

Odour Management Plan for Birch Tree Poultry Site

Birch Tree Poultry Site
Little Witley, Worcester, WR6 6LQ

June 2021

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Record of Changes

| Version | Date | Change |
|---------|-----------|-----------------|
| 1 | June 2021 | Initial version |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |



Birch Tree Poultry Site - Odour Management Plan

1. Introduction

- 1.1.1. This Plan has been prepared as part of the Environment Agency Environmental Management System for the permit associated with the operation of the Birch Tree Intensive Poultry Unit.
- 1.1.2. The purpose of this Plan is to: -
 - Establish the likely sources of odour arising from the site during non emergency conditions, their release points and pathways to nearby receptors.
 - Set out the procedures followed at Birch Tree Poultry Site in order to prevent or minimise odour levels.
 - Formalise the procedures for monitoring of odours and dealing with any odour complaints.
- 1.1.3. The table on page 7 of this document sets out the likely sources of odour and the procedures followed to minimise odour levels.

2. Typical Odour Sources and Actions Taken to Minimise Odours

2.1. Primary Source of Odours - Ventilation Fans

- 2.1.1. As identified in within the Dispersion of Odour Modelling Report (Section 4.2) the primary source of odour is the high speed ridge fans that are used to ventilate the pullet rearing houses.
- 2.1.2. The fans are operated on an automatic basis as required in order to maintain a constant temperature in the houses. This logic of this operation is to initially run a single fan per house, and if this is not sufficient to overcome the temperature increase, more fans are called to run until all fans are operational. As a result, it is only in the most extreme circumstances that all of the fans will operate in automatic mode.
- 2.1.3. As part of the process for checking the operation of the fans, each fan is run up manually once per week. In order to minimise the odour release (and to ensure there is no un-due temperature drop in the buildings) this manual operation is kept to a minimum.
- 2.1.4. When the buildings have been cleaned out and washed down, the fans are operated in order to quickly dry out the buildings. This is undertaken in manual mode, but as the houses are unoccupied and clean, there is no odour release.

2.2. Secondary Source - Manure at Clean out

- 2.2.1. For 2 days every 20 weeks it is necessary to clean the manure from the houses before re-bedding and the introduction of the new flock.
- 2.2.2. At this time, it is necessary to open the buildings and load the manure onto tractors and trailers. This manure is then hauled to local fields to be spread as a fertiliser.



- 2.2.3. Whilst this operation does aerate the manure causing a release of odour, it is very localised and short lived.
- 2.2.4. Consideration should be given should the wind direction be such that the odour will be blown towards the nearest receptors, that the clean out operation be delayed until the wind direction changes.
- 2.2.5. All trailers loaded with manure are netted before transport in order to secure the load. This again reduces the aeration of the manure whilst it is being transported. Below is an assessment through the process of the potential sources of odour release and mitigation measures. This should be considered in parallel to the contents of the site risk register and Accident Management Plan.

2.3. Secondary Source – Incineration of Deadstock

- 2.3.1. Any dead birds found during operation of the plant are incinerated on site in order to maximise biosecurity.
- 2.3.2. Potentially this could happen on a daily basis, but generally the frequency of finding deadstock is on average less than this. The operation of the incinerator typically lasts for no more than a couple of hours.
- 2.3.3. Before operation of the incinerator the manager should check the wind direction. If it is blowing towards the nearest receptors, then the site manager should consider if possible waiting until the wind direction changes.



3. Pathways & Receptors

3.1. Neighbouring Properties

3.1.1. The Odour dispersion model identified the following local receptors:

| Receptor number | X(m) | Y(m) | Site | Distance | Direction |
|-----------------|--------|--------|----------------------------|----------|-----------|
| 1 | 378939 | 264979 | Works, Hillhampton | 220 | SSW |
| 2 | 378815 | 264971 | Business Park, Hillhampton | 240 | SW |
| 3 | 378734 | 264935 | Jasper Lodge | 325 | SW |
| 4 | 379306 | 265052 | The Green | 310 | SE |
| 5 | 379439 | 264971 | Pool House Farm | 488 | SE |
| 6 | 379395 | 264870 | Orchards | 506 | SE |
| 7 | 378347 | 265122 | Dingle Cottages | 610 | ESE |
| 8 | 378279 | 265285 | Spindle Park | 689 | E |
| 9 | 379457 | 265577 | Goodyear's Farm | 530 | NE |
| 10 | 379705 | 265458 | The Old Rectory | 723 | ENE |
| 11 | 379925 | 265069 | Bartlam House | 936 | E |
| 12 | 379027 | 264720 | Hazelhurst Farm | 504 | S |
| 13 | 378482 | 264760 | Dingle Farm | 615 | SW |
| 14 | 379580 | 265979 | Bonefields Farm | 817 | NE |

3.1.2. The nearest neighbouring property receptors, which are a mix of residential and commercial, are spread throughout in an arc between South East and South West from the site.

3.2. Nature Conservation Areas

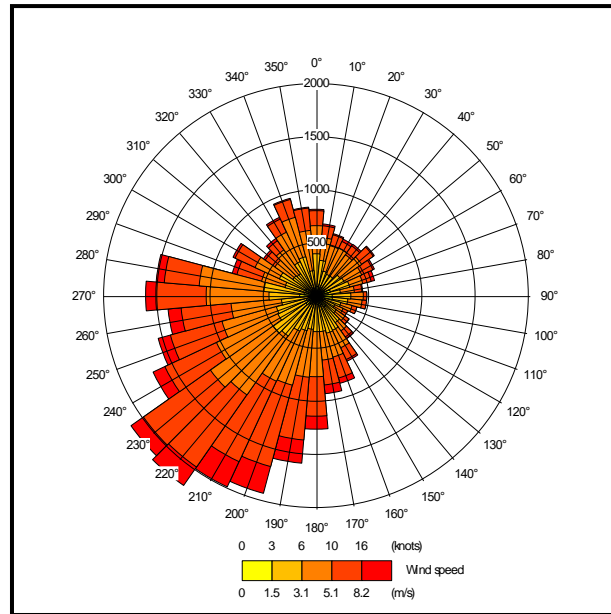
3.2.1. There are a number of areas that have been designated as Ancient Woodlands (AWs) or Special Wildlife Sites (SWSs) within 2 km of the site. There are also four areas that have been designated as Sites of Special Scientific Interest (SSSIs) within 5 km of the poultry houses, the closest of which is Shrawley Wood SSSI. There are no sites with an international designation within 10 km of the poultry houses. Some further details of the SSSIs that are within 5 km are provided below:

- Shrawley Wood SSSI - Approximately 1.35 km to the east at its closest point - A large tract of ancient woodland dominated by coppice small-leaved lime *Tilia cordata*, a woodland type that is rare in the West Midlands, with small sections of pedunculate oak *Quercus robur*, rowan *Sorbus aucuparia* and ash *Fraxinus excelsior* and other species. Streams and pools add value to the SSSIs conservation value and the woodland is important for breeding birds such as species of woodpecker, warbler, dipper and kingfisher.
- Monk Wood SSSI - Approximately 3.8 km to the south-south-east - A mixed broad-leaved plantation on an ancient woodland site on heavy clay-loam soils; some of the ancient damp woodland survives. Noted for an outstandingly rich invertebrate fauna including beetles and butterflies.
- Monkwood Green SSSI - Approximately 4.8 km to the south-south-east - An area of permanent rough pasture on heavy clay-loam soils. A damp acid species-rich grassland that is scarce within the county with some scrub, a pond and a few trees.

3.3. Prevailing Wind Direction

3.3.1. The wind rose below shows the direction of the prevailing wind for the site (taken from page 13 of the Odour Assessment Report).





- 3.3.2. Considering the locality of the receptors above, dispersion of odours will most likely occur towards them when the wind is from the North West through to North East, which is not the direction of the prevailing wind. However, there is a risk to Receptors 9, 10 and 14 when the wind is from the prevailing south western direction. When the wind is such that odours may disperse from the site towards the receptors, every effort should be made to minimise activities that may generate such odours.



4. Odour Monitoring

- 4.1.1. Using the information on page 14, routine monitoring for odours should be carried out around the site to comply with the permit; to investigate a complaint; or after there has been any change to the operations process. A record of this monitoring shall be kept on the Odour Diary (Appendix C) in order to identify trends in odours against particular conditions or operations.
- 4.1.2. All of the identified residential receptors above have been given a copy of the contact information sheet in Appendix D attached. A similar notice is posted at the entrance to the site.
- 4.1.3. If at any time a receptor wishes to make a complaint, they can use the contact information to contact Steve Isaacs. Should they not be available then the farm office should be contacted where the operator will be able to take details of the complaint.
- 4.1.4. Whoever is the designated manager, they will be fully conversant with the operation of the site, the emergency procedures together with knowledge of the contents of this Odour Management Plan.
- 4.1.5. Daily, the operator shall check the wind direction. If the wind is coming from NE through to NW, then the operator shall walk the perimeter of the site on the opposite side to that of the wind.
- 4.1.6. If an issue is identified, the procedure page 12 shall be followed.



5. Odour Complaint Procedures

- 5.1.1. Any odour complaint received will be dealt with by either Mr Steve Isaacs (the manager of the site). In their absence a designated trained operator of the plant will deal with all complaints. This operator shall be trained in the full operation (and shutdown) of the plant, the emergency procedures, and the contents of this odour management plan.
- 5.1.2. If a complaint is made, the form included in Appendix B of this Plan will be completed and this will be available for inspection by the Environment Agency. Any calls received will be investigated immediately and contact made with the complainant within 4 hours to confirm the action which has/is being undertaken to stop the release of odour. This may potentially include shutting down of the plant until the problem can be resolved.
- 5.1.3. Information will normally be collected by visiting the complainant, although in some cases, contact may be made by telephone.
- 5.1.4. After details of the complaint have been compiled, the cause(s) will be investigated, with reference to:
 - The activities taking place on the farm at the time.
 - The timing of the complaint and whether weekday, weekend etc.
 - The weather conditions at the time.
- 5.1.5. The daily monitoring regime at the site boundary & the complainant's property will also be undertaken to identify the specific odour which is the cause of complaint.
- 5.1.6. The likely reasons for the complaint will be added to the form and the complainant will be contacted as appropriate.
- 5.1.7. The feasibility of making changes to the activities responsible for the complaint will be considered. Should changes be possible, the operating procedures shall be amended such that there is no repeat of the odour generation, or it is undertaken when the wind direction is such that the odour is dispersed away from any receptors.
- 5.1.8. Further Odour Monitoring shall be undertaken at the site boundary and the location of the complainant to confirm that the odour problem has been resolved.
- 5.1.9. If changes are made, the Odour Management Plan will be amended accordingly.



6. Review Procedures

6.1.1. The Odour Management Plan shall be reviewed at least every three years or as soon as practicable after a complaint (whichever is the earlier) and changes recorded in the Table on page 16 of this plan.

6.1.2. Improvement programme to reduce odours

| Odour problem | Remedial action needed to reduce odour | Completion Date |
|---------------|--|-----------------|
| | | |
| | | |
| | | |
| | | |



7. Odour reporting form (sniff testing)

7.1.1. An assessment may need to be carried out either to work out whether emissions are complying with the permit, or as a part of an investigation into a complaint.

7.1.2. Weekly assessments can be used to build up a picture of the impact the odour has on the surrounding environment over time. This can develop 'worst case' scenarios by doing assessments during adverse weather conditions or during particularly odorous cycles of an operation. Ideally, the same methodology should be used to follow up complaints.

7.1.3. Please note:

- Staff normally exposed to the odours may not be able to detect or reasonably judge the intensity of odours off-site. You might be better off using office staff or people who have not recently been working on the site to do this.
- Don't use anyone who has a cold, sinusitis or a sore throat, because these can affect the sense of smell.
- To improve (or to check) data quality, you can get two people to do the test independently at the same time.
- Those doing the assessment should avoid strong food or drinks, including coffee, for at least half an hour beforehand. They should also avoid strongly scented toiletries and deodorisers in the vehicle used during the assessment.

7.1.4. Where you test will depend on:

- whether you are responding to a complaint;
- whether you are checking your state of compliance at sensitive receptors;
- whether you are trying to establish the source of an odour;
- wind direction.

7.1.5. The assessment may involve someone walking along a route that you have selected either because of these factors, or in response to the conditions they found when they got there. Another option is to choose fixed points so that you can evaluate the changing situation over several weeks or months. Or the



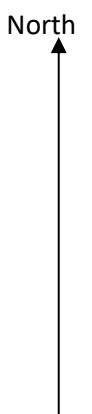
test points may vary from test to test according to local conditions, which would help you identify worst case conditions.

- 7.1.6. You should also keep a note of any external activities (such as agricultural practices) that could be either be the source of the odour, contribute to the odour, or be a confounding factor. Remember that an odour may become diluted or even change over a distance.
- 7.1.7. You should also take the factors given in the H4 Guidance (Section 7.2 on monitoring ambient air) into account.



| Appendix A – Odour Report Form | | | | | Date |
|---|--|--|--|--|------|
| Time of test | | | | | |
| Location of test e.g. street name etc | | | | | |
| Weather conditions (dry, rain, fog, snow etc): | | | | | |
| Temperature (very warm, warm, mild, cold, or degrees if known) | | | | | |
| Wind strength (none, light, steady, strong, gusting) | | | | | |
| Wind direction (e.g. from NE) | | | | | |
| Intensity (see below) | | | | | |
| Duration (of test) | | | | | |
| Constant or intermittent in this period | | | | | |
| What does it smell like? | | | | | |
| Location sensitivity (see below) | | | | | |
| Is the source evident? | | | | | |
| Any other comments or observations | | | | | |

Sketch a plan of where the tests were taken, the potential source(s).



| | |
|---|--|
| <p>Intensity (Detectability)</p> <p>1 No detectable odour</p> <p>2 Faint odour (barely detectable, need to stand still and inhale facing into the wind)</p> <p>3 Moderate odour (odour easily detected while walking & breathing normally)</p> <p>4 Strong odour</p> <p>5 Very strong odour (possibly causing nausea depending on the type of odour)</p> | <p>Location sensitivity where odour detected</p> <p>0 not detectable</p> <p>1 Remote (no housing, commercial/industrial premises or public area within 500m)</p> <p>2 Low sensitivity (no housing, etc. within 100m of area affected by odour)</p> <p>3 Moderate sensitivity (housing, etc. within 100m of area affected by odour)</p> <p>4 High sensitivity (housing, etc. within area affected by odour)</p> <p>5 Extra sensitive (complaints arising from residents within area affected by odour)</p> |
|---|--|



Appendix B - Odour Complaint Report Form

| | |
|----------------------------------|----------------------------------|
| Time and date of complaint: | Name and address of complainant: |
| Telephone number of complainant: | |

| | |
|---|------------------|
| Date of odour: | |
| Time of odour: | |
| Location of odour, if not at above address: | |
| Weather conditions (i.e., 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 NE): | |
| Complainant's description of odour: | |
| <input type="radio"/> What does it smell like? | |
| <input type="radio"/> Intensity (see below): | |
| <input type="radio"/> Duration (time): | |
| <input type="radio"/> Constant or intermittent in this period: | |
| <input type="radio"/> 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? | |
| Operating conditions at time the odour occurred (e.g. flow rate, pressure at inlet and pressure at outlet): | |
| Actions taken: | |
| Form completed by: | Date Signed |

Intensity (Detectability)

- 1 No detectable odour
- 2 Faint odour (barely detectable, need to stand still and inhale facing into the wind)
- 3 Moderate odours (odour easily detected while walking & breathing normally)
- 4 Strong odours
- 5 Very strong odours (possibly causing nausea depending on the type of odour)



| | | |
|---------------------------------|----------|----------|
| Appendix C - Odour Diary | | Sheet No |
| Name: | Address: | |
| Telephone Number: | | |

| | | | | |
|---|--|--|--|--|
| Date of odour: | | | | |
| Time of odour: | | | | |
| Location of odour, if not at above address: | | | | |
| Weather conditions (dry, rain, fog, snow etc): | | | | |
| Temperature (very warm, warm, mild, cold or degrees if known): | | | | |
| Wind strength (none, light, steady, strong, gusting): | | | | |
| Wind direction (e.g. from NE): | | | | |
| What does it smell like? How unpleasant is it? Do you consider this smell offensive? | | | | |
| Intensity – How strong was it? (see below 1-5): | | | | |
| How long did go on for? (time): | | | | |
| Was it constant or intermittent in this period: | | | | |
| What do believe the source/cause to be? | | | | |
| Any actions taken or other comments: | | | | |

Intensity (Detectability)

- 1 No detectable odour
- 2 Faint odour (barely detectable, need to stand still and inhale facing into the wind)
- 3 Moderate odours (odour easily detected while walking & breathing normally)
- 4 Strong odours
- 5 Very strong odours (possibly causing nausea depending on the type of odour)



Appendix D - Contact Information Sheet

Birch Tree Poultry Site,
Little Witley,
Worcester,
WR6 6LQ

Emergency and Complaints Contact Information

Should you wish to make a complaint about emissions from this plant, or in case of emergency, please contact the following;

Mr Steve Isaacs Tel: 07XXX XXXXX

Mr Y Tel: 07XXX XXXXX

Corbett Farms Main Farm Office Tel: 01568 708351

Any comments you wish to make in writing should be made to the above address, or by e-mail to:

bb@cfl.farm



**Appendix E - A Dispersion Modelling Study of the Impact of Odour
from the Proposed Pullet Rearing Houses at Birch Tree
Poultry Unit, near Little Witley in Worcestershire**

