



## ENVIRONMENTAL SOLUTIONS LTD

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11<sup>th</sup> August 2021

Environmental Protection Agency,  
Johnstown Castle Estate  
County Wexford  
Y35 W821.

**Licensee Name:** Woodville Pig Farms Ltd  
**EPA Licence No:** P0467  
**Application Reference No:** LA004791

**RE:** RFI Reminder, dated 17<sup>th</sup> June 2021.

Dear Sir/Madam

Panther Environmental Solutions Ltd, acting as consultants for Woodville Pig Farms Ltd, provide the following response to further information requested by the EPA on 17<sup>th</sup> June 2021.

In addition to this letter, please find attached:

- BAT Conclusions \_Woodville Farm \_10-08-2021
- BREF Emissions from Storage \_Woodville Farm \_10-08-2021
- BREF Energy Efficiency \_Woodville Farm \_10-08-2021
- 270721 RFI EPA Cullinan Farms Rev 2
- Natura Impact Statement \_Tim Cullinan \_9926\_R2
- A3\_2896\_Site Layout Plan EIA Woodville Pig Farms Site
- LA004791 \_EIAR Non Technical Summary
- LA004791 \_Attachment 1.2\_Non-Tech-Summary

Yours faithfully,

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## RFI Response Letter

Woodville Pig Farms Ltd (Application Ref: LA004791)

1. It is noted that the documentation regarding the BAT (Best Available Techniques) conclusions from the Commission Implementing Decision (CID) document for the Intensive Rearing of Poultry or Pigs (2010/75/EU, Feb 2017) has not been adequately completed.
  - a. Provide clarifications on how BAT 30 will be implemented in the new and proposed pig buildings:
    - i. Note that points a(i) and a(ii) are **not** BAT, they are the broad principles applied in the techniques listed thereafter.
    - ii. Use of BAT 30(a.1), a vacuum system for frequent slurry removal (in case of a fully or partly slatted floor), implies removal of slurry of up to twice a week. Supply information to demonstrate that adequate external covered storage capacity is available **on-site** to allow for implementation of this BAT technique. Information on the description and requirements of all BAT techniques can be found in the associated BREF document. Clarify how BAT 30 will be implemented onsite.
    - iii. State definitively how the applicant proposes to meet the requirements for BAT 30 in the proposed new pig buildings. Note that for slurry cooling to be BAT-compliant, it is necessary to incorporate heat recovery and reuse. Confirm the technique to be applied and supply details on how this will be achieved.
  - b. Implementation of BAT 16 requires **“a combination of techniques”** to be implemented: BAT 16(a) alone is insufficient. It is noted also, that given the very low volume of external storage available, that BAT 16(a.2) is unlikely to be achievable for this slurry store based on the information supplied.

**The document “BAT Conclusions \_Woodville Farm \_10-08-2021” has been updated based upon the above RFI.**

### **BAT 30.a.1: Vacuum system**

**BAT 30(a.1), a vacuum system for frequent slurry removal, would be used for the proposed new farm buildings.**

**In order to develop the Woodville site, and comply with the BAT requirement to reduce ammonia emissions, it is proposed to have a 0.6 metre (or 2 foot tank) under the proposed weaner and the new finisher house to be built there. Fresh slurry will be sluiced from these buildings to two large covered storage tanks outside the boundary fence, either to be:**

- (1) stored pending collection for spreading on farmlands (as per current practice) or,**
- (2) further treated (by anaerobic digestion or some other treatment process), as is intended to be implemented in the future.**

**It is still the aim of Mr Cullinan that some extra value would be added to the slurry to generate further employment and income in the local economy. It is intended that a company would be established, separate from Woodville Pig Farms Ltd, which would**

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govern the intended further treatment operation. The separate company will manage this slurry in compliance with all rules and regulations.

Due to the intended future use of removed slurry, it has not been proposed to include the new slurry tanks within the EPA licence site boundary.

As the proposed tanks were not included in the previous planning permission (Tipperary Planning Ref: 20211), a new planning application would be required to implement this development. The guidance document “Germán Giner Santonja et al (2017) *Best Available Techniques (BAT) Reference Document for the Intensive Rearing of Poultry or Pigs*; EUR 28674 EN; doi:10.2760/020485” would be used in the design of the proposed slurry removal system, external slurry storage and tank covers.

The capacity of these tanks will be 5,500 m<sup>3</sup> (1.21 million gallons).

The slurry treatment process and storage will be in place before the new buildings are stocked with the increased stock numbers proposed.

**BAT 30.b: Slurry Cooling**

BAT 30.b slurry cooling was proposed as part of the new development as an ammonia / odour mitigation measure. Advice from experts has been sought, and this technique has been decided against due to the cost / benefit and likely emissions reductions.

**BAT 16**

BAT 16.a.2 and 16.a.3 would form a part of the proposed development.

A.2 – operating at a level of fill would be implemented at the farm as slurry would be removed to external storage,

A.3 With the design of shallow tanks under the pigs, the slurry is sluiced or removed regularly from under the pigs without the need to agitate or stir it,

BAT 16.b.1 or 16.b.2 would form part of the proposed development.

It is intended to provide sufficient external storage for slurry produced within the new farm buildings. Additional planning permission would be required to provide storage tanks with 5,500 m<sup>3</sup> combined storage. Tank covers would be installed, however, it has not been decided between rigid or flexible covers at this time.

BAT 16.c would not be used at the site.

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2. The requested assessments against the following BREFs have not been submitted; tabulate any relevant conclusions on BAT from the following BREF documents:
  - a. Reference Document on Best Available Techniques for Energy Efficiency, February 2009; and
  - b. Reference Document on Best Available Techniques on Emissions from Storage, July 2006.

**This omission was due to a print to pdf error, where these documents were not included in the final report.**

**The attached documents “BREF Energy Efficiency \_Woodville Farm \_10-08-2021” and “BREF Emissions from Storage \_Woodville Farm \_10-08-2021” include the responses to BREF documents.**

3. With respect to the odour and ammonia modelling assessments submitted:
  - a. The odour emission factor used for production pigs (10 ouE/s) is not acceptable and has not been justified. The EPA’s guidance document, *Odour Impacts and Odour Emission Control: Measures for Intensive Agriculture* (2001), recommends an emission factor for production pigs (fatteners) of 22.5 ouE/s.
  - b. The ammonia emission factor used for production pigs reflects only the grower stage and not the finisher stage. Given the increase in sow, weaner, and grower numbers, there will be a corresponding increase in the quantity of finishers, either at the Woodville breeding unit or the Ballyknockane finishing unit. If the increased number of finishers is to be disproportionately concentrated at the Ballyknockane finishing unit, then the associated increase in ammonia and odour emissions from that site must also be assessed.
  - c. The numbers of each class of animal, particularly production pigs, used in the odour and ammonia models differs significantly from the numbers given in the licence application.
  - d. Both the odour and ammonia modelling have neglected to include emissions from external slurry storage.
  - e. Re-run the models addressing points a to c.
  - f. Update the Natura Impact Statement to reflect the corrected model results.

**The updated odour and ammonia model information is provided in the document “270721 RFI EPA Cullinan Farms Rev 2” included with this response.**

**The model has updated the emission rates from production pigs to emission rates for fattening /finishing pigs of 22.5 Ou<sub>e</sub>/pig place(s) for odour and 131.3 µg/pig place(s) for ammonia.**

**The previously proposed open external storage tank, termed “reception tank” is no longer intended to be constructed. In place of this reception tank, planning permission will be applied for to include covered slurry storage tanks to comply with the**

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requirements of BAT. Odour and ammonia emissions reductions to be gained from frequent removal of slurry to covered storage has not been included in this model.

It should be noted that the revised modelling results are not be directly comparable with the original odour and ammonia model report results. The USEPA algorithm and wake algorithm have been recently updated, which has changed treatments with regards to building wake and long field calculations.

The Natura Impact Statement has been updated with the revised modelling results and has been included with this response.

**Explanation of the numbers of animals on each site:**

The proposed development is to increase the number of sows from 920 to 1,650 sows rearing pigs from weaning to sale.

Currently there are 920 sows with 3,850 weaners at the Woodville site and 8,000 finishers at the Ballyknockane site. This size of operation sells approximately 500 pigs per week (based on a figure of 28 pigs sold per sow per year). There are therefore c. 7 weeks weaner accommodation in Woodville and 14 to 15 weeks accommodation in Ballyknockane (allowing for time to power-wash the rooms between batches). Mortality figures are not included in these numbers to reduce confusion.

The proposal is to increase the accommodation at the Woodville site and leave the Ballyknockane site as a finishing site taking pigs for a shorter time period.

The proposed 1,650 sows selling 28 pig per sow per year will have a weekly throughput of 900 pigs per week. The proposal is to accommodate 8,400 weaners and 4,200 finishers at the Woodville site. Of the 4,200 finishers, 1,200 will be reared fully to sale weight on the site (these will be the smaller pigs and will be accommodated in smaller rooms in the new proposed finisher house to be constructed on the site). The other 3,000 “production” or “pre- finisher” pigs will be reared for 4 to 5 weeks on the sow farm and then transferred to the Ballyknockane site. Therefore these pigs will spend 9 to 10 weeks on the Ballyknockane site rather than 14 to 15 as currently is the case.

The stock numbers to be kept at the Woodville site are shown in the Table below.

The proposed stock numbers for this “site” (Woodville) are set out in the following table:

Animal Type	Proposed Numbers	Current Licensed Stock Numbers
Sows	1650	920
Weaner places (ie 7 to 30kg)	8400	3850
Production Pigs (ie > 30kg)	4200	0

For the sake of clarity, this proposal is to increase the sow and pig numbers as above with a total allowance for 12,200 production pigs (ie pigs >30kg liveweight ) on the combined sites. The numbers of finishers at the Ballyknockane site will remain at 8,000 as is currently the situation.

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4. Does the figure of 4,200 fattening pigs given in the licence application include maiden gilts? What is the proposed total number of maiden gilts to be kept on-site? Note that served gilts are considered sows as per Danish ECJ judgement case C-585/10.

**With the proposal of 1,650 sows there will be a requirement to replace approximately 60% of them each year. This requires 20 to 30 selected gilts to be identified each week in the farrowing house and reared with the weaners and finisher pigs. These animals are reared to 110 kg and then selected as maiden gilts at 110 kg live-weight.**

**These breeding animals are included in the 4,200 figure for the Woodville site (up to the 110 kg live-weight). The most suitable 20 of these gilts are selected and will be approximately 10 more weeks at time of service/mating.**

**Therefore, there will be 200 maiden (i.e. unserved) gilts on the proposed Woodville site.**

**The current number of gilts allowed is 109 as per the conditions of the current IE licence.**

**Once a gilt is served she is counted as a sow.**

5. The EIAR makes reference to a septic tank onsite. Confirm if there is a septic tank onsite and update the site plan to show its location.

**The septic tank & percolation area serving the farm office facilities are located immediately north of the farm office building.**

**Please see the attached revised drawing "A3\_2896\_SITE LAYOUT PLAN EIA WOODVILLE PIG FARMS WOODVILLE SITE".**

In addition to the above, please also provide an updated non-technical summary (Application Form, and EIS where applicable) to reflect the information provided in your reply, insofar as that information impinges on the non-technical summary.

**Revised Non-Technical Summaries for the License Application and EIAR have been included in this submission.**