ENVIRONMENTAL PERMIT

Pollution Prevention and Control Act 1999
Environmental Permitting (England and Wales) Regulations 2016

Test Valley Borough Council ('the regulator') in exercise of its powers under the Environmental Permitting (England and Wales) Regulations 2016 ('the EP Regulations') hereby permits the following operator to operate a 'Part B' installation at the following address for the production of compost for the growing of mushrooms, as prescribed in Schedule 1 Part 2 Chapter 6 Section 6.8 Part B Subsection (a) of the EP Regulations, subject to compliance with the conditions of this permit.

Name of Operator:	**Tunnel Tech Limited**
Registered Office Address:	The Old Airfield Winchester Street Leckford Hampshire SO20 6DD
Registered Company Number:	01810641
Installation Address:	**The Old Airfield** **Winchester Street** **Leckford** **Hampshire** **SO20 6DD** (as indicated on the location plan below)
Permit Reference:	PPC/6-30/Tunnel/2026

Signed Dated: 16 February 2026

Mark Lee, Head of Environmental Health
Authorised to sign on behalf of Test Valley Borough Council

Address for correspondence: Housing & Environmental Health Service, Test Valley Borough Council, Council Offices, Beech Hurst, Andover, Hampshire SP10 3AJ (Tel. 01264 368000; Email. envhealth@testvalley.gov.uk; Website. www.testvalley.gov.uk

Process Description

The process carried out at the site is the production of compost for the cultivation of mushrooms (sometimes referred to as 'mushroom substrate'). The raw materials used in the process to make mushroom compost are straw, stable bedding, poultry manure, gypsum and occasionally urea. Following the immersion of the straw bales into the goody water, these are mixed with the stable bedding and the pre-mixed gypsum and chicken litter (and urea where necessary) in the hopper building.

Phase I – Composting:

After mixing in the hopper building, and the addition of ammonium sulphate (from the ammonia recovery plant), the compost is loaded into one of six fermentation bunkers via conveyor to a hatch in the roof, using an automated stacking system to distribute the material evenly and in a way that is designed to maximise penetration of air, which is fed into the bunker via floor jets (pipe and cone aeration system), and keep the process as aerobic as possible. This process takes approximately 4 hours and the extraction system operates continually through this process with additional extraction triggered by the opening of the bunker door. The bunker door is kept closed throughout fermentation and heat is generated naturally. Temperature and oxygen levels are monitored for optimum performance. The waste gases of fermentation (which includes odorous compounds) are extracted via stainless steel ducting to a polypropylene acid scrubber. This uses a sulphuric acid solution and through a process of absorption the ammonia reacts with the acid to form ammonium sulphate. The resultant ammonium sulphate is stored in an adjacent propylene tank and can be subsequently used in a composting protest. The extracted gases then pass through a damp log pile biofilter designed to minimise the odour. Conditions in the log pile biofilter are monitored to ensure it performs effectively. The material is kept in the bunkers for between 7 and 12 days, and remixed three times, typically after every 2 to 3 days. This involves opening the front door to the bunker to unload the material using a mechanical shovel and load up a mixing hopper in the building opposite. Additional goody water is added during transfers if necessary. This process typically takes 3 – 4 hours and is usually carried out in the morning, between 06:00 and 15:00 hrs weekdays and shorter hours at weekends. Once mixed, the material is returned to another bunker via the roof conveyor. After 7 days the material is transferred via loading shovel to the Phase II building.

Phase II – Pasteurising:

After completion of fermentation in the Phase I bunkers the substrate will have become a homogenous mass, dark brown in colour. The material is transferred via loading shovel and an entry conveyor to the Phase II building where the material is pasteurised. Once the Phase II stage is completed the substrate is cooled for the substrate colonisation phase.

Phase III – Substrate Colonisation:

This phase involves the substrate being spawned with mushroom mycelium for a period of around 16 days.

Location Plan

The approximate boundaries of the permitted installation are shown in red on the location plan at Figure 1 and the Boundary and site plan at figure 2.

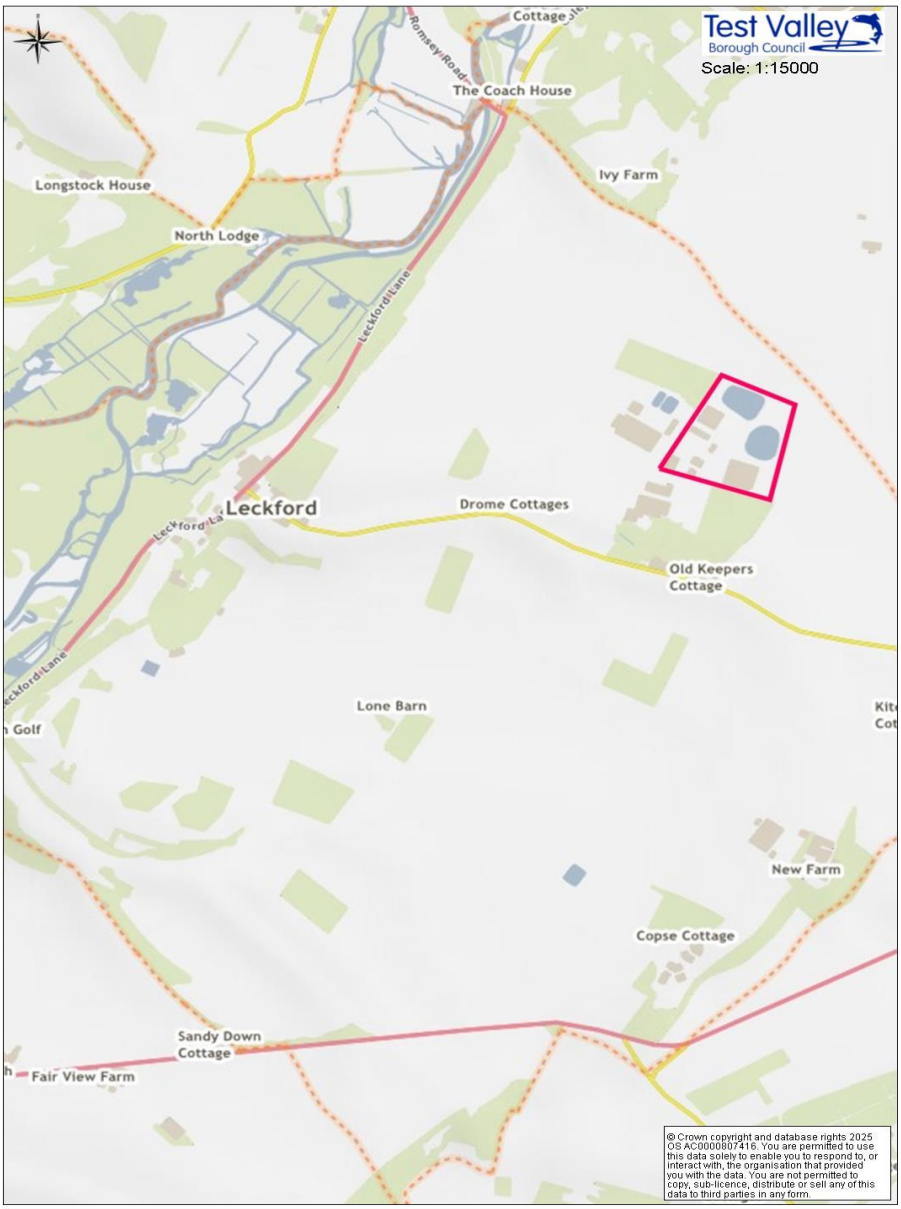


Figure 1 Permitted Installation – Location Plan

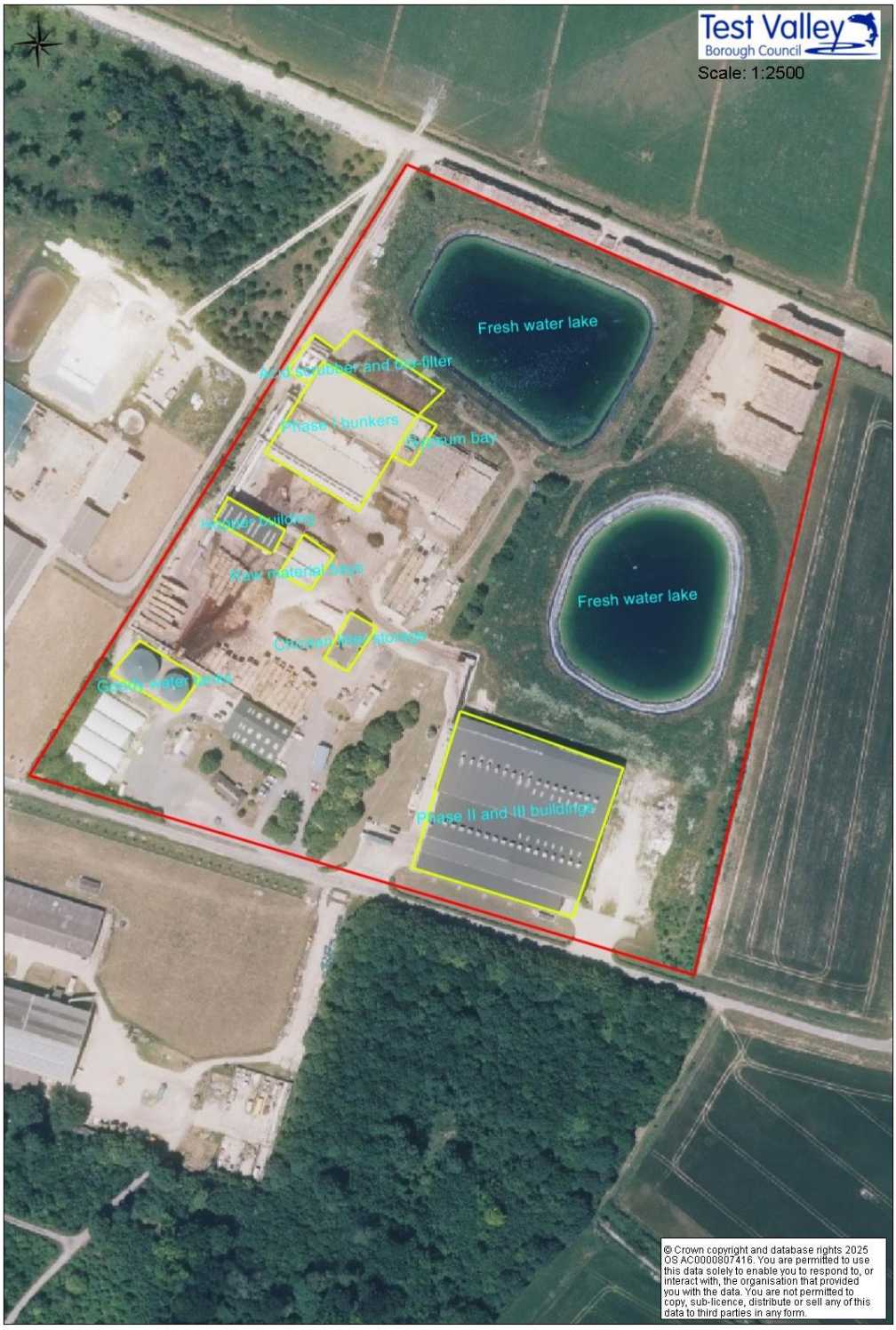


Figure 2 Boundary and site plan

Permit Conditions

All conditions shall take effect immediately unless otherwise stated.

Best Available Techniques

1. The best available techniques shall be used to prevent, or where that is not practicable, reduce emissions from the installation in relation to any aspect of the operation which is not regulated by any other condition of this permit. In determining what constitutes best available techniques, reference shall be made to the Secretary of State's Guidance Note PG6/30(13), or any revised guidance in its place.

Notification of Changes

2. If the operator proposes to make a change in operation of the installation, he must, at least 14 days before making the change, notify the regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition 'change of operation' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.

The Use and Storage of Raw Materials

3. All potentially malodorous raw materials, such as poultry manure, shall be covered when delivered to the site, for example using sheeted or netted vehicles. In the event that a delivery of such raw materials is excessively wet and/or at an advanced stage of decomposition so as to give rise to excessive odour during storage, then the operator shall not take delivery of such materials.

4. Stockpiles of all potentially malodorous raw materials shall be minimised so far as reasonably practicable. Other than in exceptional circumstances, this shall not exceed the volume required for three weeks of pre-wet stage operations.

5. The operator shall take reasonable steps to choose raw materials that are consistent with minimising odour emissions. Best endeavours shall be made to implement substitutions as set out in paragraph 5.13 of Process Guidance Note 6/30(13).

6. All potentially malodorous raw materials shall be stored undercover to prevent them becoming so wet as to give rise to offensive odour.

7. If Urea is brought into the process, by addition at the mixing stage, the regulator shall be notified.

Pre-Phase I Operations

8. Pre-phase I operations shall be carried out in such a way as to ensure odour emissions are minimised. This shall include all of the following:

    a. The incorporation of goody water into the substrate shall be achieved by immersion, not boomspraying;
    b. Ensuring that the quality of water in the straw dunk tank is consistent with minimising odour emissions;
    c. Storage time for pre-wet bales shall be kept to a minimum;
    d. Premixing poultry manure with gypsum (where used) and ensuring the mix is kept dry before adding to the straw and stable bedding in the hopper building prior to transport to the phase I buildings;
    e. A curtain shall be hung from the hopper building ceiling, just inside the door, to cover at least the upper third of the entrance area, so assisting in reducing the release of fugitive emissions from the front of the building during the loading of materials;
    f. Optimum moisture content levels, storage location and storage time in line with the agreed environmental management plan.

Phase 1 Stage Operations

9. All phase 1 material shall be subject to forced aeration in accordance with paragraph 5.14 of Process Guidance Note 6/30(13). The level of oxygen within the pre-wet material shall be continuously monitored, and recorded, and kept at 3% or higher over an average of 24 hours. Records of such monitoring shall be kept for at least two years and made available as soon as reasonably practicable upon request by the regulator.

10. A curtain shall be hung from the bunker ceiling, just inside the bunker door, to cover at least the upper third of the entrance area, so assisting in reducing the release of fugitive emissions from the front of the bunker during the unloading and reloading of compost.

11. Additional bunker extraction shall be operated to capture emissions from inside a bunker when it is undergoing the physical process of removal and re-loading of substrate.

Cleaning and Drainage

12. All surfaces and equipment liable to come into contact with raw materials or waste and all walls of areas where such materials are handled shall be impervious, capable of being readily cleansed and shall be kept clean. Yard surfaces shall be impervious, laid to drain and be free from surface imperfections to ensure free flow of effluent and rainwater and avoid the collection and possible stagnation of liquids.

13. All floors of processing and storage areas shall be of impervious construction laid to fall to the effluent collection system and trapped drainage inlets shall be provided where necessary, with sedimentation tanks and interceptors to prevent the transmission of material likely to impair the free flow of any receiving effluent system or to impact the process performance by increasing the oxygen demand.

14. A suitable cleaning programme shall be instituted. The cleaning of all drainage areas and collecting tanks, yards, and roads shall be undertaken regularly and at least once a week. In addition, phase 1 material bunkers shall be thoroughly cleaned between batches, in particular ensuring that aeration holes/grids are not blocked. The aeration system shall be cleaned through as detailed in the Environmental Management Plan.

Goody Water, Rainwater and Sludge

15. The quantity of goody water stored shall be kept as low as reasonably practicable. Collected rainwater shall be stored separately until needed to top up the goody water. Appropriate steps shall also be taken to prevent gypsum being washed into the goody water tanks.

16. All potentially malodorous liquids, such as goody water, shall be stored in tanks designed and situated to minimise the impact of any odour which is generated. All pipework and channelling which carries such leachate from the process to storage and vice versa shall be totally enclosed and maintained free from any leaks. All such pipework and channelling shall be fully flushable in situ. The principal goody water tank shall be back vented to the extraction and odour abatement plant. The back-up tank shall only be used in an emergency, emptied as soon as is practicable and its use shall be recorded. Records shall be retained for a minimum of two years and include the date of use of the back-up tank.

17. All goody water tanks shall be effectively aerated, using submerged pipework so as not to agitate the surface. The aeration rate shall be measured and adjusted to ensure that the redox potential is kept above -280mV. The redox potential shall be periodically monitored, at least once per week, or otherwise in accordance with a protocol to be agreed with the regulator. Records of such monitoring shall be kept for at least two years and made available as soon as reasonably practicable upon request by the regulator.

18. Solids from all goody water tanks shall be drawn off regularly. Solids shall not be allowed to build up in goody water tanks to more than a dry matter content of 8% w/w.

Extraction and Odour Abatement System

19. All extracted air from the composting process (bunkers, and buildings) and associated raw material handling and processing activities shall be routed through odour abatement plant consisting of acid and biological treatment. The extraction system shall be designed and operated such that its capacity and operation is effective for the necessary extraction of odorous emissions from the various process buildings, conveyors and associated plant.

20. The extraction system, acid scrubber and biofilter shall be subject to ongoing monitoring as detailed within the Environmental Management Plan and reviewed every six months to ensure that they provide adequate extraction rates and inline duct pressure to meet the demands of the composting process and that any requirement for biofilter media replacement is identified. The review shall be recorded.

21. Conditions in the post scrubber leachate and within the biofilter, including temperature, moisture levels (Biofilter), ammonia levels and pH, shall be maintained on an ongoing basis and managed in accordance with the agreed Environmental Management Plan, to ensure the effective operation of the biofilter.

22. The operator shall keep an adequate supply of acid to ensure the uninterrupted operation of the scrubber. Spares critical for the continued operation of the acid scrubber shall be kept on site.

23. An alarm system shall be implemented to ensure that staff are alerted to faults with the acid scrubber without delay.

24. The alarm systems ensuring that staff are alerted to faults with operating parameters within the scrubber and bio-filter without delay, shall be tested and maintained, as detailed in the Environmental Management Plan, to ensure their functionality.

25. The biofilter material shall be inspected at least once per week (when the process is in operation) to identify any defects or voids, leaks or other damage to the ductwork, or wood, which would impact on the performance to minimise odour. The checks shall be recorded. A suitable irrigation system shall be deployed and managed to keep the biofilter healthy and ensure the correct conditions for healthy microflora.

Odour Management and Complaints

26. Emissions from activities shall be free from odour at levels likely to cause offense to the senses at sensitive receptors outside of the site, as perceived by the regulator, unless the operator is either operating under conditions and measures agreed as best available techniques (BAT), or site improvements are in the process of being implemented in accordance with an agreed Environmental Management Plan.

27. Records of all odour complaints shall be kept for a minimum of 2 years. The records shall include details of the complaint, the date and time of the complaint and the incident (where known) and any corrective action.

28. Routine odour monitoring shall be undertaken in line with the schedule agreed in the Environmental Management Plan.

Abnormal Events

29. In the case of any abnormal emissions, malfunction or breakdown leading to abnormal emissions, the operator shall:

    (a) Investigate and undertake remedial action immediately;
    (b) Adjust the process or activity to minimise those emissions; and
    (c) Promptly record the events and actions taken.

    Records of all such events and actions shall be kept for at least two years and made available as soon as reasonably practicable upon request by the regulator.

30. The regulator shall be informed without delay in the event of any abnormal emission that is likely to have a significant adverse effect on the local community.

31. A weather monitoring system, including measurement of wind direction and speed, shall be installed and maintained in order that likely emission paths and areas of potential odour impact can be identified in the case of abnormal emissions. Weather data shall be saved to enable assessment of trends over time to inform process management.

Maintenance

32. A written maintenance programme shall be kept. A record of such maintenance shall be retained on site for at least two years and made available as soon as reasonably practicable upon request by the regulator.

33. All external pipe work used for cleaning water, irrigation water and process liquid transfer shall be protected against frost.

Staff Training

34. Staff at all levels shall receive the necessary training and instruction in their duties relating to the control of the process and emissions to air. Training of all staff with responsibility for operating the process shall include:

- awareness of their responsibilities under the permit; and
- steps that are necessary to minimise emissions.

Records of such training shall be kept for at least two years and made available as soon as reasonably practicable upon request by the regulator.

35. The operator shall maintain a statement of training requirements for each operational post and keep a record of the training received by each person whose actions may have an impact on the environment. These documents shall be made available to the regulator on request.

36. The site management structure, responsibilities and training plan shall be designed to ensure that suitably trained and experienced staff can be available at any time to support and enable functional operation. This shall form part of the agreed Environmental Management Plan.

Site Improvement Programme

37. The operator shall comply with the improvement plan as set out in table 1 below.

Table 1: Improvement Programme		
Reference	**Improvement Programme Requirements**	**Compliance Timescale**
IP1	The operator shall appoint a competent odour control specialist to conduct a review of site activities in respect of odour emissions. The operator shall, following these reviews, submit a written report to the regulator for assessment and approval. The report shall include the following aspects: a) The investigation of all odour sources within the site and their relative significance with regard to the likelihood of emissions. b) The predicted odour exposure levels (expressed as predicted exposure C98, 1-hour 98th percentile of hourly average concentrations of odour modelled over a year) from all sources in combination modelled at the site boundary and odour exposure isopleths beyond the site boundary at or above 1.5 ou_E/m^3. c) An assessment of the available technique options for controlling odour and recommendations for site improvements in line with the duty to prevent, or where that is not practicable, to minimise odour emissions.	Shall be submitted by no later than 31st March 2026.
IP2	The operator shall prepare and submit an Environmental Management Plan including an odour control improvement schedule, for approval by the regulator, for the purpose of ensuring that no significant odour pollution is caused. Unless otherwise agreed in writing by the regulator, the reference for no significant pollution is a level no higher than 3.0 ou_E/m^3 at residential receptors within less than 500 metres of the site boundary and 1.5 ou_E/m^3 at all affected residential receptors more than 1000 metres from the site boundary.	Shall be submitted for approval by no later than 18th May 2026.

Table 1: Improvement Programme		
Reference	**Improvement Programme Requirements**	**Compliance Timescale**
IP3	Until such time as the improvement plan required by IP2 above has been implemented AND evidence submitted of the pollution target being achieved, then an interim progress review report shall be submitted to the regulator periodically in accordance with the specified timetable.	Quarterly by 30 June, 30 September, 31 December and 31 March.
IP4	In the event that the pollution target specified in IP2 has not been achieved by 31st December 2026 then the operator shall, working with a competent odour control specialist, submit a written report to the regulator for assessment and approval. The report shall include the following aspects: a) The investigation of all odour sources within the site and their relative significance with regard to the likelihood of emissions. b) The predicted odour exposure levels (expressed as predicted exposure C98, 1-hour 98th percentile of hourly average concentrations of odour modelled over a year) from all sources in combination modelled at the site boundary and odour exposure isopleths beyond the site boundary at or above 1.5 ou_E/m^3. c) An assessment of the available technique options for controlling odour, including proposals for full enclosure of all process areas and recommendations for site improvements in line with the duty to prevent, or where that is not practicable, to minimise odour emissions.	Shall be submitted no later than 31st March 2027.

Odour Control Techniques Summary

Table 1 below provides a summary of main odour release sources and possible control techniques.

Table 2: Summary of the Main Odour Release Sources and Possible Control Techniques

Release Source	Control Techniques	Reference(s)
Use and storage of raw materials	Ensure odorous raw materials are not excessively wet and/or odorous (i.e. at an advanced stage of decomposition) when delivered	PG 6/30(13) paragraph 5.13, 5.14 and Table 5.1
	Use straw of sufficient length and quality	PG 6/30(13) paragraph 5.13 and Table 5.1
	Keep raw materials (esp. poultry manure) dry until ready to be used	PG 6/30(13) paragraph 5.13 and Table 5.1
	Store no more than three week's supply of odorous raw materials	PG 6/30(13) paragraph 5.13
	Substitute up to 25% of poultry manure for less odorous sources of nitrogen where practicable	PG 6/30(13) paragraph 5.13
	Substitute up to 20% of wheat straw with oil seed rape straw where practicable	PG 6/30(13) paragraph 5.13
Pre-wet operations	Wetten straw bales by immersion, not boomspraying	PG 6/30(13) Paragraph 5.1 and Table 5.1
	Ensure the quality of the goody water in the dunk tank is good	PG 6/30(13) Paragraph 5.15
	Premix chicken litter with gypsum (where used) before adding to straw	PG 6/30(13) Paragraph 5.13
	Add poultry manure as late as possible	PG 6/30(13) paragraph 5.14
	Optimise the size of the piles	PG 6/30(13) paragraph 5.14
	Avoid anaerobic conditions through forced air.	PG 6/30(13) paragraph 5.14
	Forced ventilation to maintain oxygen at 3% or higher over 24 hours	PG 6/30(13) Paragraph 5.1 and 5.14
	All yard surfaces to be impervious and cleaned regularly, at least once per week	PG 6/30(13) paragraph 5.16 and 5.17

	All yard surfaces to be in good condition and allow free drainage in order to prevent ponding and stagnation and allow effective cleansing	PG 6/30(13) paragraph 5.16
	Enclosure, odour capture and treatment	PG 6/30(13) paragraph 4.8, 5.5 and Appendices 1-3
	Forced ventilation to maintain oxygen at 3% or higher, with oxygen monitoring probes used to monitor oxygen levels averaged over 24 hours	PG 6/30(13) Paragraph 5.14
Phase 1 operations	Thoroughly clean bunkers between batches, in particular ensuring that aeration holes/grids are not blocked	PG 6/30(13) paragraph 5.16
	Enclosure, odour capture and treatment	PG 6/30(13) Paragraph 5.14
	Minimise volume kept	PG 6/30(13) Table 5.1
Goody water and rainwater	Collect rainwater separately and do not contaminate rainwater with goody water	PG 6/30(13) Table 5.1
	Aerate goody water without agitation of the surface	PG 6/30(13) paragraph 5.15 and Table 5.1
	Regularly remove solids from goody water tank so as to prevent the solids content exceeding 8% w/w	PG 6/30(13) paragraph 5.15
	Hold sludge drawn off from goody water tank in enclosed storage or draw off directly to a road tanker	PG 6/30(13) Table 5.1 and paragraph 5.15
	Prevent gypsum being washed into the goody water tank to minimise the sulphur content	PG 6/30(13) paragraph 5.15
	Enclosure, odour capture and treatment	PG 6/30(13) Paragraph 5.14

SUPPLEMENTARY NOTES

1. The Environmental Permitting Regulatory Framework

The Environmental Permitting (England and Wales) Regulations 2016, 2016 No. 1154, set out the Environmental Permitting framework. These regulations were introduced under powers conferred by the Pollution Prevention and Control Act 1999.

The Environmental Permitting (England and Wales) Regulations 2016 are available from the following website:

https://www.legislation.gov.uk/uksi/2016/1154/contents

2. Policy and Procedures Guidance Manual

The Secretary of State for the Government Department of the Environment, Food and Rural Affairs (Defra) has produced a 'General Guidance Manual on Policy and Procedures for A2 and B Installations'. This may be downloaded from the following website at:

https://www.gov.uk/government/publications/environmental-permitting-general-guidance-manual-on-policy-and-procedures-for-a2-and-b-installations

3. Inspections

Regular inspections will be taken by authorised officers of the Council to check compliance with the permit. These inspections may be without prior notice. The number of routine inspections each year will be determined by the risk rating score for the installation. The risk rating score is determined in accordance with guidelines issued by Defra, and is available at:

https://www.gov.uk/government/publications/local-air-pollution-prevention-and-control-risk-method

4. Enforcement Policy

Test Valley Borough Council's Housing and Environmental Health Service has an enforcement policy, which can be found on the Council's website at:

http://www.testvalley.gov.uk/business/licensingandregulation/enforcement-policy-environmental-health. A hard copy will also be provided to you on request.

Offences are listed in regulation 38 of the EP Regulations. In summary, the main offences relate to:

(a) operation of an installation without an environmental permit in contravention of regulation 12 of the EP Regulations;
(b) failure to comply with or to contravene an environmental permit condition;
(c) failure to comply with the requirements of an enforcement notice, a suspension notice or a prohibition notice;
(d) failure to comply with a notice under regulation 61(1) of the EP regulations requiring the provision of information, without reasonable excuse;
(e) knowingly or recklessly making false or misleading statements regarding certain matters;
(f) intentionally making false entries in any record required to be kept in accordance with an environmental permit condition;
(g) forgery and deception in relation to certain documents.

5. Permit Transfer

Where an operator wishes to transfer the permit to someone else, he/she and the proposed transferee must make a joint application and also pay a fee. Further details are provided in chapter 25 of the Policy and Procedures Guidance Manual (see above).

6. Health and Safety

This permit relates only to the requirements of the Pollution Prevention and Control Act 1999. It must not be taken to replace any workplace responsibilities the operator has under Health and Safety legislation. Installations must be operated in such a way as to protect persons at work as well as the environment. In complying with the conditions in this permit the operator must not adopt any course of action that would put at risk the health, safety or welfare of persons at work. Should a conflict exist or arise between the requirements of this permit and health and safety obligations then it is the responsibility of the operator to notify the regulator of this without delay. The permit will then be reviewed.

7. Other Statutory Requirements

This permit is issued solely for the purpose of the Pollution Prevention and Control Act 1999. Responsibility rests with the operator to ensure that the operator complies with all other statutory requirements, for example relating to planning consent, hazardous substances consent, discharge consent or building regulation approval. Furthermore, the permit does not authorise a contravention of any other enactment or any order made, granted or issued under any enactment, nor does it authorise a contravention of any rule or breach of any agreement.

8. Fees and Charges

Defra produces a charging scheme under regulation 65 of the EP Regulations, which is subject to annual review. Under this scheme regulators are required to levy an annual

subsistence charge relating to the environmental permit, as well as charge fees for making certain applications. Details of the charging scheme are available at:

https://www.gov.uk/government/publications/permits-for-solvent-emission-fees-and-charges-for-applications

9. Public Register and Confidentiality

The Council is required to keep a public register of certain documents and information relating to permitted installations. In addition, the operator should be mindful of the fact that the Council is subject to provisions of the Environmental Information Regulations 2004 and the Freedom of Information Act 2000.

An operator may request certain information in relation to an environmental permit to remain confidential, i.e. not be placed on the public register and, potentially, to be withheld in the event of a relevant information request being made to the Council by a third party. The onus is on the operator to make such a request for information to be treated as confidential at the time of providing it. Clear justification for it being treated as such will be needed. Details of the provisions are given in Part 5 of the Regulations and chapter 29 of the Policy and Procedures Manual (see above).

10. Appeals

A person aggrieved by the conditions attached to a permit can appeal to the Secretary of State for the Environment, Food and Rural Affairs. Appeals must be made in accordance with the requirements of Regulation 31 and Schedule 6 of the EP Regulations. Appeals should be sent to the following address:

The Planning Inspectorate
Environment Appeal Team
Room 3/H Hawk Wing
Temple Quay House
2 The Square
Temple Quay
Bristol BS1 6PN

Tel: 0303 444 5584
Email: environment.appeals@pins.gsi.gov.uk

Further information about the appeals procedure is given in chapter 30 of the Policy and Procedures Manual (see above).