

Section 8 of the EIS addresses Material Assets, and include information on traffic, transport, agricultural and non-agricultural property, and resources (both natural and others) such as energy and water. Material assets such as roads and traffic and built services are dealt with in the decision of the planning authority to grant permission for the development and are not controlled by the Agency. The planning authority has considered the effect to be acceptable.

The use of natural resources by the activity will not have significant effects in terms of material assets. There are sufficient supplies of electricity and water to serve the requirements of the development. These matters are dealt with in the decision of the planning authority to grant planning permission for the developments on-site. The production of waste by the activity is assessed in the 'Waste Generation' section of this report.

The effects identified and described above have been assessed in the following section of this report:

- Waste Generation; and
- Energy Efficiency and Resource Use.

No significant cumulative effects on material assets have been identified. Therefore, there are no likely significant direct, indirect or cumulative effects identified.

### **Mitigation and Monitoring**

Mitigation measures and monitoring in relation to material assets are detailed in the following sections of this report:

- Waste Generation;
- Energy Efficiency and Resource Use.

### **Material Assets Conclusions**

I have examined all the information on material assets provided by the licensee, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the RD. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of Material Assets.

Material assets such as roads, traffic and built services are dealt with in the decision of the planning authority to grant planning permission for the developments on-site and they have considered the effects to be acceptable.

The RD does not propose to include any additional mitigation measures in relation to material assets.

### **16.5.9.2 Cultural Heritage**

#### **Identification, Description and Assessment of Effects**

Section 9 of the EIS addresses the potential direct and indirect effects on cultural heritage. Any loss of archaeological or architectural heritage could impact negatively on human beings. These matters are dealt with in the decision of the planning authority to grant planning permission for the developments on-site and are not controlled by the Agency. The planning authority has considered the effect to be acceptable.

There are no buildings or features of architectural significance and one known archaeological feature at or near the site of the installation. Evidence for a circular enclosure was revealed by archaeological testing at the site of the installation, under what is now the dry sow house. There are two ringforts 200 m west and an earthworks 300 m north of the site. It is very difficult to envisage any pathway by which emissions from the operation of the activity could impact any feature which might be present.

No significant cumulative effects on the cultural heritage have been identified. Therefore, there are no likely significant direct, indirect or cumulative effects identified.

### **Mitigation and Monitoring**

There are no specific mitigation measures or monitoring proposed in the RD.

### **Cultural Heritage Conclusions**

The Planning Authority has identified, described and assessed the likely significant direct and indirect effects of the development on cultural heritage. Their assessment concluded that they are "satisfied that the proposed development is an adequate distance from the site of the ringfort (COo25-179) and its zone of archaeological potential".



The RD does not propose to include any additional mitigation measures in relation to cultural heritage.

### **16.5.9.3 Overall Conclusions for Material Assets and Cultural Heritage**

I have examined all the information on material assets and cultural heritage provided by the licensee, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of material assets and cultural heritage.

### **16.5.9.4 Interactions Between Environmental Factors**

Interactions of effects are considered in Section 11.2 of the EIS. The most significant interactions between the factors as a result of the activity are summarised below.

#### **Human beings, air, and flora and fauna**

Potential effects from emissions to air may impact on human beings, air quality and flora and fauna as demonstrated in the 'Emissions to Air' section above. As demonstrated such effects are considered not to be likely or significant.

#### **Water, soil, and flora and fauna**

Accidental discharges of wash water, slurry or other substances to ground may directly and indirectly affect soil, groundwater quality, surface water quality downstream, aquatic habitats and aquatic flora and fauna. Indirect effects on soil, groundwater quality, surface water quality, habitats and flora and fauna may arise from landspreading slurry which arises from the activity. As demonstrated in the 'Emissions to Water and Ground' section above, such effects are not considered to be likely or significant.

#### **Conclusions**

I have considered the interactions between human beings, flora and fauna, soil, water, air, climate, material assets, cultural heritage and landscape, and the interaction of the likely effects identified throughout this report. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the RD. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of the interaction between the foregoing environmental factors.

### **16.6 Reasoned Conclusion on the significant effects**

Having regard to the examination of environmental information contained above, and in particular to the content of the EIS and supplementary information provided by the licensee, and the submissions from third parties in the course of the application, it is considered that the potential significant direct and indirect effects of the activities on the environment are as follows:

- Emissions to air;
- Noise emissions; and
- Accidental leakages or spills.

Having assessed those potential effects, I have concluded as follows:

- Emissions to air will be mitigated through imposing emission limit values to comply with the CID; and implementing monitoring, maintenance and control measures;
- Noise emissions will be mitigated through imposing daytime, evening-time and night-time noise limits at noise sensitive locations; and implementing monitoring, maintenance and control measures; and
- Accidental leakages or spills will be mitigated through inspection and maintenance of bunds and tanks; and accident and emergency requirements specified in the RD.

Having regard to the effects (and interactions) identified, described and assessed throughout this report, I consider that the monitoring, mitigation and preventative measures proposed will enable the activity to operate without causing environmental pollution, subject to compliance with the RD. The conditions of the RD and the mitigation measures proposed will significantly reduce the likelihood of accidental emissions occurring and limit the environmental consequences of an accidental emission should one occur.

### **17. EPA Charges**

The annual enforcement charge recommended in the RD is €8,497, which reflects the anticipated enforcement effort required and the cost of monitoring.

### **18. Recommendation**

The Agency, in considering an application for a licence or the review of a licence, shall have regard to section 83 of the EPA Act. The Agency shall not grant a licence or revised licence unless it is satisfied that emissions comply with relevant emission limit values and standards prescribed under regulation. In setting such limits and standards, the Agency must ensure they are established based on the stricter of either, or both, the limits and controls required under BAT, and those required to comply with any relevant environmental quality standard. The Agency shall perform its functions in a manner consistent with section 15 of the Climate Action and Low Carbon Development Act 2015 as amended.

The RD specifies the necessary measures to provide that the installation shall be operated in accordance with the requirements of section 83(5) of the EPA Act and has regard to the AA and the EIA. The assessment is consistent with section 15 of the Climate Action and Low Carbon Development Act 2015 as amended. The RD gives effect to the requirements of the EPA Act and has regard to submissions made.

I recommend that a Proposed Determination be issued subject to the conditions and for the reasons as drafted in the RD.

Signed



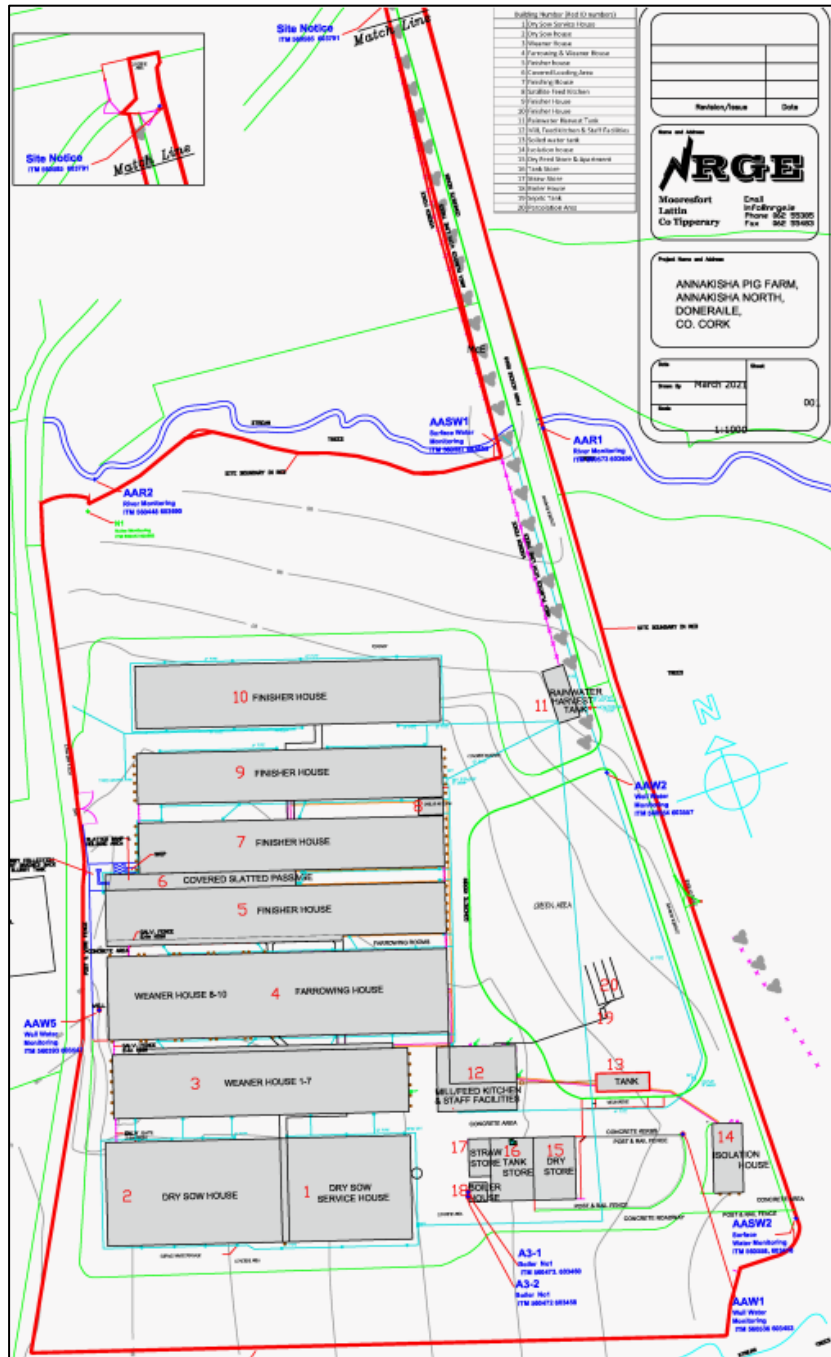
Philip Stack  
Philip Stack, ICER Inspector

### **Procedural Note**

In the event that no objections are received to the Proposed Determination on the application, a licence will be granted in accordance with Section 87(4) of the EPA Act, as soon as may be after the expiration of the appropriate period.

# Appendices

## Appendix 1: Drawings



Excerpt from the drawing titled 'Annakisha Pig Farm' received by the Agency in support of the application on 17 May 2023.

## Appendix 2: AA table

**Table 2A.1: Assessment of the effects of the activities on European sites and proposed mitigation measures.**

Site Code	Site Name	Qualifying Interests (* denotes a priority habitat)	Conservation Objectives	Assessment
002170	Blackwater River (Cork/Waterford) SAC	<p><b>Habitats</b></p> <p>1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1220 Perennial vegetation of stony banks 1310 Salicornia and other annuals colonising mud and sand 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>) 3260 Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation 91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles 91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)*</p> <p><b>Species</b></p> <p>1096 Brook Lamprey (<i>Lampetra planeri</i>) 1106 Salmon (<i>Salmo salar</i>) 1421 Killarney Fern (<i>Trichomanes</i>)</p>	<p>NPWS (2012) Conservation Objectives: Blackwater River (Cork/Waterford) SAC 002170. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>The site is located 1.5 km to the south of the installation.</p> <p>I am satisfied beyond reasonable scientific doubt that ammonia emissions from the project site will not cause an impact on the qualifying interests for this European Site.</p> <p>I am satisfied beyond reasonable scientific doubt that storm water discharges will not cause an impact on this European Site due to any potential hydrological connectivity of the project site with the European site being in excess of 1.9 km.</p> <p>The project site is not located within the vicinity of any known breeding site for Brook Lamprey (<i>Lampetra planeri</i>), Salmon (<i>Salmo salar</i>), Killarney Fern (<i>Trichomanes speciosum</i>), Sea Lamprey (<i>Petromyzon marinus</i>), Otter (<i>Lutra lutra</i>), Twaite Shad (<i>Alosa fallax fallax</i>), White-clawed Crayfish (<i>Austropotamobius pallipes</i>), Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>), or River Lamprey (<i>Lampetra fluviatilis</i>) at this European site.</p> <p>I am satisfied beyond reasonable scientific doubt that ammonia emissions or storm water discharges associated with the changes to the activity from the project site will not cause an impact on the conservation objectives for this European Site.</p>

Site Code	Site Name	Qualifying Interests (* denotes a priority habitat)	Conservation Objectives	Assessment
		<i>speciosum</i> 1095 Sea Lamprey ( <i>Petromyzon marinus</i> ) 1355 Otter ( <i>Lutra lutra</i> ) 1103 Twaité Shad ( <i>Alosa fallax fallax</i> ) 1092 White-clawed Crayfish ( <i>Austropotamobius pallipes</i> ) 1029 Freshwater Pearl Mussel ( <i>Margaritifera margaritifera</i> ) 1099 River Lamprey ( <i>Lampetra fluviatilis</i> )		
004095	Kilcolman Bog SPA	<b>Birds</b> A038 Whooper Swan ( <i>Cygnus cygnus</i> ) A052 Teal ( <i>Anas crecca</i> ) A056 Shoveler ( <i>Anas clypeata</i> )  <b>Habitats</b> Wetlands	NPWS (2022) Conservation objectives for Kilcolman Bog SPA [004095]. First Order Site-specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage.	<p>The site is located 7.0 km to the north of the installation.</p> <p>I am satisfied beyond reasonable scientific doubt that ammonia emissions from the project site will not cause an impact on the qualifying interests for this European Site.</p> <p>I am satisfied beyond reasonable scientific doubt that storm water discharges will not cause an impact on this European Site due to the lack of hydrological connectivity of the project site with the European site.</p> <p>The project site is not located within the vicinity of any known breeding site for Whooper Swan (<i>Cygnus cygnus</i>), Teal (<i>Anas crecca</i>) or Shoveler (<i>Anas clypeata</i>) at this European site.</p> <p>I am satisfied beyond reasonable scientific doubt that ammonia emissions or storm water discharges associated with the changes to the activity from the project site will not cause an impact on the conservation objectives for this European Site.</p>

Site Code	Site Name	Qualifying Interests (* denotes a priority habitat)	Conservation Objectives	Assessment
002036	Ballyhoura Mountains SAC	<p><b>Habitats</b>  4010 Northern Atlantic wet heaths with <i>Erica tetralix</i>  4030 European dry heaths  7130 Blanket bogs (* if active bog)</p>	<p>NPWS (2016)  Conservation Objectives:  Ballyhoura Mountains SAC 002036.  Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.</p>	<p>The site is located 13.0 km to the north of the installation.</p> <p>I am satisfied beyond reasonable scientific doubt that ammonia emissions from the project site will not cause an impact on the qualifying interests for this European Site.</p> <p>I am satisfied beyond reasonable scientific doubt that storm water discharges will not cause an impact on this European Site due to the lack of hydrological connectivity of the project site with the European site.</p> <p>I am satisfied beyond reasonable scientific doubt that ammonia emissions or storm water discharges associated with the changes to the activity from the project site will not cause an impact on the conservation objectives for this European Site.</p>
002037	Carrigeenamronety Hill SAC	<p><b>Habitats</b>  4030 European dry heaths</p> <p><b>Species</b>  1421 Killarney Fern (<i>Trichomanes speciosum</i>)</p>	<p>NPWS (2021)  Conservation Objectives:  Carrigeenamronety Hill SAC 002037.  Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	<p>The site is located 15.1 km to the northeast of the installation.</p> <p>I am satisfied beyond reasonable scientific doubt that ammonia emissions from the project site will not cause an impact on the qualifying interest for this European Site.</p> <p>I am satisfied beyond reasonable scientific doubt that storm water discharges will not cause an impact on this European Site due to the lack of hydrological connectivity of the project site with the European site.</p> <p>The project site is not located within the vicinity of any known breeding site for Killarney Fern (<i>Trichomanes speciosum</i>) at this European site.</p> <p>I am satisfied beyond reasonable scientific doubt that ammonia emissions or storm water discharges associated with the changes to the activity from the</p>

Site Code	Site Name	Qualifying Interests <i>(* denotes a priority habitat)</i>	Conservation Objectives	Assessment
				project site will not cause an impact on the conservation objectives for this European Site.

### Appendix 3: Relevant Legislation

The following European instruments which have been transposed into Irish legislation are regarded as relevant to this application assessment and have been considered in the drafting of the Recommended Determination.
National Emissions Ceilings Directive (2016/2284)
Industrial Emissions Directive (IED) (2010/75/EU)
Environmental Impact Assessment (EIA) Directive (2011/92/EU as amended by 2014/52/EU)
Habitats Directive (92/43/EEC) & Birds Directive (79/409/EC)
Water Framework Directive [2000/60/EC]
Waste Framework Directive (2008/98/EC)
Air Quality Directives (2008/50/EC and 2004/107/EC)
Groundwater Directive (80/68/EEC) and 2006/118/EC
Environmental Liability Directive (2004/35/CE)
Regulation (EC) No 1069/2009, as amended (Animal By-products Regulation)
Nitrates Directive (91/676/ EEC)
Energy Efficiency Directive (2018/2002/EU)

### Appendix 4: Other CIDs/BREF/BAT documents relevant to this assessment

Commission Implementing Decisions	Publication Date
COMMISSION IMPLEMENTING DECISION of 15 February 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs (2017/302/EU)	February 2017
Sectoral BREF	Publication date
Reference Document on the Best Available Techniques for the Intensive Rearing of Poultry or Pigs	July 2017
Horizontal BREF	Publication date
Reference Document on the Best Available Techniques on Emissions from Storage	July 2006
Reference Document on the Best Available Techniques for Energy Efficiency	February 2009