Dust & Bio-aerosol Management Plan for Woodend Poultry Farm

Poultry dust may vary in composition from pure wood dust to a complex mixture of organic and inorganic particles, faecal material, feathers, dander (skin material) and bioaerosols – dust particles containing living organisms including mites, bacteria, fungi and fungal spores and endotoxins depending on the type of birds, the work activity, and the point in the growing or production cycle.

The Environmental Risk Assessment submitted to apply for a permit for rearing broiler chickens identified sources of dust and bio-aerosols with moderate potential to cause annoyance. Created this dust management plan (DMP) 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 plan so there is no reasonable cause for annoyance to people outside the installation boundary. Significant pollution outside the boundary is not expected, operator has no record or recollections of any dust concerns or complaints and will continue to foster good relations with neighbours.

Actions and contingency actions in this DMP 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 11 Assessing dust control measures on intensive poultry installations, Health and Safety Executive (2012) Controlling exposure to poultry dust, guidance for employers, and DEFRA (2018) Code of practice for the welfare of meat chickens and meat breeding chickens, updated 25 January 2024.

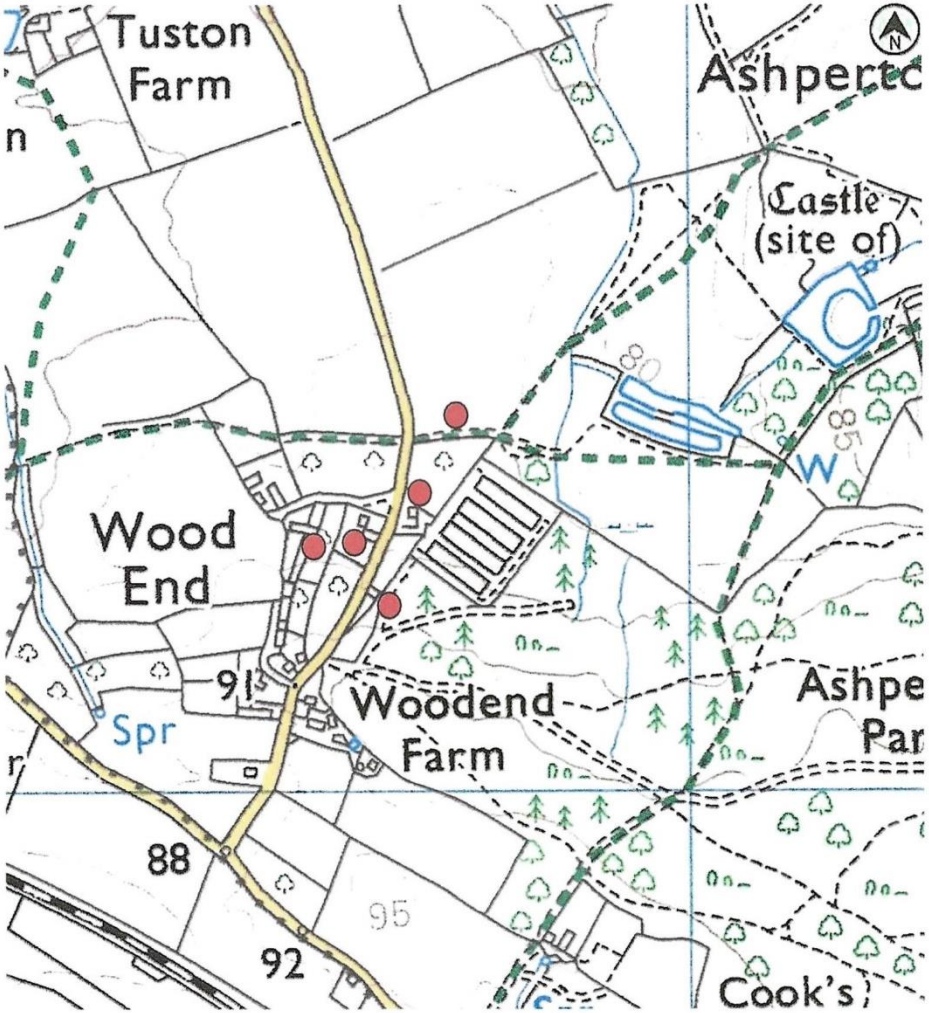
Identified dust sensitive receptors within 100m of the installation boundary (including a residential dwelling for a farm worker) from a desk top study shown in Table 1 and Figure 1.

Table 1. Longfield Poultry Farm sensitive receptors within 400m

Nº	Receptor	Address	NGR	Direction	Distance from boundary metres
1	Residential	Woodend Poultry Farm, Woodend, Ledbury, HR8 2RS	SO 6371 4130	W	0
2	PROW	Public Right of Way (footpath), Woodend, Ledbury, HR8 2RS	SO 6374 4138	N	0
3	Residential	Woodend Cottage, Woodend, Ledbury, HR8 2RS	SO 6366 4127	W	40
4	Residential	Keepers Cottage, Woodend, Ledbury, HR8 2RS	SO 6366 4121	SW	50
5	Residential	Lower Woodend, Woodend, Ledbury, HR8 2RS	SO 6359 4128	W	100

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

Fig 1. Woodend Poultry Farm location of sensitive receptors within 100m



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. Likely to be exposed to dust and bioaerosols for the majority of occasions.

Public rights of way (footpaths) likely 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:-

- Sources of dust & bioaerosols from a typical intensive poultry unit
- Actions taken at Woodend Poultry Farm to prevent or minimise dust levels
- Contingency actions to limit exposure to elevated dust and bioaerosol emissions beyond the installation boundary.

Table 2 Routine actions and contingency actions to minimise dust and bio-aerosols and risks at Woodend Poultry Farm

Source of dust & bio-aerosols	Potential risks and problems	Routine actions to minimise dust & bio-aerosols and risks	Contingency actions to minimise dust & bio-aerosols & risks
Dust from manufacture & feed selection	• Milling & mixing compound feed • Feed ingredients • Fat content	• Feed broiler chickens ad-lib with a minimum of three pelleted, compound diets, crumbled in manufacture for chicks up to 12 days of age. • Feed specifications prepared by the compounders nutrition specialist and continually monitored. • Feeds supplied from mills in certification schemes and only use approved ingredients. • No feed manufacturing, milling, or mixing onsite.	
Dust from feed delivery & storage	• Dust from silos • Storage of feed • Feed spillage • Form of feed	• Package silos, pipes, augers and feeding equipment contains the dust and odour. Use pan feeders which create less dust than track feeders. • 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 houses, and with kerbs or barriers as required. • Feed delivery vehicles always covered to minimise any dust and odour from being released. • Blow feedstuffs over as short a distance as possible to minimise creating dust. • Deliveries monitored by drivers or farmworkers, and any spillage will be cleared up immediately. • Automated or mechanical equipment essential for the health and wellbeing of the birds must be inspected by farmworkers at least once per day to check there is no defect in it.	Trigger • Feed spillage during delivery. • Fault with the feeding equipment. Timeframe for implementation • Immediately/same day/ depend on skip availability Contingency action • Spillage will be cleared up immediately into bags by drivers or farmworkers and stored in a secure place. • Uncontaminated feed will be used but feed which is contaminated will be waste for disposal into the trade waste bin or skip onsite and removed on the next scheduled 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

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Source of dust & bio-aerosols	Potential risks and problems	Routine actions to minimise dust & bio-aerosols and risks	Contingency actions to minimise dust & bio-aerosols & risks
		• Planned preventive maintenance for buildings and equipment by company engineers or professional contractors in accordance with any manufacturer's instruction and keeping records of the work.	• 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.
Dust & bioaerosols from ventilation fans	• Dust may contain large amounts of bird proteins and mite residues with high risk of respiratory sensitisation for workers inside poultry houses. • Increasing ventilation may reduce airborne dust inside the house but will be released outside.	• Forced ventilation system designed & installed by professional contractor. • 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. • Automated or mechanical equipment essential for the health and well-being of the birds must be inspected by farmworkers at least once per day to check there is no defect in it. Defects must be rectified immediately on the same day by farmworkers, company engineers or professional contractors. • Remove build-up of settled dust from fans, ceiling and feeding equipment, etc after destocking.	

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Source of dust & bio-aerosols	Potential risks and problems	Routine actions to minimise dust & bio-aerosols and risks	Contingency actions to minimise dust & bio-aerosols & risks
Dust issues with litter quality	• Type of bedding • Treatment of bedding • Amount of bedding • Application of bedding • Age of bedding	• Must use new litter every time, never reused. • 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. • According to How to comply sawdust and flax straw have been found to produce less dust than wheat or barley straw, but neither are normal UK industry practise for intensive rearing broiler chickens. • Expect to litter houses not less than seven times every year. • Contract service established to spread new litter material evenly over entire floor area prior to chicks being delivered. • Plastic wrapped bales delivered direct into houses for unpacking and spreading to contain any dust. • Dust filtration not installed but closing doors, opening vents to dilute air, and switching on extraction fans to create effective airflow is industry best practise to limit workers exposure to dust during litter spreading.	
Dust issues with bird activity	• Increased flock numbers • Birds exhibiting higher activity levels create elevated levels of dust in the air.	• A systematic inspection of all the birds must be undertaken at least twice each day at appropriate intervals by farmworkers. Young birds should be inspected at least three times a day. • Farmworkers should walk close enough to see the birds clearly and for them to be disturbed and so	

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		move away to identify any bird that is sick, injured or weak for appropriate action.	
Dust issues during destocking	• Fans & open doors • Increasing ventilation will reduce airborne dust inside but more dust will be exhausted outside.	• Expect to destock houses not less than fourteen times every year. Rearing broilers onsite to around 31 days of age, then start destocking. A quarter will be removed, 'thinned,' and transported to an abattoir and remainder reared on to around 38 days of age. Expect to destock all the chickens in a single day for thinning and in one or two days for final destocking. • Ventilation used to minimise airborne dust in the houses for workers & maintain sufficient air changes and temperature for chickens throughout the process. • Minimise workers exposure to dust by keeping doors closed and switch on more fans to create effective airflow is best practise. Release and disperse dust and odour via the side extraction fans. • Catching takes place in low light to keep birds calm. • Birds caught with care and lifted 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.	

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Source of dust & bio-aerosols	Potential risks and problems	Routine actions to minimise dust & bio-aerosols and risks	Contingency actions to minimise dust & bio-aerosols & risks
Dust issues removing litter	• Ventilation fans & open doors • Increasing ventilation will reduce airborne dust inside but more dust will be exhausted outside. • Considered to be the dustiest activity onsite.	• Must remove litter after destocking. Expect to remove litter not less than seven times every year. • Contract service established to remove litter as soon as possible, normally within a day of destocking, not more than 3 days, e.g., destocking on Friday and cleanout on Monday. • Remove litter 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. • Expect to remove all the litter from all the houses in one day. • 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 very close proximity to the sensitive receptors. • Trailers will be kept covered at all times except during loading.	

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		• Export litter offsite for power generation or land-spreading. Latter will be under control of a separate farming business & with a written agreement in place. • 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.	
Washout	• Ventilation fans & open doors • Considered to be the least dusty activity	• Expect to wash-out houses not less than seven times every year. • 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. • Expect to complete as quickly as possible in 1-2 days. • 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. • Keep poultry houses closed & locked after washout.	

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Source of dust & bio-aerosols	Potential risks and problems	Routine actions to minimise dust & bio-aerosols and risks	Contingency actions to minimise dust & bio-aerosols & risks
Monitoring		• Farm Manager responsible for site tour every day including perimeter check for abnormal elevated dust level, specifically any level with potential to cause annoyance at sensitive receptors.	Trigger • Abnormal, extraordinary, elevated dust levels. Timeframe for implementation • Immediate, same day. Contingency action • Check routine and contingency actions to minimise dust and risks 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 checking at perimeter, until dust reduced and back to normal. Duration of action • Normally achievable same day, next day. Cessation of action • Dust reduced, back to normal onsite & offsite. • Record events and actions in farm diary.
Complaint	• Wind direction exposing receptors to dust. • Receptor sensitivity likely to increase in warm weather when people want to enjoy their gardens and	• Farm Manager, Environmental Manager responsible for investigating any complaint reported by Agency, local authority, or the public. • Investigate if alleged dust can be substantiated. Even if no longer apparent an investigation must still be carried out and recorded same day. Establish:- • Time event occurred, duration, description of dust. • Activities taking place onsite at time of complaint. • Any dusty activities taking place offsite in vicinity.	Trigger • Complaint reported on Saturday or Sunday by email from Agency, local authority, not considered likely to be reported from anywhere else. Timeframe for implementation • As soon as possible on opening email. Contingency action • Investigate if alleged dust can be substantiated. Even if no longer apparent investigation must still be carried out and recorded same day, next day.

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Source of dust & bio-aerosols	Potential risks and problems	Routine actions to minimise dust & bio-aerosols and risks	Contingency actions to minimise dust & bio-aerosols & risks
	have windows open more. • Slow response • Elevated level of annoyance.	• Record details of investigation and action taken on dust 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.	• Continue monitoring for dust. 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	• Update with new issues, actions & contingency actions.	• Environment Manager responsible for annual review of this DMP, updated sooner where a substantiated complaint results in making changes to related issues procedures, or any routine or contingency actions.	

Change history	Date	Name
Last updated	15 July 2025	Karl Collett
Last review	-	-
Next review	-	-
	15/07/25 Created mandatory plan to apply for permit for rearing broiler chickens.	

Dust Complaint Report

Date	
Reference number	
Name and address of complainant	
Telephone number of complainant	

Time and date of complaint		
Date, time, and duration of offending dust		
Weather conditions *(e.g., dry, rain. Fog, snow)*		
Wind strength and direction *(e.g., light, steady, strong, gusting)*		
Callers' description of dust		
Has the caller any other comments about the offending dust?		
Any other previous known complaints relating to the installation (all aspects, not just dust)		
Any other relevant information		
Potential dust sources that could give rise to the complaint		
Operating conditions at the time offending dust occurred		
Actions taken		
Final outcome		
Complainant visited		
Complainant contacted with explanation Yes/No Date By whom		
Form completed by	Date:	Signed: