Odour Management Plan for Great Westwick Farm Poultry Unit

The nature of livestock farming means that preventing odour generation at source is rarely possible as animals are inherently odorous. However, there are many things that can be done, often at low cost, to minimise odour or to prevent it reaching neighbours.

The Environmental Risk Assessment submitted with the application to vary permit for change of use to rearing broiler chickens from pullets and include a mobile macerator as a directly associated activity identified sources of odour with minor potential to cause annoyance, although no significant increase in odour is expected result of changing to rearing broilers. Created and updated this odour management plan (OMP) to support the overall environmental management system in place. The overriding principle is to ensure day-to-day activities are carried out in accordance with the OMP so there is no reasonable cause for annoyance to people outside the installation boundary. No cause for annoyance is expected, the operator has no record or recollections of any noise concerns or complaints and will continue to foster good relations with neighbours.

Actions and contingency actions in this OMP are best available techniques (BAT) in accordance with Best Available Techniques (BAT) Reference Document 2017, Environment Agency (2010) EPR 6.09 Sector Guidance Note; How to comply – Intensive Farming v2; Appendix 4 Odour management at intensive livestock installations, Environment Agency (2011) Additional guidance for H4 Odour Management: How to comply with your environmental permit (especially for monitoring and responding to complaints), and Environment Agency (2013) Poultry Industry Good Practice Checklist.

Identified odour sensitive receptors within 400m of the installation boundary (excluding residential dwellings for farm workers) from a desk top study shown in Table 1 and Figure 1.

Table 1. Great Westwick Farm Poultry Unit sensitive receptors within 400m

Nº.	Receptor	NGR	Direction	Distance from boundary
1	Agricultural premises, Redward, Marshes, Burnham-on-Crouch, CM0 8NE	TQ 9857 9636	SSW	380
2	Redward Cottages, Marshes, Burnham-on-Crouch, CM0 8NE	TQ 9853 9656	WSW	305
3	Redward Cottages, Marshes, Burnham-on-Crouch, CM0 8NE	TQ 9854 9655	WSW	305
4	Great West Wick Farm House, Marshes, Burnham-on-Crouch, CM0 8NE	TQ 9849 9672	W	315

Distances measured on government website at magic.defra.gov.uk

Fig 1. Great Westwick Farm Poultry Unit sensitive receptors within 400m



Wind direction is defined as the direction from which the wind is blowing. According to the Met Office Eastern England climate report - as Atlantic depressions pass by the UK the wind typically starts to blow from the south or south-west but later comes from the west or north-west as the depression moves away. Directions between south and north-west account for the majority of occasions and the strongest winds nearly always blow from this range. Averaged across the year the prevailing wind direction is from the southwest.

Residential dwellings likely have high sensitivity – reasonably expect enjoyment of a high level of amenity, and where people would reasonably be expected to be present continuously, or at least regularly for extended periods.

Agricultural premises likely to have low sensitivity – where the enjoyment of amenity would not reasonably be expected, or there is transient exposure, where people would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use.

The following table sets out:-

- Likely sources of odour from a typical intensive poultry unit
- Actions taken at Great Westwick Farm Poultry Unit to prevent or minimise odour levels
- Contingency actions to limit exposure to elevated odour emissions beyond the installation boundary.

Table 2. Routine actions and contingency actions to minimise odour and odour risks at Great Westwick Farm Poultry Unit

Odour related issue	Potential risks and problems	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
Effect of diet	High protein diet increases nitrogen and sulphur content of the litter Feeds which are unbalanced in nutrients leading to increased excretion, bedding moisture and higher odour and ammonia emissions to air Poor quality ingredients.	 Feed specifications created and performance is continually monitored by nutrition specialists. Reduce the percentage crude protein content using a nitrogen balanced diet based on the energy needs and digestible amino acids. Multiphase feeding with a diet formulation adapted to the specific requirements of the production period. Provide chickens a minimum of three separate diets which contain increasingly lower percentage crude protein to meet their dietary needs as they grow. Addition of controlled amounts of essential amino acids. Highly digestible amino acid analogues lysine, methionine, threonine, and valine added during the milling supplement otherwise low naturally occurring levels in wheat grains. Feed supplied from mills in certification schemes, only use approved ingredients. No feed manufacturing, milling, or mixing onsite. 	
Odour from feed delivery and storage	 Creation of dust and odour during feed delivery Spillages of feed during delivery, storage and spoilage. 	 Package silos, pipes, augers and feeding equipment contains the dust and odour and prevent feed from getting wet. Cyclone dust separators capture dust during delivery and routinely checked and emptied by farm workers. Silos and feeding equipment protected from collision damage from reversing vehicles by careful siting relative to traffic flows, in between the houses not on the concrete apron with kerbs or barriers as required. Feed delivery vehicles always covered to minimise any dust and odour from being released. 	

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		 Deliveries monitored by drivers or farmworkers, and any spillage will be cleared up immediately. Automated or mechanical equipment essential for the health and well-being of the birds must be inspected by farm workers at least once per day to check there is no defect in it. Planned preventive maintenance for buildings and equipment by company engineers or professional contractors in accordance with any manufacturer's instructions and keeping records of the work. 	waste bin or skip onsite and removed on the next scheduled emptying or changeover. If there isn't a large enough bin or skip onsite already under an established service agreement, farmworkers must contact a contractor to provide one for waste storage, collection and disposal. Equipment defects must be rectified immediately, same day by farmworkers, company engineers or professional contractors. Duration of action Achievable same day, bins or skips to be emptied. Cessation of action Spillage cleared up for use or secured for disposal. Farmworkers inspect the contingency actions have been successful and any contaminated feedstuffs have been secured or exported offsite for disposal.
Odour from problems with housing ventilation system	 Inadequate design causing poor dispersion of odour Extraction fans close to receptor locations Electricity outage. Inadequate air movement in the house, leading to high humidity and 	 Forced ventilation system designed & installed by professional contractor. Optimised discharge conditions of exhaust air from houses using a combination of techniques to disperse ammonia, odour, and dust quickly. Maximised outlet heights, exhaust air above roof level through the ridge, maximised vertical outlet velocity and with uncapped outlet cones. Ventilation is automatic, computer controlled to provide sufficient fresh air appropriate for the age of the birds, without draughts, and remove excess moisture to keep the litter and droppings dry and friable under all weather & seasonal conditions. 	 Trigger High/low temperature alarm. Electricity outage. <u>Timeframe for implementation</u> Immediate, same day, automatic. <u>Contingency action</u> Investigate cause of high/low alarm and rectify. Check heating & ventilation systems are working correctly and provide sufficient air changes and temperature to keep the litter dry to meet chickens welfare needs and minimise odour. Defects must be rectified by farmworkers, company engineers or professional contractors.

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Odour related issue	Potential risks and problems	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
	higher litter moisture content • According to BREF odour from broiler housing increase in offensiveness with moisture content of the litter.	 At Great Westwick Fm Poultry Unit heat exchanger on every house for ventilation and energy efficiency. Fans inside houses recirculate warm air from the ceiling down to floor level and spread it over eggs and chicks. Keeps the surface of the litter dry and reduces ammonia and odour. Automated or mechanical equipment essential for the health and well-being of the birds must be inspected by farm workers at least once per day to check there is no defect in it. Remove build-up of settled dust from fans, ceiling and feeding equipment, etc after destocking. Planned preventive maintenance for buildings and equipment by company engineers or professional contractors in accordance with any manufacturer's instructions and keeping records of the work. Package generator in place in event of grid electricity outage. Test every week. Planned preventive maintenance by professional contractors in accordance with any manufacturer's instructions and keeping records of the work. 	 Emergency back-up generator starts automatically. Regularly check generators and fuel level during use. <u>Duration of action</u> Achievable immediately, same day. <u>Cessation of action</u> Farmworkers check heating & ventilation systems are working correctly. Grid electricity restored. Check generator switched off and fuel level.
Odour from wet litter	 Design Insufficient litter Poor quality litter Drinking system According to How to comply, the level of odorant emissions 	 Concrete floors poured over continuous damp-proof membrane, prevents moisture being drawn up from the ground and insulated walls and ceilings prevent condensation of moisture in the air. Use new litter every time, never reuse litter. Contract service established to spread new litter material evenly over entire floor area prior to eggs or chicks being delivered. 	Trigger Wet, capped litter, elevated odour. High water usage. Leaking drinking system. Timeframe for implementation Immediate, same day. Contingency action

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Odour related issue	Potential risks and problems	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
	decreases as the quantity of litter per livestock unit is increased - binding nitrogen to reduce odour and ammonia According to the BREF odour from poultry housing increases in offensiveness with moisture content of the litter.	 Use a proprietary blend of dust extracted chopped straw/wood shavings or chopped straw to provide absorbent bedding. Dust extracted straw/wood shavings are commercially available, cost effective and readily disposed of end of each production cycle. Check for wet, capped litter, elevated odour during the systematic bird inspections at least twice per day. Three times per day for young birds. Replenish litter on any damp area before destocking. Package non-leaking nipple drinkers with drip cups installed to minimise spillage and keep litter dry. Monitor daily water usage, meter in every house. Adjusting drinking lines to optimum birds eye level to minimise spillages and keep litter dry. Automated or mechanical equipment essential for the health and well-being of the birds must be inspected by farm workers at least once per day to check there is no defect in it. Planned preventive maintenance for buildings and equipment by company engineers or professional contractors in accordance with any manufacturer's instructions and keeping records of the work. 	 Defects must be rectified by farm workers, company engineers or professional contractors. Move any wet litter to dry out or add extra litter. Replenish litter on any damp areas before destocking. <u>Duration of action</u> Repairs achievable same day. Keep checking for leaks. Monitoring litter every day, if it isn't drying rapidly or starts capping and add extra to prevent it spreading. <u>Cessation of action</u> Farmworkers checking contingency actions, satisfied wet litter has successfully dried and odour levels inside house returned to normal level. House destocked.

Table 2. Routine actions and contingency actions to minimise odour and odour risks at Great Westwick Farm Poultry Unit

Odour related issue	Potential risks and problems	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
Odour issues in destocking	Releasing more dust and odour result of increased ventilation via extraction fans and open doors Wet litter when fork lift trucks moving in & out.	 Abattoir can slaughter 240,000 chickens per day so can take the smaller and larger birds in as little as a single day. Expect to be destocking houses not less than 14 days every year based on rearing birds to around 31 days of age, then start destocking. A quarter will be removed, 'thinned,' and transported to a local abattoir and remainder reared on to around 38 days of age. Normally 10 days washing-out & empty in between batches so approx. 7.6 batches pa. Ventilation is automatic, computer controlled to provide sufficient fresh air appropriate for the age of the birds, without draughts, and remove excess moisture to keep the litter and droppings dry and friable under all weather & seasonal conditions including during destocking. Switching on more fans to create the required airflow. Minimise FLT movements to avoid churning up any damp litter. Birds caught with care and lift directly into transport modules inside houses, modules covered to protect chickens from weather conditions during transport, also contains dust and odour but expect them to be uncovered in warmer weather. Loaded trailers promptly moved offsite. HGVs pass-by receptors but takes only seconds. Keep the ventilation switched on and the house closed and locked after destocking. 	Trigger Wet litter, elevated odour. Timeframe for implementation Immediate, same day. Contingency action Replenish litter on any damp areas before destocking. Duration of action Monitoring litter every day, if it isn't drying rapidly or starts capping and add extra to prevent it spreading. Cessation of action Farmworkers checking contingency actions, satisfied wet litter has successfully dried and odour levels inside house returned to normal level. House destocked.

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Odour related sissue Potential risks and problems	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
Odour issues removing litter • Releasing more dust and odour result of increased ventilation via extraction fans and doors ope to take litter out. • Loading into trailers • Windy • According to Hook to comply — odorous compounds absorbed onto dust particles themselves decompose releasing volations compounds • Generally considered to dustiest and modorous activition the farm.	working week (Monday to Friday and Saturday morning but exclusive of public & bank holidays), in accordance with How to comply. • Use ventilation to maximum effect to reduce workers exposure during litter removal. Use combination of opening or closing doors, opening vents for natural air dilution, and switching on fans to create required airflow in accordance with HSE guidance. • Remove build-up of settled dust from fans, ceiling and feeding equipment, etc with compressed air before washout, and helps reduce the quantity of dirty water. • Use front end or skid-steer loader to push bulk of litter into a large heap the length of house to avoid double handling and minimise time loading into trailers. • Doors open on the concrete apron where the waiting trailers will be parked so not in close proximity to any	 Removing litter delayed. Timeframe for implementation Immediate, same day. Contingency action Keep poultry houses closed & fans switched off. Duration of action For as long as required, until removing litter started. Cessation of action Contractor arrives to remove litter. Farmworkers inspect houses as soon as work finished to ensure fans switched off and doors closed.

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Odour related issue	Potential risks and problems	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
		 Switch off fans and keep houses closed & locked when the work is finished. Keep checking the actions to minimise dust & odour are adhered to until the work is finished. No used litter will be stored onsite. Expect to washout seven times every year and to be completed as quickly as possible in 2-3 days. Contract service established to washout houses as soon as possible, normally within one day of destocking, & not normally more than 3 days e.g. destocking Friday & washout on Monday. Washout in normal daytime 07.00-23.00hrs in working week (Monday to Friday and Saturday morning but exclusive of public & bank holidays), in accordance with How to comply. Concrete apron & kerbs installed to direct dirty water into package below ground dirty water storage tanks with capacity for all the dirty water from washout. Keep roadways, concrete apron, dirty water grates and drains clear of litter, etc to avoid backing-up, pooling, or over spilling into surface water drains or on unmade land. 	Trigger Dirty water backing up in drains Washout delayed. Timeframe for implementation Immediate, same day. Contingency action Keep poultry house closed & fans switched off after removing litter to minimise odour release. Duration of action For as long as required, until washout is started. Cessation of action Contractor arrives to washout. Keep houses closed & locked after the washout.
		 Dirty water drains flushed through after washout to prevent stagnation. Foot dips emptied into dirty water storage tank. Use Defra approved disinfectant contain for example formaldehyde and glutaraldehyde which are slightly odorous. Used in accordance with manufacturer's instructions by trained workers. 	

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Odour related issue	Potential risks and problems	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
		 Keep ventilation switched on to dry out and remove any residual odour after washing and disinfecting. Keep houses closed & locked after the washout. 	
Odour issues with dirty water	Offensive odour from tankers. Emptying delayed.	 Contract service established to empty the dirty water tanks after washout and ready for next time and avoid anaerobic conditions developing in the settled sludge. Empty tanks seven times every year after washout all on the same day in as few hours as possible. Empty dirty water tanks in day time 07.00-23.00hrs in working week (Monday to Friday and Saturday morning but exclusive of public & bank holidays), in accordance with How to comply. Dirty water exported offsite for land spreading under control of a separate farming business, a written agreement will be in place. 	 Trigger Delay in emptying dirty water tanks. Diverter valve not reset and dirty water tank overfilled Timeframe for implementation Immediate, same day. Contingency action Keep inspection covers closed. Contact contractor to empty dirty water tanks. Washdown any dirty water overspilled on the concrete apron and drains after tank is emptied. Duration of action Achievable same day or next day. Cessation of action Tank emptied and apron and drains washed down. Diverters turned to watercourse from dirty water tanks.
Odour issues with macerated eggs & poultry carcasses	Inadequate storage Stored for a prolonged time	 Remove dead chickens from houses daily. Store carcases, dead chicks and macerated eggs and dirty water from cleaning the macerators in accordance with legal requirements for category 2 material. Use non-leaking containers with lids inside the chiller room and keep locked. Macerator located on concrete apron next to chiller. Maceration not considered to be an odorous activity. Package mobile macerator equipment and pressure washer installed in an enclosed trailer & arrives onsite 	 Trigger Chiller not working Leaking containers Higher mortality in warmer weather or disease Collection delayed. Timeframe for implementation Immediate, same day. Contingency action Contact maintenance team to attend to chiller or with a professional refrigeration engineer.

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Odour related issue	Potential risks and problems	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
		same day the dead-in-shell and non-viable eggs are collected up after hatching. Macerator operation limited to normal day time 07.00-23.00hrs in working week (Monday to Friday and Saturday morning but exclusive of public & bank holidays), in accordance with How to comply. Outside these times only in extraordinary circumstances e.g., delays, breakdowns, availability, etc. Macerator is fast, in use only a few minutes in each hour after collections from inside each house. Move on to next site same day or back to hatchery. Planned preventive maintenance for buildings and equipment by company engineers or professional contractors in accordance with any manufacturer's instructions and keeping records of the work. Planned, frequent collection of the category 2 material by an approved transporter, or under the National Fallen Stock Scheme. Weekly collection is generally adequate. Farmworkers inspect containers in daily checks, make sure not leaking, covered or been emptied.	 Keep the chiller closed and locked. Stop using any leaking bins, and empty carcases into another. Clean & disinfect spillages on the concrete. Contact transporter for more frequent collection, start same day, next day, or arrange a refrigerated trailer. In event normal contractor isn't available in time, although not reasonably likely for Crown Chicken Ltd, using professional transporters, and lots of others are always readily available to the company. Alternatively seek another via Defra National fallen stock scheme. <u>Duration of action</u> Achievable same day or in 1 or 2 days. More frequent collections for as long as required. <u>Cessation of action</u> Carcases removed offsite and odour level normal. Farmworkers inspect containers in daily checks, make sure containers have been emptied at the scheduled intervals or more frequently, and there are empty containers or available space.
Bio-security issues	Disease and increased mortality, and more carcases but significant disease outbreaks in commercial poultry flocks	 Health planning with professional veterinary input. Staff are well managed, supervised and appropriately trained and qualified, including holiday cover, part-time, and temporary staff. Systematic inspection of all the chickens every day. 	Trigger Wet litter, elevated odour. Increase in morbidity or mortality. Timeframe for implementation Immediate, same day. Contingency action Investigate symptoms. Obtain veterinary assistance.

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Odour related issue	Potential risks and problems	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
	are rare • Increase droppings, higher moisture content in litter and odour		 Duration of action Monitoring, treatment with veterinary assistance for as long as required. Cessation of action Litter quality improved, odour reduced inside house. Morbidity and mortality return to normal levels.
Odour issues with waste	Packaging, disposables, sweepings etc.StorageManagement	 Store in secure, non-leaking containers. Scheduled collection with registered waste carrier. Frequency of collection can be increased anytime. 	
Monitoring	Monitoring odour levels daily at source can help identify any increase in level with time so remedial action can be taken.	 Farm Manager responsible for site tour every day including perimeter sniff-testing, specifically for any level with potential to cause annoyance to sensitive receptors. Farmworkers accustomed to odour through exposure may not be able to detect or judge intensity of odour offsite. Anyone with a cold, sinusitis, or a sore throat will likely underestimate the odour. Strong food or drinks, including coffee to be avoided for at least half an hour before sniff testing and avoid strongly scented toiletries and deodorisers in vehicles, etc. People who have not recently been working on the farm might be more helpful. Environmental Manager monitoring odour levels, snifftesting and recording after complaint and keeping records. 	 Elevated odour level or offensive odour. <u>Timeframe for implementation</u> Immediate, same day. <u>Contingency action</u> Check routine and contingency actions to minimise odour are being adhered to. Inform people at receptor locations and anyone else likely to be seriously affected, what has been done or still needs to be done to reduce dust levels and duration with timescales. Continue periodically sniff-testing at perimeter, until odour reduced back to normal level.

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Odour related issue	Potential risks and problems	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
Complaint	Wind blows odour towards sensitive receptors. Odour sensitivity	 Farm Manager, Environmental Manager responsible for investigating any complaint reported by Agency, local authority, or the public. Investigate if alleged odour can be substantiated. 	Cessation of action Odour reduced to normal levels. Record events and actions in the farm diary. Trigger Complaint reported on Saturday or Sunday by email from Agency, local authority, not considered likely from anywhere else.
	likely to increase in warm weather when people want to enjoy their gardens and have windows open more. Slow response Elevated level of annoyance.	 Even if no longer apparent investigation must still be carried out and recorded same day. Establish:- Time event occurred, duration, description of odour. Activities taking place onsite at time of complaint. Any odorous activities taking place offsite in vicinity. Check actions, contingency actions being adhered to and any change to standard operating procedure. Record details of investigation and action taken on odour complaint report. A copy must be sent to the Agricultural Director immediately and must be retained onsite & available for future reference, or inspection with Agency. Notify Agency, local authority, complainant, anyone else likely to be seriously affected, same day as soon as possible result of investigation and corrective action or what still needs to be done with timescales. 	 Timeframe for implementation As soon as possible on opening email. Contingency action Investigate if alleged odour can be substantiated. Even if no longer apparent investigation must still be carried out and recorded same day, next day. Continue odour monitoring. Duration of action Investigation likely achievable same day, next day. Cessation of action Notify Agency, local authority, complainant, anyone else likely to be seriously affected, same day as soon as possible result of investigation and corrective action or what still needs to be done with timescales.
Management plan review	New odour issues, actions & contingency actions.	Environment Manager responsible for annual review of this OMP, updated sooner where a substantiated complaint results in making changes to related issues procedures, or any routine or contingency actions.	

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Odour related	Potential risks and	Routine actions to minimise odour and odour risks	Contingency actions to minimise odour and odour risks
issue	problems		
Change history	Date	Name	
Last updated	11 April 2025	Karl Collett	
Last review	-	-	
Next review	-	-	
	Updated for variation application V004 for change to rearing broiler chickens		
	from pullets and inc	lude a mobile macerator as a directly associated activity.	

Odour Complaint Report

Time and date of complaint	
Name and address of complainant	
Telephone number of complainants	
1	
Date of odour	
Time of odour	
Location of odour, if not at above address	
Month or conditions	
Weather conditions	
(Dry, rain. fog, snow)	
Temperature	
(Very warm, warm, mild, cold	
or degrees if known)	
Wind strength	
(None, light, steady, strong, gusting)	
Wind direction	
(e.g., from SW)	
Complainant's description of odour What does it smell like?	
What does it shiell like?	
Odour intensity	
0 No odour	
1 Very faint odour	
2 Faint odour	
3 Distinct odour	
4 Strong odour	
5 Very strong odour 6 Extremely strong odour	
C Extremely strong buoti	
○ Duration (time)	
○ Constant or intermittent in this period	
○ Does the complainant have any other	
comments about the odour?	
Are there any other complaints relating to the	
installation, or to that location (either	
previously or relating to the same exposure):	
Any other relevant information:	
-	
Do you accept that odour likely to be from	
your activities?	
What was happening on site at the time the odour occurred?	
Actions taken	

Complainant visited		
Complainant contacted with explanation		
Yes/No		
Date		
By whom		
Form completed by	Date:	Signed:

Environment Agency (2011); Additional guidance for H4 Odour Management: How to comply with your environmental permit.