**Dust Management Plan**

Weavers Meadow Pig Unit

Langford

Cullompton

Devon

EX15 1RQ

Permit Number: ERP/BP3902LE

Grid Reference: ST 02698, 03535

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7. **Introduction**

This Dust and Bioaerosol Management Plan (DMP) will assist Chris Down (the operator) in effectively managing potential dust releases associated with the operations at their development of Weavers Meadow Farm Pig unit. This DMP is a “live” document, the monitoring procedures, responsibilities and compliance actions and should be updated as appropriate. Chris Down have been operating a pig unit for many years at the site and there is no record of any complaint due to dust emissions from the pig unit.

This bespoke DMP is a live management plan prepared to support the overall Environmental Management System in place at Weavers Meadow Farm and required as part of permitting the site under EPR/BP3902LE. The overriding principle of the DMP is to ensure the day to day activities are carried out in accordance with this document to help minimise the overall environmental impact. The site has four separate sensitive receptors within 400 meters of the permit boundary and one of which is within 100 meters, however, there have been no complaints of dust.

This plan will be reviewed in the event of any building and management changes and on the outcome of investigations into the causes of any future dust complaints should these occur. All management plans will be reviewed at least every year if there are no changes on site.

Any dust complaints will be recorded and investigated using the Dust Complaint Report Form contained within Technical Guidance Note IPPC SRG 6.02 (Farming)Noise Management at Intensive Livestock Installations.

This plan is completed by Harry Edwards of the Farm Consultancy Group with relevant and site-specific information provided by Chris Down, the Operator.

1. **Installation Background**

Weavers Meadow Farm will have a capacity for:

Sows and Farrowers: 1771

Pigs 7-15 kg – 1460

Production Pigs above 30kg – 432

The site is run as a fully slatted or part slatted based system with vacuum slurry removal, the existing housing and the proposed housing to all be operated as per BAT with frequent slurry removal.

A BAT assessment has been carried out for both the existing pig buildings and the proposed new building. This BAT assessment has not identified a need for an improvement program based on the buildings utilising biofilters. As the existing buildings are built to the same specification as the proposed new building both of which are to comply with BAT AELS.

The majority of buildings are ventilated using variable spend roof fans with some buildings operating natural ventilation. Slurry is collected underneath the buildings and pumped out at least every 12 weeks to ensure slurry depth is maintained below 800mm.

The unit operates a mostly dry feed system, the diets fed to all the pigs throughout all stages are balanced nutritionally and formulated in such a way to minimise the production and emissions of ammonia, odours, dust and the overall environmental impact of the farming activities.

Nipple drinkers are used throughout to prevent water wastage. Meter readings will be taken on a regular basis to monitor water consumption and to detect the presence of any leakages, the site utilises borehole water and has mains water as a backup.

All lorries are washed out and disinfected regularly, maintaining cleanliness to a high standard. Each lorry is equipped with a shovel, bag and brush for instant clean up of accidental spillages, thus reducing emissions of both dust and odour. Washings are captured and drain back into the contained slurry system, thus reducing emissions of both dust and odour.

These measures are intended to reduce the production and emission of ammonia odours and to prevent dust and liquids escaping into the environment. The batch system enables the housing to be cleaned out on a regular basis, ensuring all pig housing is as clean as possible. All dead stock will be disposed on via on site incineration. Data sheet in appendix 1.

1. **BAT Summary**

BAT 11 – where applicable the unit has used the following techniques to comply with BAT 11:

* Ad lib feeding
* Dust separators used in feed system
1. **Sensitive Receptors**

There are 4 properties within 400 meters of the installation. These are:

1. Residential properties at Little Cleeves 245 m – 302285, 103790
2. Weavers Meadow Farm Dwelling (owned by operator) 25 m – 302680, 103495
3. Shuffshayles Farm – 118 m – 302731, 103386
4. Tye Farm – 318 m – 3033004, 103528

Potential dust sources include feed delivery and storage, pig feeding, stock and housing, ventilation, site infrastructure. The site has never received a complaint relating to dust.

Plan showing nearest sensitive receptors to the site.



1. **Preventative measure / on site Dust control measures**

Measures that help minimise dust impact off-site are summarised in the following table. This plan will be reviewed at least every year or in light of any building and management changes, and on the outcome of investigations into the causes of any future dust complaints, if any occur.

Any dust complaints will be recorded and investigated immediately using the Complaint Report Form contained at the end of this document.

The responsibility for the management actions from this plan fall to Chris Down and will be jointly reviewed by Chris and Harry Edwards of The Farm Consultancy Group. An annual review will be carried out or immediately following a substantiated complaint.

Scale for ranking dust intensity:

1. Little dust difficult to detect

5 – a lot of dust likely to cause a nuisance if for sustained periods.

As dust and odour production are closely linked the below table identifies measures on site that not only reduce dust specifically but also help to reduce odour and therefore as a by product dust is also reduced.

|  |  |  |
| --- | --- | --- |
| **Odour source/ Issue**  | **Assessment of Potential Risks and Problems**  | **Actions taken to prevent or minimise the risk of odour**  |
| Feed Delivery and storage  | * Spillages of feed during delivery and storage
* Creation of dust during delivery
 | * All liquid feed is stored in enclosed feed tanks with vents. All tanks bunded with lockable release valves.
* Feed delivery systems are sealed to minimise atmospheric dust.
* Any spillages with be cleared up immediately by farm staff and if fit for consumption will be placed in spare plastic feed bags and fed back to the pigs. Any spillages unfit for consumption will be cleared into skips immediately and removed from site by licenced waste contractors within 24hrs
* Spillages over 500 kg – farm staff will notify the feed delivery company immediately who will be required to send a vehicle out to clear and remove all split feeds within 8 hours.
* Feed tanks and pipework checked by farm staff as part of an annual check on condition. Records of this are kept in the farm office.
* Any damage to feed pipework or silos when identified by farm staff is to be repaired immediately if it is likely to cause pollution or odour. If damage is not presenting immediate risk (e.g damage to protective bollards which will not cause leaks) will be reported to the farm manger within 8 hours who will record work to be carried out in the maintenance plan and then contact the suitably qualified contractor within 24 hours.
 |
| Carcass Storage and disposal  | * Potentially increased odour and dust occurrence in hot windy weather.
* Dust caused from incinerator exhaust
 | * Incinerator maintained and serviced as per manufactures specifications using an outside qualified contractor to reduce fugitive emissions and increase its efficiency.
* Location of incinerator to the south of the unit which provides a shield to the nearest sensitive receptor.
 |
| Pig Housing and ventilation  | * Dust and odour from building design and maintenance
* Building clear out
* Dust from pigs
 | * All pens and stock checked for cleanliness as part of daily welfare routines by farm staff.
* All pigs checked twice daily by farm staff to monitor health, any signs of disease are treated as required and where necessary identified pig is moved to hospital accommodation, for closer monitoring.
* All pens and buildings cleaned out in accordance with written cleaning plan, available in the farm office.
* Potentially odorous spillages (feed ingredients, manure/slurry etc.) cleaned up immediately.
* Stocking density maintained at or below levels set out in Welfare Regulations
* Feeders are constructed to minimise waste, bowl drinkers / nipple drinkers are used to reduce water wastage instead of water troughs.
* Buildings are well maintained with an annual maintenance checklist carried out by the farm manager, records of which are available in the office. Area identified as needing repair are notified to a qualified repairs contractor to be carried out within 3 months or immediately if pollution risk identified.
* Temperature is computer controlled with daily monitoring carried out by farm staff.
* Building design and specification as per recognised industry specification matching that of other permitted sites.
* Computer controlled ventilation system, ventilation design based on recommendations from qualified building industry experts. Maintained as per manufactures specification by outside contractors.
 |
| Manufacture and selection of compound foods  | * Poor Quality and odorous ingredients
* Feeds which are unbalanced in nutrients, leading to increased excretion and higher emissions of odorous compounds
* Changes in feed composition resulting in poor growth rates and limits in digestion.
 | * No on-site milling or mixing, all feed is delivered via specifically designed lorries.
* Feed is only supplied via UKASTA accredited feed mills, which means only approved raw materials are used in production. Finely ground feed avoided where possible.
* Feed sample for every load is taken by farm staff and kept in a sealed bag for a minimum of three months in the farm office.
* Feed composition is closely matched to pigs requirement, especially protein. this minimises water consumption and urine excretion and helps to minimise slurry moisture content.
* Rations are reviewed annually by a suitably qualified nutritionist who will provide recommendations to the operator. The operator is not obliged to follow these recommendations if they are not legal or regulatory requirements.
 |
| Dirty open yard areas  | * Pig movements between buildings resulting in dirty yard areas
* Dirty areas allowed to pond and stagnate producing odour
 | * Minimised pig movements between buildings
* Buildings designed to ensure all slurry is unable to escape the enclosed building. Doorway opens up to passage way which does not stock pigs.
* Loading bays are located directly outside each building to minimise potential dirty yarded area. Once pig loading has been completed farm staff will pressure wash the area clean within 6 hours.
* Loading bays have ramped concrete to channel all dirty water back into the slurry storage under the slats.
* Concrete yard areas and loading bays are well maintained with an annual maintenance checklist carried out by the farm manager, records of which are available in the office. Area identified as needing repair are notified to a qualified repairs contractor to be carried out within 3 months or immediately if pollution risk identified. The scope of such work would include laying of new concrete, patching up existing cracks if they are deemed by the farm manager to undermine the integrity of the concrete.
* Site drainage designed to keep clean uncontaminated water separate from dirty water and slurry with the use of kerbing and the on-site management which only means the loading bays are areas that could become dirty.
 |
| Fugitive emissions  | * Deadstock bins
* Slurry removal
* Feed Delivery and feed bins
* Incinerator
 | * Deadstock bins located between pig houses.
* Slurry removal points are located as far as practically possible away from sensitive receptors, however these need to be located by each building for effective slurry removal.
* Anticyclones are fitted to all feed silos and monitored as part of annual maintenance checklist carried out by the farm manager.
* Incinerator located away from sensitive receptor.
 |

**Key Responsibilities**

|  |  |  |
| --- | --- | --- |
| **Task** | **Staff Position Responsible**  | **Comments**  |
| Dust monitoring  | * Farm Manager (pig stockman to cover holiday and illness)
* Permit operator
 | * Annual review of dust results or sooner following substantiated complaints
 |
| Overseeing/ monitoring feed deliveries / feed storage and spillages  | * Farm Manager
 | * Major spillages reported to permit operator if caused pollution incident
 |
| Ventilation and heating system  | * Stockman and Farm Manager
* Permit operator
 | * Responsible for day to day adjustments
* Responsible for design, selection and upgrade of system.
 |
| Stock inspections  | * Stockman
 | * All stock inspected twice a day and any issues are recorded.
 |
| Drinking water systems  | * Stockman
* Permit operator
 | * Responsible for day to day adjustments
* Responsible for design, selection and upgrade of system.
 |
| Slurry removal and house washing  | * Farm Manager
* Stockman
 | * Farm manager responsible for timing of slurry removal.
* Farm manager responsible for washout plan.
* Stockman will operate machinery day to day
 |
| Carcass Disposal  | * Farm Manager
* Permit operator
 | * Responsible for day to day adjustments
* Responsible for design, selection and upgrade of incineration system.
 |
| Drainage System  | * Farm Manager
* Permit operator
 | * Responsible for day to day adjustments
* Responsible for design, selection and upgrade of drainage system.
 |
| Reviewing annual plans  | * Permit operator
 |  |
| Documenting / reviewing abnormal events  | * Farm Manager
* Permit operator
 | * Documenting
* Reviewing
 |
| Complaints Log  | * Farm Manager
 |  |

**7. Contingency Measures**

The below table identifies what happens if the day to day management of the farm has failed to control dust. This occurs when dust complaints have been substantiated.

|  |
| --- |
| **Odour Contingency** |
| **Source**  | **Potential Cause**  | **Primary Mitigation Measure**  | **Secondary Mitigation Measure**  |
| Feed Delivery and Storage  | Failure of pipe coupling to feed silo creating a leak or spillage | **Trigger Point** Spillage occurs **Mitigation** Any spillages with be cleared up immediately by farm staff and if fit for consumption will be placed in spare plastic feed bags and fed back to the pigs. Any spillages unfit for consumption will be cleared into skips immediately and removed from site by licenced waste contractors within 24hrs Spillages over 500 kg – farm staff will notify the feed delivery company immediately who will be required to send a vehicle out to clear and remove all split feeds within 8 hours. **Cessation of Action** No spillage remains and any waste generated by the spill has been removed from site by specialist contractor..  | **Trigger point** Unable to clear spill quickly and at risk of rain soaking and /or contaminating watercourse. **Mitigation**Farm workers to build a temporary bund around the spill with strawFarm manager to contact specialist removal contractor immediately  **Cessation of Action** No spillage remains and any waste generated by the spill has been removed from site by specialist contractor..  |
| Feed Delivery and Storage  | Failure feed bins  | **Trigger Point** Spillage occurs **Mitigation** Any spillages with be cleared up immediately by farm staff and if fit for consumption will be placed in spare plastic feed bags and fed back to the pigs. Any spillages unfit for consumption will be cleared into skips immediately and removed from site by licenced waste contractors within 24hrs Spillages over 500 kg – farm staff will notify the feed delivery company immediately who will be required to send a vehicle out to clear and remove all split feeds within 8 hours. Farm manager to order replacement feed bin immediately. **Cessation of Action** No spillage remains and any waste generated by the spill has been removed from site by specialist contractor. Feed bin has been replaced and in working order. .  | **Trigger point** Unable to clear spill quickly and at risk of rain soaking and /or contaminating watercourse. Replacement feed bin not currently on site to allow normal feeding protocol to continue. **Mitigation**Farm workers to build a temporary bund around the spill with straw and cover spill with straw/soil. Farm manager to contact specialist removal contractor immediatelyFarm manager to reduce normal feed order and order more often to enable the farm to operate with one bin less.  **Cessation of Action** No spillage remains and any waste generated by the spill has been removed from site by specialist contractor.Feed bin on site and installed by qualified contractor. .  |
| Carcase storage and disposal | Failure of incinerator or inefficient burning resulting in dust creation.  | **Trigger point** Daily inspection and monitoring by farm manager identify failure **Mitigation** Farm manager to contact qualified contractor to repair immediately. Stop using incinerator until repaired., if inefficient burning. **Cessation of Action** Contractor has completed repair work and incinerator is in working order  | **Trigger point** Contractor is unable to repair incinerator within 72 hours. **Mitigation** Farm manager to contact National Fallen Stock and request removal of all stock immediately and on going until incinerator is operational. **Cessation of Action** Contractor has completed repair work and incinerator is in working order.  |
| Pig Housing and ventilation | Failure of the Ventilation System meaning natural ventilation used  | **Trigger Point**Alarm and/or inspection has identified a major ventilation system failure which is not related to power supply (i.e. not resolved by back-up power generation)**Mitigation** Farm Manager to contract the repairs contractor to repair immediately. **Cessation of Action**Ventilation system is restored | **Trigger Point*** Unable to restore ventilation to house within 48 hours.

**Mitigation** Arrange for removal of stock from house and transfer to alternative house, farm or slaughter.Action is within 48 hours (pig health as well as dust and odour factors are paramount)**Cessation of Action**House is empty, slurry removed cleaning completed. Ventilation system is repaired and functioning. |
| Pig Housing and ventilation | Unable to complete wash out and disinfectant of sheds due to washer breakdown.  | **Trigger Point** On site pressure washers fail**Mitigation** Farm manager to call contractor immediately to repair pressure washers. **Cessation of action** Contractor has been and repaired the pressure washer within 48hrs.   | **Trigger Point** Pressure washer fails and repairs contractor cannot repair within 48hours **Mitigation** Farm Manger to contact washing contractors to complete shed washing and disinfecting. If machine is not repairable, purchase a new washer before sheds need to be washed again.**Cessation of action** Pressure washer repaired or new pressure washer purchased.  |
| Feed Quality | Poor quality / condition of feed at delivery (e.g. excessive fines/dust or damp) creating blockages that could result in feed spoiling and creating odour from silos or feeders. Or general increase in dust creation from fine particles.  | **Trigger Point**Blocked feed system is identified during or after delivery or excessive dust. **Mitigation Techniques & Speed of Response**Immediately isolate the system and notify feed mill to make immediate collection and replacement from silo if appropriate.Temporarily use bagged feed transferred from another silo if this is needed for stock welfare.Immediately dismantle and clear any part of the feed system at risk of block. Bag any feed to be disposed of in sealed plastic bags. **Cessation of Action**Satisfactory feed delivered into cleared system and confirmed by visual inspection of bulk and sample. | **Trigger Point**Unable to clear blocked silo/system **Emergency Measure & Speed of Response**Introduce a temporary mobile silo (tanker) to replace blocked system.Act within 2 days if problem has persisted and bagged feed is being used. **Cessation of Action**Permanent feed system is back available for use. |

**Dust Report Form**

|  |  |
| --- | --- |
|  Staff Member: |  |
|  Time & Date: |  |
|  Location: |  |
|  Temperature: |  |
| Wind Strength |  |
| Wind Direction |  |
| Intensity  |  |
| Location Sensitivity (See below) |  **0 1 2 3 4 5**  |
| Is the source evident? |  |
| Comments and observations |  |
| Corrective actions taken |  |
| Was the dust eliminated |  |

|  |
| --- |
|  0 Not detectable |
|  1 Remote (No housing, commercial/industrial premises or public area within 500m) |
|  2 Low Sensitivity (No housing etc. within 100m of affected area)  |
|  3 Moderate sensitivity (Housing etc. within 100m of affected area) |
|  4 High sensitivity (Housing etc. within area affected by odour) |
|  5 Extra sensitive (complaints arising from residents within area affected by dust) |

**Complaint - Actions and Outcome Record Sheet**

**Complainant**

Record name, or ‘withheld’ if requested but not given by complainant, or ‘not supplied’ if it was not requested by the person receiving the complaint.

|  |  |
| --- | --- |
| Name of person |   |
| Organisation name |   |
| Address |   |
| Telephone |   |
| Email address |   |

**Complaint about and description**

|  |  |
| --- | --- |
| Odour  |   |
| Dust |   |
| Noise |   |
| Other |   |

**Nature and record of complaint**

Product / Service / Action / Document / Other (describe):

Person who used / expected it:

Date used /expected:

Nature of deficiency:

**Complaint Number**……………….

**Complaint handled by**

|  |  |
| --- | --- |
| Name of person |   |
| Role |   |
| Received by | Letter / email / telephone / meeting |
| Date received  |   |

**Action and issues being investigated**

[Record details of any other organization / external person involved, if applicable. Add more action rows if necessary.]

|  |  |
| --- | --- |
| Action 1 (Description) |   |
| Action by (name of person) |   |
| Date by |   |
| Action 2 (Description) |   |
| Action by (name of person) |   |
| Date by |   |
| Action 3 (Description) |   |
| Action by (name of person) |   |
| Date by |   |

**Outcome**

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|   |
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|

**Communicated to**

|  |  |
| --- | --- |
| Date complainant notified |   |
| Date any other parties notified |   |
| Names of any other relevant parties (for each, state person and organization) |   |

**Keep a copy of this record and file it with any other documents associated with the complaint, actions taken and the out come**