**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 Hergest Camp Farm.

Actions and measures are listed that will prevent where possible or minimise odour emissions at Hergest Camp 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 Hergest Camp Farm Poultry Unit, high velocity roof fans will help to prevent odour issues at the site as the higher efflux velocity will 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.

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| --- | --- | --- | --- | --- | --- |
| **Receptor Map** | **Receptor Name** | **Description** | **Distance/**  **Range** | **Orientation** | **NGR** |
| 1 | Arrow View (26 properties) | Residential | 119-173m | Northeast | 327751,254846 |
| 2 | Arrow Court Bungalow | Residential | 157m | Northeast | 327839,254803 |
| 3 | Arrow Court Industrial Estate Units | Commercial | 30-357m | Northeast | 327858,254749 |
| 4 | Arrow Court Villa | Residential | 180m | East | 327835,254523 |
| 5 | Ridge View Industrial Estate Units | Commercial | 30-140m | East | 327765,254617 |
| 6 | Arrow Court Farm | Residential | 324m | East | 327980,254511 |
| 7 | Dwelling | Residential | 305m | South | 327514,254291 |
| 8 | Dwelling | Residential | 376m | South | 327477,254235 |
| 9 | Caravan Park | Residential | 255m | Southwest | 327292,254512 |

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| **Odour Related Issue** | **Potential Risks and Problems** | **Actions taken to minimise odour and odour risks at**  Hergest Camp 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 |
| Feed delivery and storage | Spillage of feed during delivery and storage.  Creation of dust during feed delivery. | 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 recorded with the silo not being used until repair has been effected. | In place |
| Ventilation and heating  Systems/Dust | Inadequate air movement in the house,  leading to high humidity and wet litter  Inadequate system design, causing poor dispersal of odours.  Extraction fans located close to sensitive receptors.  Dust | 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  The ventilation and heating system is regularly adjusted to match the age and requirements of the flock.  The ventilation system is designed to efficiently remove moisture from the house, high velocity roof fans with an efflux velocity of 7m/s, aiding dispersion.  Additional gable end fans operated only during hot weather to aid cooling,  Humidity recorded daily and maintained in the range of 55 – 65% keeping a balance of dry litter and avoiding dust production.  Stock inspections carried out twice daily by trained staff to avoid panicking birds creating dust.  Dust levels if present is controlled during cleanout operations - As per routine inspection and maintenance schedule and clean out operations. | In place |
| 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 a purpose built building with freezers. Collection by a licensed collection agent, collection frequency of collections will be once a week at the start of cycle, rising to 3 times a week near to end of cycle. Records of dates, quantities and destination will be held on site. Daily levels of mortalities recorded with abnormalities investigated – See health plan | In place |

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| --- | --- | --- | --- |
| House clean out | Creation of dust associated with litter removal from houses.  Use of odorous products during cleaning. | Litter carefully placed into trailers positioned close to doors.  Trailers sheeted before leaving fill position.  Only DEFRA approved and suitable products used. Chemical containers triple washed at point of use.  Wash water tank levels monitored during washing and emptied as required to prevent overfill – See Key responsibilities  Clean out carried out as soon as possible following destocking. (within 1 day, total average time for site de littering 2 days)  Houses awaiting de littering kept sealed, minimum ventilation operated during de littering, houses resealed awaiting washing operations | In place  In place |
| Used Litter | Storage of used litter on site.  Transport of litter and land spreading. | No storage on site at any time.  All trailers sheeted before leaving fill position.  Avoidance of double handling/reloading, litter removed from house and loaded directly into trailers. Loaded trailers to leave site as soon as loaded.  All litter sold to Gamber Logistics with written agreement. | In place |
| Washing operations including vehicles | Loss of dirty water to Land or Watercourse | Washing operations carried out within two days of de littering.  Use of specialist contractors for washing operations. Exhaust vents pre-soaked with low pressure hose minimising both dust and dirty water releases.  Bespoke terminal hygiene program followed, detailing quantities of water and chemical dilution rates.  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.  Dirty water tanks monitored during wash down to maintain freeboard –See Key responsibilities  Vehicle washing at designated wash point, with washings directed to dirty water tanks  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  Total time for site washing average 3 days. | In place |
| Fugitive emissions | Leaks to doors, bin pipes, feed bins, fuel and chemical storage | 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. Buildings integrity checked weekly.  Fuel oil in approved bunded storage tanks.  Chemicals in secure bunded shed free from frost and unauthorised entry together with any veterinarian products/medicine  Chemical spill kit available within.  See site plan. | In place |
| Dirty water management | Standing dirty water during the production cycle or at clean out.  Application of dirty water to land. | Working areas around houses are concreted and kept clean during production cycle.  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 on operator controlled land in accordance with manure management plan adhering to The Reduction and Prevention of Agricultural Diffuse Pollution (England) Regulations 2018 (‘farming rules for water’), and the Nitrate Pollution Prevention Regulations 2015 (amended in 2016). | In place |
| Abnormal operations | Water leak/pipe failure  Bird health/sickness | 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.  Veterinarian contacted (24hour cover) Litter covered with fresh top up bedding to minimise increased odour until bird health recovered –See health plan  Abnormal events documented, dated and signed, appropriate plans reviewed and updated to prevent reoccurrence, Routine maintenance schedule, Technical standards, OMP,NMP, Emergency Plan and Contingency’s. | In place |
| Waste production/storage | Odour from production or storage areas | No storage or production of odorous waste on site.  Waste management plan in force detailing types and quantities produced along with disposal routes. Records kept on site. | In place |
| Materials/storage | Potential odour source | Feed delivered into sealed vermin proof silos.  Sealed delivery system into poultry houses with no milling or mixing on site.  Remaining feed at end of cycle stored in sealed silo and used on subsequent cycle.  Marked on site plan.  3 month shelf life of feed negating the need for removal.  Raw materials inventory recorded and kept on site – See key responsibilities  Cleaning chemicals kept in frost free secure bunded storage area, Chemical spill kit available. |  |

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| **Odour Contingency** |  |  |  |  |  |
| **Source** | **Potential Cause** | **Trigger Factor with immediate action** | **Mitigation Measures to be implemented and remain operative until cessation trigger verified** | **Additional Mitigation** | **Cessation Trigger** |
| 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. Within 24 hours | Bin/pipework replaced  Ten working days | Visual inspection |
| Carcase storage and disposal | Storage container failure/damage | Daily Inspection | Carcasses removed from faulty  freezer to operational freezer.  Within 1 hour | Freezer repaired or replaced  within 72 hours. | Visual Inspection |

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| --- | --- | --- | --- | --- | --- |
| Variations in stocking density/bird growth | Rapid bird growth or poor growth due to illness. | Deviation in predicted growth | Bird growth monitored Daily  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. Within 24 hours | Immediate veterinarian advice sought | Growth rates normal |
| Ventilation System | Fan/system failure | System fully alarmed | Alternative ventilation fan used, electrician call out. 1 Hour | End of cycle maintenance | 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 Within 2 hours  Arrange system integrity testing at cycle end, findings to be documented and recorded, pipe work/system parts to be replaced as per report. | End of cycle maintenance | Normal consumption |
| Bird depletion/Thinning | Fugitive odour release | OMP monitoring | Minimum ventilation rate to prevent fugitive release of odour.  Within 1 Hour | Review OMP with any changes documented and recorded and submitted to Environment Agency Area Officer for approval. | OMP monitoring recording reduced low levels |
| Litter Removal | Fugitive odour release from poultry houses | Raised odour levels during OMP monitoring | 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. | Review of littering out procedures | OMP monitoring levels returned to normal |
| Washing operations/dirty water | Odour release from drainage/storage  Delay in dirty water removal  Blocked drains | Raised odour levels during OMP monitoring  Washing procedure monitoring | 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.  Washing operations suspended. Within 1 hour. Additional ground under operator control for dirty water removal  Blockage cleared | Ventilation rates increased  Contingency for waste water collection with Maygothling Waste Ltd.  Specialist drainage contractor called out | OMP monitoring levels normal  Normal washing resumed after visual inspection |
| Litter/manure | Wet litter | Raised odour levels during OMP monitoring | Additional bedding applied to maintain dry friable litter.  Within 2 hours  Initiate olfactory checks to ensure effectiveness. | Additional ventilation and heating implemented to dry litter | OMP monitoring levels normal |

**Incidents and Abnormal Operations Hergest Camp Farm**

All incidents or abnormal operations should be logged on table below, date nature and corrective actions filled in.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Nature of Incident | Corrective Action | Management Plan Reviewed | Signature |
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In the event of any of the above requiring management plan reviews, Area Officer will be notified.

**Key Responsibilities**

|  |  |
| --- | --- |
| **Task** | **Staff position responsible** |
| 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 |
|  |  |

**Monitoring Procedure**

**Procedure**

Monitoring is carried out weekly, by means of “sniff testing” at the monitoring points by persons not involved directly with the operations at the installation.

Monitoring will be carried out weekly at the points marked on the “Monitoring Map”

All records will be securely stored and held on site for inspection.

Monitoring will be by means of self-assessed “Sniff Testing” by person/persons not normally working on the poultry installation.

Severity Scoring

0 – No Odour Detected

1 – Low Intermittent Odour Detected

2 – Low Continuous Odour Detected

3 – Medium Odour Detected

4 – High Odour Detected

5 – Very High Odour Detected

In the event of odour scores of 3, 4 or 5 being recorded the site staff will be alerted to implement contingency measures. Retesting at the installation boundary will be conducted following any actions implemented to ensure the effectiveness of recorded actions implemented.

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

# Odour Complaint Form

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| --- | --- | --- | --- | --- | --- |
| 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 |  | |

To prevent/minimise odour emissions beyond the site boundary the operator will implement odour reduction measures listed in the table below, time frames to be agreed with the Environment Agency.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Additional Odour Control Measures** | **Short/Long Term** | **Description of Measure** | **Benefit/Effect** | **Timeframe** |
| Carcass Storage | Short Term | Purpose built storage building housing freezers | Carcasses frozen daily during crop cycle preventing odour release | Completion prior to first broiler placements |
| Hedge Screen | Short Term | Evergreen screen hedge planted at Northern gable of site screening Arrow View properties | Screen hedge 3m minimum height trapping dust particles to reduce odour | Planting within 6-9 months of broiler production |
| Heat Exchangers | Short Term | Heat recovery/emission reduction | Reduction of Ammonia, reduction of dust, reduction of odour  Separate document detailing specifications, technical data and operations | One house to be fitted with a heat exchanger prior to broiler production, with monitoring to assess the odour reduction achieved. Additional heat exchangers to be fitted to other houses dependant on outcome of monitoring trial, with time frame to be agreed with Environment Agency. |
| Air scrubbing | Long Term | Wet acid scrubbing system with test data/certification for odour reduction.  Detailed specification of scrubber manufacturer to be specified in the event of other mitigation methods prove to be ineffective. | Proven odour reduction | Following the installation of the above heat exchangers a review will be conducted to evaluate the effectiveness of odour reduction. A report will be submitted to the Environment Agency. In the event substantiated complaints are still being received a phased instalment of air scrubbing systems will commence.  Time frame to be agreed with Environment Agency. |

**NB.** Monitoring protocol to be to VERA and approved with EA, to be conducted over a period of twelve months to capture all climatic seasons. Heat exchangers will be run for the duration of the crop cycle in both summer and winter. Monitoring trial will be conducted on one of the poultry houses fitted with heat exchanger versus one control house.

Air scrubbing – currently the only available system with comprehensive testing data for odour reduction is the Inno+ system.

The Lavamatic system is currently being monitored at an installation in Shropshire. In addition to this the manufacturers are conducting monitoring trials in Europe under DLG certification standards.

**Version 6 June 2023**