

## **Odour Management Plan**

The following plan has been prepared as part of the EPR permit application.

The following tables highlight the likely sources of odour arising from poultry broiler production at Marsh House Farm.

Actions and measures are listed that will prevent where possible or minimise odour emissions at Marsh House Farm.

Site plan shows all material storage areas and potential odour emission sources.

Plan to be reviewed every year from permit issue date, prior to any major changes to operations (to ensure effectiveness ) or following any complaint, any changes to OMP or other management plans to be documented dated and signed and Area Officer notified.

Actions and preventative measures in OMP referenced from Odour Assessment Document and Fugitive Emissions Assessment in line with the H1 Risk Assessment, to be implemented in conjunction with the following key documents;

Emergency Plan

Technical Standards

Routine Maintenance Schedule

Health Plan

Contingencies

Environmental Management

Key responsibility for the OMP and the referenced plans are the Operator or deputies who have been briefed on the requirements.

Example Odour Complaint form attached.

## **Introduction**

There are sensitive receptors around Marsh House Farm, high extraction fans on all houses will help to prevent odour issues at the site and aid dispersion of odour reducing concentrations at nearby receptors. The prevailing wind is from the southwest this helps to minimise Odour to sensitive receptors that are located around the site with the exception of those located to the north and east. The sighting of main operational activities will be taken into consideration, sighting where practical away from closest sensitive receptors to minimise impacts of them.

## **Complaints Procedure**

In the event of a substantiated odour complaint the cause would be investigated, and actions taken listed in the odour/contingency plans to cease the release. Area officer would be notified immediately, a review of the OMP conducted at the earliest opportunity with any changes communicated to Area officer for approval. A complaints report would be filled out and retained on site.

Example Odour Complaint form attached.

The table below lists all sensitive receptors within 400m.

Receptor Name	Description	Distance	Orientation	National Grid Reference
Dwelling	Residential	387m	NE	343158,238178
Dwelling	Residential	253m	SE	343060,237521

Odour Related Issue	Potential Risks and Problems	Actions taken to minimise odour and odour risks at Marsh House Farm	Completion date
Broiler Production	Odour levels	Twice daily olfactory checks coinciding with stock inspections (normally 07.00-10.00 hrs and 16.00-18.00hrs) any abnormalities recorded and investigated – see contingencies and routine maintenance and inspection schedule.	In place
Manufacture and selection of feed	Milling and mixing of compound feeds. The use of poor quality and odorous ingredients. Feeds which are ‘unbalanced’ in nutrients, leading to increased excretion and litter moisture and emissions of ammonia and other odorous compounds to air.	No on-site milling and mixing. Feed specifications are prepared by the feed compounder’s nutrition specialist. Feed is supplied only from UKASTA accredited feed mills, so that only approved raw materials are used. Protein is reduced in accordance with SGN EPR6.09 ‘How to comply with your environmental permit for intensive farming’ ‘How to comply with your environmental permit for intensive farming’.	In place

<p>Feed delivery and storage</p>	<p>Spillage of feed during delivery and storage. Creation of dust during feed delivery.</p>	<p>Feed delivery systems are sealed to minimise atmospheric dust. Any spillage of feed around the bin is immediately swept up. The condition of feed bins is checked frequently so that any damage or leaks can be identified. Feed silos protected by collision barriers. Feed deliveries are monitored to avoid dust and spills – As per routine inspection and maintenance schedule. See site plan. Feed silos checked twice weekly or prior to delivery, any defect found will be recorded with the silo not being used until repair has been effected.</p>	<p>In place</p>
<p>Ventilation and heating Systems/Dust</p>	<p>Inadequate air movement in the house, leading to high humidity and wet litter</p> <p>Inadequate system design, causing poor dispersal of odours.</p> <p>Extraction fans located close to sensitive receptors.</p> <p>Dust</p>	<p>Use of extraction fans to aid dispersion, checked prior to cycle commencement by qualified electrician who will provide 24hr breakdown cover – See electrical service reports</p> <p>The ventilation and heating system is regularly adjusted to match the age and requirements of the flock.</p> <p>The ventilation system is designed to efficiently remove moisture from the house.</p> <p>Additional gable end fans operated only during hot weather to aid cooling, (excepting House 5)</p> <p>Indirect heating system giving lower humidity levels.</p> <p>Humidity recorded daily and maintained in the range of 55 – 65% keeping a balance of dry litter and avoiding dust production.</p> <p>Stock inspections carried out twice daily by trained staff to avoid panicking birds creating dust.</p>	<p>In place</p>

		Dust levels if present is controlled during cleanout operations - As per routine inspection and maintenance schedule and clean out operations.	
Litter management	Odours arising from wet litter (see above).	Controls on feed and ventilation (see above) help to maintain litter quality. Additional controls include:- Use of nipple drinkers with drip cups to minimise spillage. Daily checks of drinker height and pressures to avoid capping. Insulated walls and ceilings to prevent condensation. Concrete floors to prevent ingress of water. Stocking levels at optimum to prevent overcrowding. Use of veterinarian bespoke health plan. See health plan	In place
Carcase disposal	Inadequate storage of carcasses on site.	Carcasses placed into plastic sealed bags, stored in sealed, shaded and vermin proof containers away from sensitive receptors. Containers checked daily for integrity, any damaged containers not used and either repaired or replaced. Carcase collection will be timed to prevent the release of odour, at least twice weekly during crop cycle, frequency increased during summer months and crop age (3 times per week) Containers washed and disinfected at end of crop cycle. Daily levels of mortalities recorded with abnormalities investigated – See health plan	In place

House clean out	<p>Creation of dust associated with litter removal from houses.</p> <p>Use of odorous products during cleaning.</p>	<p>Litter carefully placed into trailers positioned close to doors.</p> <p>Trailers sheeted before leaving fill position.</p> <p>Only DEFRA approved and suitable products used. Chemical containers triple washed at point of use.</p> <p>Wash water tank levels monitored during washing and emptied as required to prevent overfill – See Key responsibilities</p> <p>Clean out carried out as soon as possible following destocking. (within 1 day, total average time for site de littering 2 days)</p> <p>Houses awaiting de littering kept sealed, minimum ventilation operated during de littering, houses resealed awaiting washing operations</p>	<p>In place</p> <p>In place</p>
Used Litter	<p>Storage of used litter on site.</p> <p>Transport of litter and land spreading.</p>	<p>No storage on site at any time.</p> <p>All trailers sheeted before leaving fill position.</p> <p>Avoidance of double handling/reloading, litter removed from house and loaded directly into trailers. Loaded trailers to leave site as soon as loaded.</p> <p>Any land spread under the control of separate farming business with written agreement.</p> <p>Spread in strict accordance with Manure Management Plan.</p>	<p>In place</p>
Washing operations including vehicles	<p>Loss of dirty water to Land or Watercourse</p>	<p>Washing operations carried out within one day of de littering.</p> <p>Use of specialist contractors for washing operations. Exhaust vents pre-soaked with low pressure hose minimising both dust and dirty water releases.</p> <p>Bespoke terminal hygiene program followed, detailing quantities of water and chemical dilution rates.</p>	<p>In place</p>

		<p>Key staff monitoring washing operations ensuring effective drainage to dirty water tanks. Any malfunction detected during washing operations will result in suspension of operations until any problem has been rectified.</p> <p>Dirty water tanks monitored during wash down to maintain freeboard –See Key responsibilities</p> <p>Vehicle washing at designated wash point, with washings directed to dirty water tanks</p> <p>All sediment traps and drains cleaned both before and after washing operations, any sediments collected and sent off site with litter – See Inspection and maintenance schedule</p> <p>Total time for site washing average 3 days.</p>	
Fugitive emissions	Leaks to doors, bin pipes, feed bins, fuel and chemical storage	<p>Checks to feed storage and fill pipes as per routine maintenance schedule, twice weekly or prior to delivery, silo/pipe not used if any defect found until repair effected.</p> <p>Fuel oil in approved bunded storage tanks.</p> <p>Chemicals in secure bunded shed free from frost and unauthorised entry together with any veterinarian products/medicine</p> <p>Chemical spill kit available within.</p> <p>See site plan.</p>	In place
Dirty water management	<p>Standing dirty water during the production cycle or at clean out.</p> <p>Application of dirty water to land.</p>	<p>Working areas around houses are concreted and kept clean during production cycle.</p> <p>At clean out dirty water from houses together with lightly contaminated yard wash is directed to the underground storage tanks (yard areas have gradients ensuring flow is directed to drains) (see site plan), dirty water system washed at crop end before being removed off site immediately following washing completed and spread to land under control of operator.</p>	In place



Abnormal operations	<p>Water leak/pipe failure</p> <p>Bird health/sickness</p>	<p>Water consumption monitored daily ensuring early detection, any leak detected isolated with repair effected immediately (24 hour cover) wet area - blanket covered with top up bedding material to prevent increased odour.</p> <p>Veterinarian contacted (24hour cover) Litter covered with fresh top up bedding to minimise increased odour until bird health recovered –See health plan</p> <p>Abnormal events documented, dated and signed, appropriate plans reviewed and updated to prevent reoccurrence ie. Routine maintenance schedule, Technical standards</p>	In place
Waste production/storage	Odour from production or storage areas	<p>No storage or production of odorous waste on site.</p> <p>Waste management plan in force detailing types and quantities produced along with disposal routes. Records kept on site.</p>	In place
Materials/storage	Potential odour source	<p>Feed delivered into sealed vermin proof silos. Sealed delivery system into poultry houses with no milling or mixing on site.</p> <p>Remaining feed at end of cycle stored in sealed silo and used on subsequent cycle.</p> <p>Marked on site plan.</p> <p>3 month shelf life of feed negating the need for removal.</p> <p>Raw materials inventory recorded and kept on site – See key responsibilities</p> <p>Cleaning chemicals kept in frost free secure bunded storage area, Chemical spill kit available.</p>	

<b>Odour Contingency</b>				
<b>Source</b>	<b>Cause</b>	<b>Trigger Point</b>	<b>Action</b>	<b>Measurement</b>
Feed delivery and storage	Pipe or bin failure causing leak	Identified during daily checks	Repair to pipe work or feed bin with immediate effect, use other bins, spills cleaned up immediately. Integrity of pipe work and bin checking frequency reviewed and updated in routine maintenance and inspection document, with changes recorded and dated.  Within 24 hours	Visual inspection  Repairs recorded
Carcass storage and disposal		Odour detected during daily checks	Carcasses removed from store into additional storage bins. Within 1 hour	Monitoring points rechecked and documented
Variations in stocking density/bird growth	Rapid bird growth or poor growth due to illness.	Checked twice daily from automatic weighing system	Ventilation and heating controls advanced to account for additional live-weight within house. Veterinarian advice sought immediately for bird illness with additional bedding added to prevent/minimise odour release. Document and record	Ventilation adjusted for additional liveweight gain. Veterinarian advice followed

			<p>abnormalities. Ensure stocking density complies with BAT standards and bird permit places.</p> <p>Within 24 hours</p>	
Drinker systems	Leaky systems/pipe failure	Visual inspection and daily recording of water consumption versus target consumption	<p>Any leaks repaired immediately. Wet areas covered with additional bedding to minimise odour. Arrange system integrity testing at cycle end, findings to be documented and recorded, pipe work/system parts to be replaced as per report.</p> <p>Within 1 hour</p>	Visual inspection of drinker system, consumption in line with bird targets
Bird depletion	Fugitive odour release	Elevated Odour levels detected	<p>Minimum ventilation rate to prevent fugitive release of odour, review OMP with any changes documented and recorded and submitted to Environment Agency Area Officer for approval.</p> <p>Collection governed by Integrator</p> <p>Within 1 hour</p>	Monitoring points rechecked hourly until detection level drops to 2 or below

<b>Odour Contingency</b>					
<b>Source</b>	<b>Potential Cause</b>	<b>Trigger Factor with immediate action</b>	<b>Mitigation Measures to be implemented and remain operative until cessation trigger verified</b>	<b>Additional Mitigation</b>	<b>Cessation Trigger</b>
Feed delivery and storage	Pipe or bin failure causing leak	Daily inspection	Repair to pipe work or feed bin with immediate effect, use other bins, spills cleaned up immediately. Integrity of pipe work and bin checking frequency reviewed and updated in routine maintenance and inspection document, with changes recorded and dated.	Bin/pipework replaced	Visual inspection
Carcass storage and disposal	Storage container failure/damage	Daily Inspection	Carcasses removed from damaged container into	N/A	Visual Inspection

			additional container, damaged container replaced/repared immediately.	Collection implemented	
Variations in stocking density/bird growth	Rapid bird growth or poor growth due to illness.	Deviation in predicted growth	<p>Bird growth monitored Daily</p> <p>Ventilation and heating controls advanced to account for additional live-weight within house. Veterinarian advice sought immediately for bird illness with additional bedding added to prevent/minimise odour release. Document and record abnormalities. Ensure stocking density complies with BAT standards and bird permit places.</p>	Immediate veterinarian advice sought	Growth rates normal
Ventilation System	Fan/system failure	System fully alarmed	Alternative ventilation fan used, electrician call out	N/A	Repairs effected and documented

Drinker systems	Leaky systems/pipe failure	Deviation in expected water consumption	Any leaks isolated and repaired immediately. Wet areas covered with additional bedding to minimise odour. Arrange system integrity testing at cycle end, findings to be documented and recorded, pipe work/system parts to be replaced as per report.	N/A	Normal consumption
Bird depletion	Fugitive odour release	OMP checks	Minimum ventilation rate to prevent fugitive release of odour, review OMP with any changes documented and recorded and submitted to Environment Agency Area Officer for approval.	N/A	OMP check recording reduced low levels
Litter Removal	Fugitive odour release from poultry houses	Raised odour levels during OMP checks	Minimum ventilation rate to prevent fugitive release of odour, review OMP	Review of littering out procedures	OMP check levels returned to normal

			with any changes documented and recorded and submitted to Environment Agency Area Officer for approval.		
Washing operations/dirty water	<p>Odour release from drainage/storage</p> <p>Delay in dirty water removal</p> <p>Blocked drains</p>	<p>Raised odour levels during OMP checks</p> <p>Washing procedure monitoring</p>	<p>Arrange drainage integrity testing and drain cleaning, record and document findings. Dirty water tanks filled with clean water and agitated prior to removal to remove any possible sediment/stagnation.</p> <p>Washing operations suspended, agreement with neighbouring farms for dirty water removal</p> <p>Blockage cleared</p>	<p>Ventilation rates increased</p> <p>Licensed waste disposal contractor used</p> <p>Specialist drainage contractor called out</p>	<p>OMP check levels normal</p> <p>Normal washing resumed after visual inspection</p>

Litter/manure	Wet litter	Raised odour levels during OMP checks	Additional bedding applied to maintain dry friable litter.  Initiate olfactory checks to ensure effectiveness.	Additional ventilation and heating implemented to dry litter	OMP monitoring levels normal
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### **Key Responsibilities**

<b>Task</b>	<b>Staff position responsible</b>
Olfactory checks	Manager
Overseeing/monitoring feed deliveries	Manager/Assistant
Sweeping feed spillages	Lorry driver/ Assistant
Feed bin and pipe integrity checks	Manager/Assistant
Adjusting ventilation and heating	Manager/Assistant
Stock inspections	Manager/Assistant
Daily checks on drinker heights and pressures	Manager/Assistant
Carcase disposal	Manager/Assistant
Integrity checks for carcase containers	Manager/Assistant
Monitoring wash tank levels and organising tank emptying	Manager/Assistant
Cleaning of sediment traps/drains	Manager/Assistant
Monitoring of water consumption for leak detection	Manager/Assistant
Documenting/reviewing abnormal events	Manager
Reviewing annual plans	Manager



Complaints Log	Manager

**Odour Check Procedure**

**Procedure**

Odour checks are carried out weekly, by means of “sniff testing” at the check points by persons not involved directly with the operations at the installation.

Odour checks will be carried out weekly at the installation boundary

Check procedure/frequency to be reviewed annually or in the event of a complaint.

OMP to be reviewed annually or following a complaint.

**Odour Complaint Form**

Installation Name	Date Recorded	Reference Number
Name and Address of caller:		

Tel. No. of caller	
Location of caller in relation to Installation	
Time and Date of complaint	
Date, Time and duration of Offending odour	
Callers description of odour	
Has the caller any other Comments about the odour?	
Weather conditions	
Wind strength and direction	

Any previous complaints Relating to this odour?			
Any other relevant information			
Potential odour sources that could give rise to the complaint			
Operating conditions at the time offending odour occurred			
Follow up Date and time caller contacted			
Action taken			
Amendment requirement to Odour Management Plan			
Form completed by		Signed	

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