



320190053P

# ODOUR MANAGEMENT PLAN

In support of approved planning application for the erection of an agricultural building to house cattle.

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## Introduction

- Approval was given to the construction of a steel frame timber clad building on 30<sup>th</sup> October 2018 under reference 3/2018/0569
- Condition 6 requires the submission of a scheme for the control of odours. This is that document
- This Odour Management Plan (OMP) has been prepared to support the planning application & overall Environmental Management practices for Higher House Farm, a small-holding of circa 5.5 acres. The objective of this OMP is to ensure that the day-to-day activities are carried out in accordance with government guidelines and best practice to minimise the overall environmental impact.

The purpose of this OMP is to:

- Establish the likely source of odours arising from the small-holding
- Set out procedures in order to mitigate or minimise the risk of odour
- Formalise an effective method of dealing with any odour complaints quickly and efficiently

As recommended by the Environmental Health Officer, the following areas have been fully considered, with control measures devised which will prioritise odours at their earliest stages of development.

- Managing Inventory  
*e.g. feedstock & storage of feed*
- Controlling Evaporation
- Containment & Abatement
- Dispersions
- Reducing Impacts

## **Potential Odour Sources**

At maximum capacity the building will house 12 head of cattle, comprising 4 mature adults, 4 young heifers and 4 calves.

The following sources have been identified as contributing to a potential low risk odour source:

- Odour emissions from feed selection
- Odour emissions from yard areas
- Odour emissions from housing
- Odour emissions from ventilation
- Odour emissions from out loading (bedding / manure).

| Section | Potential Issue             | Control Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A       | Animal housing & management | <ul style="list-style-type: none"> <li>The design, including planned layout, of the housing is such that odours will filter out through slatted timber walls of the shed, there will be a solid block wall between the animal housing and the storage area of the shed, directly between the animal housing and the nearest sensitive receptors.</li> </ul>                                                                                                                                                 |
|         |                             | <ul style="list-style-type: none"> <li>Pens and stock will be checked daily for cleanliness and the welfare of the animals</li> </ul>                                                                                                                                                                                                                                                                                                                                                                       |
|         |                             | <ul style="list-style-type: none"> <li>All pens, housing and buildings will be cleaned out every two months</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                      |
|         |                             | <ul style="list-style-type: none"> <li>Any odorous spillages will be cleaned promptly (within 12 hours) e.g. feed/ingredients</li> </ul>                                                                                                                                                                                                                                                                                                                                                                    |
|         |                             | <ul style="list-style-type: none"> <li>Stocking density will be maintained at, or below, levels defined by Defra taking into account livestock units per hectare along with breed; as such there will be no more than 12 head of cattle raised at any one time.</li> </ul>                                                                                                                                                                                                                                  |
|         |                             | <ul style="list-style-type: none"> <li>Ventilation will correspond to the animals' requirements. The buildings have been designed to allow constant natural ventilation. Roof pitch, ventilated sides and large ridge vents ensure that there is no risk of stagnant air being trapped.</li> </ul>                                                                                                                                                                                                          |
|         |                             | <ul style="list-style-type: none"> <li>Build-up of waste feed is prevented by removing it daily from eating areas; this will be disposed of along with waste manure in the far north west corner of the property – see image in Appendix. This is circa 200 metres away from the nearest receptor.</li> </ul>                                                                                                                                                                                               |
|         |                             | <ul style="list-style-type: none"> <li>Drinking systems have been designed to prevent wastage &amp; leaks by placing the drinking bowls throughout the cattle lay-down areas and close to the feed barriers. Pipes will be 'heat-taped' for frost protection to avoid bursts or freezing issues during the winter. All will be monitored via daily visual checks by the applicant and his family.</li> </ul>                                                                                                |
|         |                             | <ul style="list-style-type: none"> <li>Feeding systems are clean slabs of concrete which lie outside the feed barrier – the cattle will eat all that is provided to them before any new feed is laid out. The area is protected from the elements by a canopy to avoid spoilage. The slabs will be brushed clean regularly. Should there be any waste this will be disposed of along with waste manure. Silage will be stored in wrapped bales, there will be no open silage face to emit odour.</li> </ul> |
|         |                             | <ul style="list-style-type: none"> <li>Housing surfaces have been designed, where appropriate, to be made of non-porous, smooth surfaces to allow for satisfactory cleaning.</li> </ul>                                                                                                                                                                                                                                                                                                                     |
|         |                             | <ul style="list-style-type: none"> <li>Temperature &amp; humidity for animal housing along with feed &amp; straw storage will be checked daily by the operator so identify any excess humidity or heat. The cattle will only be housed in the building during the winter months.</li> </ul>                                                                                                                                                                                                                 |
|         |                             | <ul style="list-style-type: none"> <li>Bedding material will be stored in the storage bay, nearest to the sensitive receptors. This has been designed to keep bedding clean &amp; dry therefore reducing the likelihood of it spoiling/deteriorating. The straw will be under cover enclosed on all sides.</li> </ul>                                                                                                                                                                                       |

| Section | Potential Issue                               | Control Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B       | Cleaning Out                                  | <ul style="list-style-type: none"> <li>Cattle are re-bedded with fresh straw twice per week; cleaning out of animal housing will be performed as required in affected areas e.g. at drinking areas, where there is an increased risk of wet litter &amp; therefore potentially odour, this will be done fortnightly; otherwise, if the litter remains in an acceptable condition it will be changed twice a year as a minimum and deep cleaned annually when the cattle are returned outside after the winter. Yard brushing and good housekeeping will be a major factor in the business for all other areas.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                          |
| C       | Animal Carcasses                              | <ul style="list-style-type: none"> <li>Fallen stock will be stored appropriately, i.e. where they cannot be accessed by other animals or birds &amp; in an area which can be cleaned &amp; disinfected, whilst awaiting uplift by an approved transporter for disposal e.g. by incineration. This will be within a maximum of 24 hours (carcase collection is a 363 day a year service).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| D       | Feed Delivery                                 | <ul style="list-style-type: none"> <li>All feed will be stored in covered, protected areas to prevent it from spoiling/deteriorating</li> <li>No liquid feeds will be used.</li> <li>All feed will be distributed as and when required, excess feed will not be distributed and left to spoil</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| E       | Odour Complaints                              | <ul style="list-style-type: none"> <li>Any odour complaints will be dealt with efficiently and promptly; once the source of the odour issue has been identified, it will be monitored at the site boundary closest to the complainant as part of the investigation. All details of the complaint will be recorded on the complaints log and kept for a minimum of 2 years.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| F       | Dust ( <i>especially as an odour vector</i> ) | <ul style="list-style-type: none"> <li>In the cattle housing shed dust build-up will be removed when the facility is cleaned down and the litter replaced; in other locations, such as vehicle access areas &amp; general surrounds to the buildings (which will be concrete) these will be washed down as required to prevent either dust or mud build-up and run off will be run through an interceptor, not the mains drainage system.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| G       | Manure Storage                                | <ul style="list-style-type: none"> <li>Cattle are re-bedded with fresh straw twice per week; no manure storage is required as deep litter straw bedded courts will be used. Once the deep litter beds have reached their capacity, the buildings will be mechanically emptied. This will be carried out on days with wind speeds no greater than 10 Knots (mph) &amp; a wind direction of the east or southeast, which will ensure that the nearest receptors have no risk of detection – the deep litter will be removed &amp; loaded straight onto a trailer then taken the same day out to the adjacent field for storage and further decomposition. Spreading of this litter will take place once or twice a season. The litter will be loaded onto a trailer and taken to the adjacent field generally on frosty cold days to try and avoid damage to the soil. The trailer will drop the litter in remote locations where a 'midden' can be formed – this will be circa 200m from the nearest sensitive receptor.</li> </ul> |

| Section | Potential Issue                                | Control Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| H       | Effects of Diet on Odour and Ammonia Emissions | <ul style="list-style-type: none"> <li>• Feed composition will be closely matched to the requirements of the cattle, especially protein</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|         |                                                | <ul style="list-style-type: none"> <li>• Cattle will be fed a mixed ration of hay, straw, silage along with concentrated proteins &amp; sugars in a supplied pre-mix. These feeds will be provided through separate feed bins and wet/dry feeding systems once per day.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|         |                                                | <ul style="list-style-type: none"> <li>• Diets will be continually reviewed to ensure good performance of live-weight gains whilst considering possible effects on associated odours</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| I       | Fugitive Emissions / Abnormal Operations       | <ul style="list-style-type: none"> <li>• The aim is to limit the likelihood of these happening due to the controls put in place to minimise leaks &amp; or spillages etc Leaks will be addressed and spillages will be cleared up promptly.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|         |                                                | <ul style="list-style-type: none"> <li>• In the case where, even with all the controls in place, there are unacceptable odour emissions then the activity causing these emissions will be stopped. A full investigation with corrective &amp; preventative action measures implemented as required would be carried out as soon as reasonably practicable. Results of the investigation, including relevant contact with neighbours affected by the issue, would be fully documented and a proposed action plan generated where necessary. Other corrective action which may be taken would be to remove the item(s) causing the odour to the other side of the farm, arrange for immediate uplift by licenced contractor.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| J       | Feed Storage                                   | <ul style="list-style-type: none"> <li>• The feed storage bay will be completely wind and watertight with doors and cladding on all sides. Feed will be checked for to ensure that no 'heating' is taking place If the temperature of the feed is warm, it will be disassembled to allow for greater air circulation &amp; at this time a decision will be taken on whether the feed needs to be replaced altogether as, along with being a fire risk, it may not be acceptable for animal consumption. Silage will be stored in wrapped bales, as such there will be no open silage face to emit any odour.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| K       | Ventilation                                    | <ul style="list-style-type: none"> <li>• Ventilation is natural &amp; is best for the breed of cattle, it will be provided via ventilated side walls and a ventilated roof ridge of the housing shed .</li> <li>• Natural ventilation is the least troublesome, most efficient and least expensive system for providing an optimum ventilated environment – the aim being to provide a continuous stream of fresh air to every housed animal at all times of the day or night. In the UK, wind speed is above 1m/sec for more than 95% of the time which means that there will be sufficient generating force to provide the necessary air changes within the building, all by natural ventilation. For the remaining time, fresh air will automatically replace foul because there are no solid walls to contain the heat and therefore cause condensation/evaporation issues. Roof pitch, ventilated sides and large ridge vents ensure that there is no risk of stagnant air being trapped. This constant replacement of animal/housing air with clean, fresh air will prevent both build-up of stale odour and microbe issues caused by dampness with bedding/litter.</li> </ul> |

| Section | Potential Issue           | Control Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| L       | Cleanliness of Yard Areas | <ul style="list-style-type: none"> <li>Yard surfaces will be cleaned weekly (daily if required); pooling will be prevented through routine maintenance e.g. holes will be filled, uneven surfaces levelled as required.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| M       | Litter Quality            | <ul style="list-style-type: none"> <li>Odour from the litter will be minimised by: adequate ventilation &amp; limiting condensation (see 'Ventilation' and 'Animal Housing &amp; Management'); maintaining litter depth at greater than 50cm to absorb moisture loading; correct feeder &amp; drink type &amp; management; limiting stocking density &amp; having healthy livestock.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| N       | Pest Control              | <ul style="list-style-type: none"> <li>A pest control company, will be contacted if we notice any issues with vermin or other pests.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| O       | General Comments          | <ul style="list-style-type: none"> <li>Neighbours will be informed (where necessary) prior to any activities which may be considered to be an odour nuisance e.g. when planned activities such as deep litter removal or the deep cleaning of the cattle housing shed. Where possible e.g. in instances of planned farm activities which may cause an increase in odour, neighbours will be alerted in a timely manner (2 - 7 days) by letter - given our inclement weather on occasion activities may have to be revised in order to avoid forecast rain/wind, so whilst we would endeavour to provide as much notice as we can this may not always be possible. In the event that posting letters is not an option e.g. in the event of an unplanned activity such as carcase storage then the neighbours will be alerted in person, likely giving between 2 &amp; 24 hours' notice.</li> </ul> |
|         |                           | <ul style="list-style-type: none"> <li>Effectiveness of all controls will be reviewed as a minimum annually (review will be triggered sooner in the event of complaints of odours or any major process changes which may have a possible odorous impact)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## Appendix - Proposed location of muck heap prior to spreading



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