Dust and Bioaerosols Management Plan

Background

A dust and bioaerosol risk assessment/management plan is required for new bespoke or substantial variation applications where a site is within 100 m of a sensitive receptor such as the farmhouse or a neighbour.

Note: The level of detail needed will depend on the level of risk. Sites that are close to sensitive receptors may need to consider additional mitigation techniques.

The overarching principle is that vague statements such as ‘the buildings will be inspected regularly’ should be avoided. It is essential to say who, how, when, where and what follow-up actions will be taken, e.g. the farm manager will perform a weekly walk-around inspection of the buildings, the findings will be recorded in the inspection and maintenance records in the farm office.

Farm name: North Farm **Operator:** Sellmor Farming Ltd **Permit number:** 3330AY

Date: 07/01/25 **Prepared by:** R Morley

Introduction

This bespoke dust and bioaerosol risk assessment/management plan has been prepared to support the overall Environmental Management System in place at Illustrative Farm. The overriding principle is to ensure that the day-to-day activities are carried out in accordance with this document to help minimise the overall environmental impact.

Name of the permit holder	Sellmor Farming Limited
Activity address	North Farm Thorpe le Street York YO42 4LJ
National grid reference	483246, 444161

Document reference and dates for Site Condition Report at permit application and surrender	August 2018 HP3330AY

Setting

The installation is located at National Grid Reference 483246 : 444161.

Figure 1 shows the location of the installation

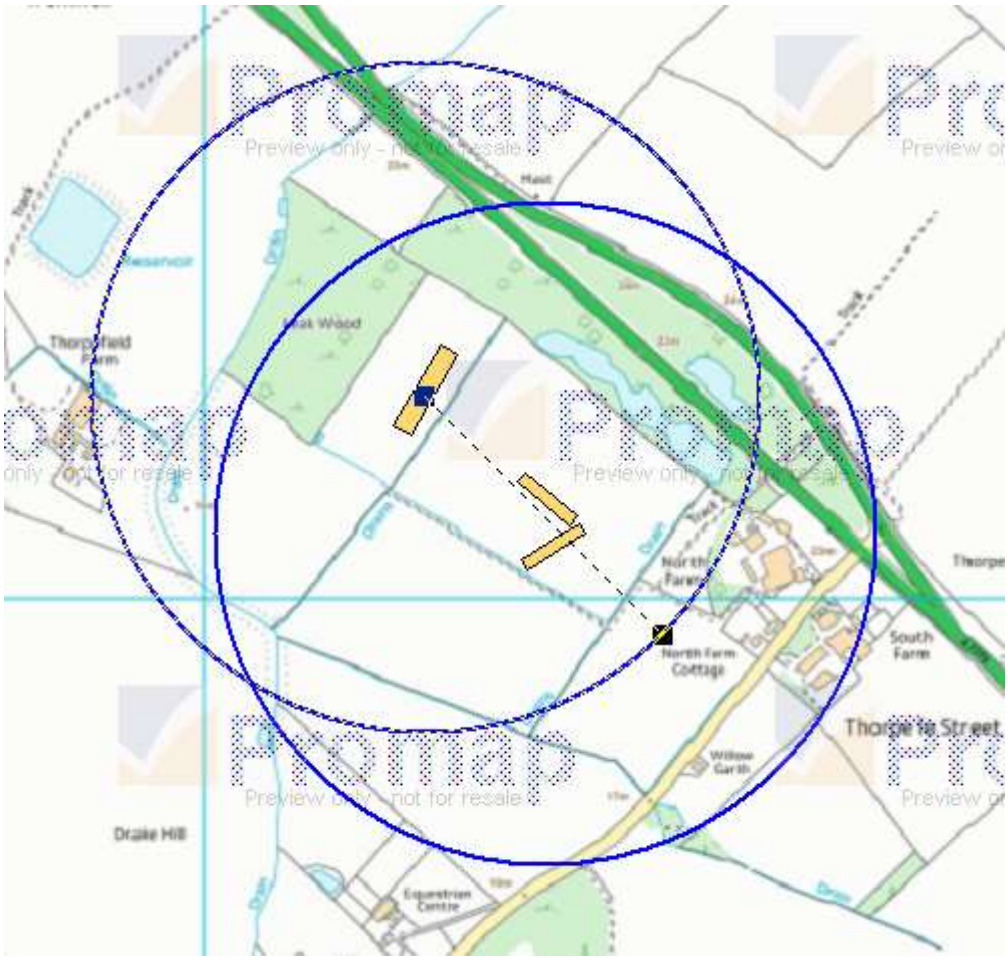


Figure 1: Receptors in the vicinity of North Farm

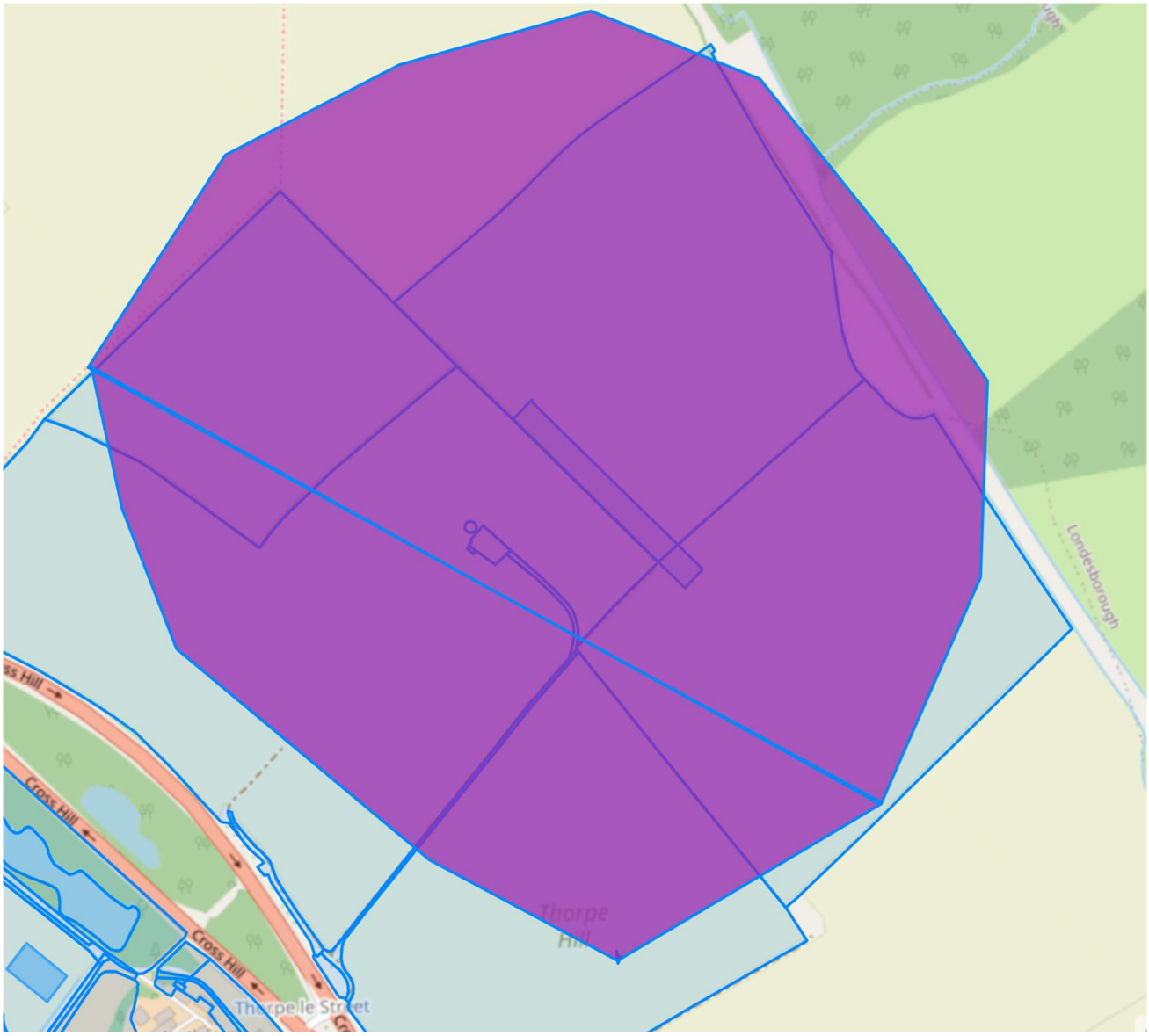
Receptor	Distance from site / (Range boundary)	Direction	Type of receptor	Grid reference
Receptor 1: North Farm Cottage	20m	East	Residential	SE83715 44029
Receptor 2: 2 Orchard Cottage	46m	East	Residential	SE83678 43967
Receptor 3: Willow Garth	25m	South	Residential	SE83593 43806
Receptor 4: 1 Orchard Cottage	46m	East	Residential	SE83684 43972
Receptor 5: High Trenwick	86m	North	Residential	SE83074 44811
Receptor 6: South Farm	138m	East	Residential	SE83783 43974
Receptor 7: Equestrian Centre	102m	South	Residential	SE83246 43586
Receptor 8: Willow House	248m	South	Residential	SE83143 43505

Receptor 9: Drakehill Cottage	277m	South	Residential	SE83138 43466
Receptor 10: Thorpefield	105m	South	Residential	SE82840 44180
Receptor 11: Thorpefield Cottage	88m	South	Residential	SE82735 44270

Table 2: Receptor locations House A and B

Receptor	Distance from site / (Range boundary)	Direction	Type of receptor	Grid reference
Receptor 1: Thorpe Rise Farm	220m	South	Farm business / Residential	SE84043 43914
Receptor 2: High Trenwick Farm	550m	West	Farm business / residential	SE83075 44810
Receptor 3: Moor Farm	720m	North	Farm business / residential	SE84907 45094
Receptor 4: Garrick Farm	650m	East	Farm business / Residential	SE85137 44361

Figure 2: House A & B 400m boundary line coloured purple from the building



The purpose of this assessment and Dust and Bioaerosol Risk Management Plan is to:

- Establish the likely source of dust and bioaerosols arising from the farm

- Set out procedures at the farm to mitigate or minimise the risk
- Formalise an effective method of dealing with any complaints quickly and efficiently

Potential sources

In accordance with the document, 'How to comply with your environmental permit for intensive farming', Appendix 11 Assessing dust control measures on intensive poultry installations, a risk assessment of dust and bioaerosol pollution was performed.

As a result, the following sources have been identified as contributing to a potential low risk dust/bioaerosol source:

Pathways and receptors

The pathway for all of the above sources is via the atmosphere. With the most sensitive receptors being inhabitants of nearby residential dwellings, the wind direction will significantly influence how receptors are affected. We have not received any complaints from neighbours relating to odour from the farm. The prevailing wind direction is south-westerly and, therefore, odour emission should be predominantly blown away from nearby neighbours.

Although the prevailing wind is in the direction of the receptors, there are control measures in place to ensure the minimisation of risk.

Table 2 gives a summary of some of the main at-source and exhaust control methods for particulate reduction from hen farms. In addition, all staff will receive training on all aspects of the farm operation which could lead to pollution, including the odour, noise and dust management plans, dealing with accidents and our general responsibilities under the permit.

Table 2: A summary of at-source and exhaust control methods for particulate reduction from Hen farms

Choose relevant techniques or add your own. For a full list of dust and bioaerosol abatement techniques, please refer to Appendix 11 of 'How to comply with your environmental permit'**.** Weekly inspection of the site by the operator for any signs of dust, which may leave the installation boundary or be a hazard to staff or visitors.

Source of dust	Example	How is reduction achieved?	Comments
General	Day-to-day activity	Weekly inspection of the site by the operator.	Look for any signs of dust, which may leave the installation boundary or be a hazard to staff or visitors.
Feed	Dust from silos	Covered feed silo.	Containers should be in place on silo exhausts to catch any excess feed and dust.
	Dust extraction in feed mill areas	Filters reduce dust emissions to the outside.	These need to be cleaned regularly.
	Storage of feed	Use of covers for feed containers.	Biosecurity issue as well.
	Feed spill control	Collection of any spilt feed is undertaken to avoid dust being generated.	Good management practice and avoids possible pollution into a watercourse.
	Spilled feed is swept up	Any spillages are cleaned up immediately.	

Source of dust	Example	How is reduction achieved?	Comments
Bedding material	Application of bedding: grass or straw	Bedding is applied internally infrequently as required.	Bedding is supplied in bales rather than in bulk. Bales are opened inside the housing rather Weekly inspection by the operator.
Type of slurry/manure removal system	Ventilation is carefully controlled, maintained and monitored to meet animal welfare requirements and to ensure efficient productivity		Hens require careful control of airflow over them as they can be easily disturbed by draughts. Increased ventilation with fans is often used in summer months.
Ventilation	General management	Weekly inspection by the operator and any visible dust on fans, vents, etc. is removed.	
House cleaning	General management	Good house cleaning between batches is essential to reduce the volume and potential for air contamination within the house and via exhaust system.	Care is taken to avoid dust accumulation around exhaust vents. Cleaning takes place in such a way that does not cause a release of dust to air or water, e.g. dust is not blown off site or washed into surface water drains.
Building layout and design	Natural and artificial ventilation	Specification and design of ventilation system to provide good air quality for the animals and staff.	Natural screens also reduce odour, noise and visual impact on the local environment. However, sufficient space is required and it can be difficult to retrofit. Screens and/or barriers must not be placed too close to buildings as this may impede good and effective ventilation.
	Housing is designed to minimise the effect of high winds	Screens and windbreaks are used, where possible.	

Source of dust	Example	How is reduction achieved?	Comments
Dry filters	Collecting dust onto filters on exhaust vents	Cyclones are fitted to milling systems.	Can be used in Hen houses when air change rates are relatively low and where the system will not interfere with the air distribution within the house. However, to remove anything other than large particles, it would need both a large and impractical surface area of filter, or very frequent cleaning/changing, which may prove impractical.

Checklist
Options for dust and bioaerosol control at source and exhaust

Source of dust	Example	How is reduction achieved?	Achieved Yes/No	Comments
Feed	Dust from silos	Covers put over feed silo pipes.	Y	
	Storage of feed	Use of covers for feed containers.	Y	
	Feed spill control	Collection of any feed spill is undertaken to avoid dust being generated.	Y	
	Feeding method	Auto feed through a worm all contained	Y	
	Over-administration of feed	Avoidance of spilled feed crushed on the floor by carefully monitoring the process.	Y	
	Weekly inspection	Dust that is in danger of leaving the perimeter is swept up.	Y	
Bedding material	Application of bedding	Bedding is applied internally, rather than being blown in.	Y	
	Storage of bedding	Bedding is stored under cover.	Y	
	Weekly inspection	Any stray bedding is swept up.	Y	
Ventilation	Natural or fan ventilated	Ventilation is carefully controlled, maintained and monitored.	Y	
	Weekly inspection	Any visible dust on fans and exhaust outlets is removed.	Y	
House cleaning	Good management	Thorough cleaning between batches.	Y	

Source of dust	Example	How is reduction achieved?	Achieved Yes/No	Comments
Building layout and design	Artificial ventilation	Artificial ventilation is carefully controlled, maintained and monitored.		
	Natural ventilation	Screens and windbreaks kept in good order.		
Dry filters	Collecting dust onto filters on exhaust vents	Cyclones and dust socks are emptied at prescribed intervals.		

Appendix 1: Dust, bioaerosol and fugitive emissions complaint form

Introduction

Date	Name and details of person making the complaint	Nature of complaint	Action taken

Complaints will be responded to within ….. days (or, refer to standard complaints procedure for the installation, staff training, etc.)

This document has been prepared by the applicant using the AHDB Pork template. AHDB Pork is a part of the Agriculture and Horticulture Development Board (AHDB).