

Northampton County Council
Planning Services Department
Floor 3
Guildhall Road Block
County Hall
Northampton
NN1 1DN

ADVANCED ORGANICS LTD



Attention – Mr Peter Moor and Mr Phil Watson

Date - 8th April 2014

Ref - 13.00117.WASFUL

Subject – Odour Control Measures Proposed as Part of the Planning Application for the TAD Facility to be built at Pebble Hall Farm, near Theddingworth, Leicestershire.

The following odour abatement features have been included in the proposed design,

1. Inherently Low Odour Process

- a. Aerobic digestion is a considerable less odourous process than anaerobic processes. It does not involve methane gas production or the very strong odours associated with failures of anaerobic digestion processes.
- b. Double Barrier Design – The first barrier is that all the digestion processes are enclosed in stainless steel vessels which are directly vented to the odour control system. The second barrier is the airtight ‘panel lined’ building which will be kept under negative pressure by means of an extraction that will emit treated air through biofilters.
- c. A low volume, low odour dried fertiliser product is produced rather than large quantities of liquid digestate which have to be stored and subsequently spread to land giving odour risk potential across a wide area. The dried product will be stored undercover at all times.
- d. No odourous feedstock material will be stored outside.

2. Inherently Low Odour Feedstocks.

- a. The target feedstocks are out of date packaged foods which will enclose their odour during storage on site until they are processed by the depacking machine.
- b. Target feedstocks are from the commercial sector where they will be collected from site promptly and will not have time for odour to develop.

3. Remote Location

- a. The proposed site is a generous 660m separation distance away from the nearest sensitive receptor thus providing considerable dispersion of any odours.
- b. Favourable topography - The prevailing winds will blow any odourous emissions into the local hillside where there will be considerable absorption. This hillside is in line with the sensitive receptors and will give them additional protection from odours.

4. Negative Pressure Building with Fridge Panel Internal Cladding

- a. Airtight fridge panelling offers a high degree of sealing and to the best of our knowledge we will be the only food waste building in the UK offering this high standard of sealing against fugitive emissions. The high degree of sealing ensures the negative pressure can be maintained. The building will be made airtight and a smoke test to be carried out prior to the commencement of development.
- b. Duty/standby/assist fans ensure the reliability of the system in the event of a fan breakdown or unusually high odours
- c. The system has been designed with advice from ADAS to provide 2 air changes per hour.
- d. Rapid open (2.5m/s) and closing (0.8 m/s) insulated doors to prevent odour escape. No processing or unloading will take place when doors are open.
- e. The fan system will be controlled to ensure a negative pressure is maintained.
- f. The doors to the building will be sealed at all times unless allowing access/egress of delivery vehicles

5. Odour Management Plan

- a. Industry odour experts ADAS have developed the sites initial Odour Management Plan (OMP) to incorporate industry best practice.
- b. All plant and machinery will be serviced and maintained in accordance with the manufacturer's instructions.
- c. No odourous material will be stored outside.
- d. The doors to the building will be sealed at all times unless allowing access/egress of delivery vehicles.

6. Odour Control System

- a. Designed with the assistance of ADAS with 4 off 6m x 7m x 2.5m bays of biofilter media with a generous residence time of 60 secs.

- b. Modular construction to allow for media change in individual biofilter modules without interrupting odour abatement through the remaining modules.
- c. The odour control system will have a maintenance contract to ensure it is operating correctly.

7. Vehicle Odour Control

- a. The operation will have an inherently low number of road movements thus minimising the potential smell from odourous loads.
- b. All loads will be delivered in covered vehicles.
- c. Odourous loads will be refused at source to prevent odorous loads travelling to site.
- d. All loads will be packed using pallets or sealed food waste boxes to prevent odour release in transit and a high proportion of wastes will be within sealed “point of sale” packaging.

8. Sealed Drainage System

- a. A sealed drainage system returns all liquors to the process. There is therefore no odour risk associated with effluent treatment processes.

9. Waste Packaging Compactor

- a. The high performance depacking system produces a clean dry material with little odour. This material is compacted and stored in a closed compactor vessel within the negative pressure building. The compactor will be typically emptied on a daily basis giving little opportunity for odours to develop through decay.
- b. No putrescible or food based waste will be placed in the compactor skip, which will be covered at all times.

10. Option to Combust to Odourous Air

- a. There is an option to combust odourous air through the engines to assist the biofilter.
- b. Combustion of air will guarantee to destroy all odours.

11. External Liquid digestate Storage tanks vented to building

- a. Small quantities of potentially odorous air from inside the digestate storage tanks will be vented by breather pipes back into the odour controlled process building.

12. Organic Biocide used for Cleaning Systems

- a. The building will be regularly washed down using a steam cleaner in addition to an organic biocide degreasing agent that kill bacteria, break down fats and prevents the build-up of smells in small crevasses.

13. Future Odour Control Design Flexibility

- a. Should it be deemed necessary in the future the site could readily accommodate
 - i. Air Interlock door system
 - ii. Local odour suppression using chemical odour control agents e.g. a Mistair system
 - iii. Local ionised air odour destruction systems such as Terminodour system.
 - iv. Tertiary wet scrubber systems before or after the biofilter to remove volatiles and bacteria

14. Acceptance of EHO Odour Conditions

- a. The operators will accept the odour conditions as specified in the EHO email comments of the 22/8/13 and 11/3/14 including the requested condition clauses similar to those suggested below,

- b. **Complaints Clause**

“- In the event that complaints regarding odour, noise, lighting and/or dust (including bioaerosols) are received by the Local Planning Authority from any sensitive receptor, and thereafter notified to the operator, an assessment of the complaint shall be undertaken by the operator. A report on the findings, with proposals for removing, reducing or mitigating identified adverse effects resulting from the operation, and a programme for the implementation of remedial measures and works to be undertaken shall be submitted to the Local Planning Authority no later than five working days from the receipt of the complaint, unless a later date is otherwise agreed in writing by the Local Planning Authority.”

And,

- c. **Planning Authority Approval of Odour Management Plan**

“Prior to the commencement of operations involving the importation of waste to the site a management plan of measures proposed to control odour,(including bioaerosols) shall be submitted to, and approved in writing by the Planning Authority. The measures as approved shall thereafter be

implemented, along with any subsequent remedial measure agreed under the requirements of condition ??? (above) of this permission by the Planning Authority.”

Should you require any further information on the odour abatement system or any other systems please do not hesitate to contact us.

Yours sincerely

Mike Jordan

Advanced Organics Ltd