



**Cyfoeth  
Naturiol**  
Cymru  
**Natural  
Resources**  
Wales

## **Sector Guidance Note**

### **How to comply with your environmental permit for intensive farming EPR 6.09**

#### **Introduction and chapters**

**Document owner: National Services/ Knowledge, Strategy & Planning (KSP)**

**Record of changes:**

**Standard Farming Installation Rules and Guidance**

Version	Date	Change
1	1 August 2000	Initial version for use available on the website only, little changed from consultation version
2	24 November 2000	Revisions take into account the consultation comments and also restyling for publication
3	30 June 2001	Changed following comments received from industry
4	20 June 2005	Changed following comments from industry, experience from application, and to take account of Intensive Livestock BREF publication

**Intensive Farming – How to comply**

Version	Date	Change
1	April 2006	Fixed Permit Conditions used as conditions where possible with rules and guidance from version 4 of the Standard Farming Installation Rules. Additional guidance added for existing installations.
2	January 2010	Incorporating changes for the purposes of the Environmental Permitting Regulations
3	Aug 2014	Rebrand to Natural resources Wales
4	October 2014	Further reformatting

**Published by:**

Natural Resources Wales  
Cambria House  
29 Newport Road  
Cardiff  
CF24 0TP  
0300 065 3000 (Mon-Fri, 8am - 6pm)  
[enquiries@naturalresourceswales.gov.uk](mailto:enquiries@naturalresourceswales.gov.uk)  
[www.naturalresourceswales.gov.uk](http://www.naturalresourceswales.gov.uk)  
© Natural Resources Wales

All rights reserved. This document may be reproduced with prior permission of Natural Resources Wales

## Contents

<b>Introduction</b>	<b>5</b>
<b>1. Management</b>	<b>9</b>
1.1 General management	9
1.2 Accident management plan	13
1.3 Energy efficiency	16
1.4 Efficient use of raw materials	18
1.5 Avoidance, recovery and disposal of wastes produced by the activities	21
<b>2. Operations</b>	<b>23</b>
2.1 Permitted activities	23
2.2 The site	23
2.3 Operating techniques	23
Selection and use of feed	19
Housing design and management	20
Livestock numbers and movements	25
Slurry spreading and manure management planning - off-site activity	26
Slurry spreading and manure management planning - on-site activity	26
2.4 Improvement programme	38
<b>3. Emissions and monitoring</b>	<b>41</b>
3.1 Emissions to water, air or land	41
3.2 Fugitive or diffuse emissions	42
3.3 Odour	51
3.4 Noise and vibration	52
3.5 Monitoring	53
<b>4. Information</b>	<b>55</b>
4.1 Records	55
4.2 Reporting	57
4.3 Notifications	58
4.4 Interpretation	60
<b>Appendices</b>	
Appendix 1	Protocol for sampling slurry and solid manure for analysis
Appendix 2	Minimising emissions from new pig housing - examples of housing designs from the BREF
Appendix 3	Minimising emissions from new poultry housing - examples of housing designs from the BREF
Appendix 4	Odour management at intensive livestock installations
Appendix 5	Noise management at intensive livestock installations
Appendix 6	How to produce a manure management plan
Appendix 7	Undertaking a housing review

- Appendix 8 Undertaking a drainage review
- Appendix 9 Producing a proposal for covering slurry stores
- Appendix 10 Emission reduction plan

## Introduction

This sector guidance note is about preventing pollution. It describes the standards and measures we expect intensive pig and poultry farms to take in order to control the risk of pollution to air, land and water.

This note applies to Section 6.9 of Schedule 1 to the Environmental Permitting Regulations (EPR) Part A(1)(a) Rearing of poultry or pigs intensively in an installation with more than:

- (i) 40,000 places for poultry;
- (ii) 2,000 places for production pigs (over 30kg)  
and/or
- (iii) 750 places for sows.

Poultry includes chickens, layers, pullets, turkeys, ducks, guinea fowl and quail. Pigs reared outdoors are excluded, but housed free-range poultry (egg-laying and chickens reared for meat) are included.

Farms regulated under EPR require a bespoke permit to operate. The permit will cover all aspects of farm management, from feed delivery to manure management.

Animal welfare is not dealt with by EPR - you must comply with appropriate animal welfare standards in the design and operation of the farm. **You should not compromise the health and welfare of your livestock in order to comply with your permit.**

EPR implement the Integrated Pollution Prevention and Control (IPPC) Directive in England and Wales and came into force on 6<sup>th</sup> April 2008.

The IPPC Directive requires that the Best Available Techniques (BAT) are used. When making an application, the costs and benefits of a range of options should be compared to show that your proposals represent BAT. If you propose to use the measures which are expressed as BAT in this note, you will not need to compare options. You should justify any departures from the BAT on a site-specific basis. In some cases an options appraisal may still be required, for example where indicative BAT is not included or where you propose to use an alternative measure. The **BAT Reference Document (BREF) for Intensive Rearing of Poultry and Pigs** has been produced by the European IPPC Bureau. Appendices 2 and 3 of this note contain examples of housing designs from the BREF for reference.

For bespoke permits, we would expect all new plant and livestock housing to be designed and built to the required standards. Where regulatory controls are being applied to existing plant we expect plant to be upgraded to meet the standards where necessary, and we set improvement conditions with a

timescale. This would occur for example where a farm currently below the threshold expands above the threshold and would have a mix of existing and new buildings. We have set a target date of 2020, by which time we intend that all permitted installations will be achieving equivalent standards of environmental protection.

Modern permits describe the objectives (or outcomes) that we require – what we want you to achieve – but they do not normally tell you how to achieve them. They give you a degree of flexibility. Each section of this guidance gives the typical permit condition with which you must comply and then provides guidance on how to comply. References to figures and tables in the permit conditions refer to the figures and tables you will find in your permit.

Where a condition requires you to take appropriate measures to secure a particular objective, we will expect you to use, at least, the measures described in this guidance which are appropriate for meeting the objective. You may have described the measures you propose in your application or in a relevant management plan but further measures will be necessary if the objectives are not met.

When applying for your bespoke permit the application form asks you to explain how you will comply with the standards in this guidance.

Unless otherwise specified, the measures described in this guidance reflect those of the previous version of How to Comply (version 1, April 2006) and the preceding Standard Farming Installation Rules. Previous separate guidance on odour, noise and manure management planning are now appendices to this document. The measures will be reviewed in the light of future BREF note revisions. In the meantime we will take account of advances in BAT when considering any changes to your process.

The conditions that are in your permit are presented in shaded boxes throughout this document, for example:

<p>2.3.4 The operator shall maintain and implement a system to record the number of animal places and animal movements.</p>
---

These conditions are followed by the standards and measures that you should take to comply with the condition. Links to further information are included where relevant.

You should only need to refer to this note for guidance on how to meet your permit conditions. You do not need to use 'Getting the basics right – how to comply with your environmental permit' which includes guidance for all sectors regulated under EPR. We have incorporated the relevant information from

'Getting the basics right' into this document. You may need to consult guidance documents applicable to all EPR sectors, known as Horizontal (H) guidance, that give in depth information for particular topics, for example, H1 Environmental risk assessment and H4 Odour. The References section of this document lists these documents and where you can find them.

### **Key issues**

We want you to operate a profitable farm business. As part of this we expect you to monitor and manage environmental impacts as part of your everyday farm operations.

The key issues in the pig and poultry sector are:

#### **Ammonia**

Ammonia is a gas that is directly emitted from livestock and from manure, litter and slurry. It can directly damage vegetation and it contributes to eutrophication and acidification of sensitive habitats. We expect you to minimise impacts on sensitive receptors.

#### **Nutrients in manure/litter/slurry**

The key nutrients are nitrogen and phosphorus. A manure management plan will address soil nutrient status, crop uptake and nutrient requirements.

#### **Effluent discharges**

These include discharges from roofs where fans vent to the roof and contaminated run-off from yards and housing. These can pollute surface water and groundwater.

#### **Dust**

Dust can be a source of nuisance, odour and air pollution and may affect human health. It originates from bedding, feed and the animals themselves.

#### **Odour and noise**

Odour and noise can affect people living near your installation and can be a source of nuisance.

#### **Accidents**

Accidents and emergencies can happen on any installation which could result in polluting discharges e.g. oil, pesticides, feed, affecting the environment.

#### **Resource use**

We expect you to optimise the use of all resources on your farm. You will use a range of resources and raw materials as part of your operation which include:

- Energy - operating more efficiently by reducing the energy used will reduce emissions of the greenhouse gas carbon dioxide per unit of output averaged over several years.
- Water – you should optimise water use which will also reduce waste water.
- Raw materials including biocides, pesticides, veterinary medicines, agricultural fuel oils and bedding – inappropriate storage and use can lead to environmental pollution. You should aim to use materials that have a reduced environmental impact.
- Feed – diets should be targeted to the livestock stage so nitrogen and phosphorus excretion is minimised. You should discuss the formulation of the diet with a nutritional advisor or supplier to ensure that the minimum dietary requirements of the animals are being met.

Priority areas for improvement for existing plant will be:

- safe storage of oils and materials
- integrity of buildings
- management of drainage systems
- management of manure and slurry systems



## 1. Management

### 1.1 General management

The activities shall be managed and operated:

- 1.1.1 (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances and closure and those drawn to the attention of the operator as a result of complaints; and
- (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.
- 1.1.2

Records demonstrating compliance with condition 1.1.1 shall be maintained.

- 1.1.3 Any person having duties that are or may be affected by the matters set out in the permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

This condition means that you must: identify the risks that your activities pose to the environment and take all reasonable actions to prevent or minimise those risks. In particular:

- you must design, operate and maintain all equipment whose failure may lead to pollution so that it continues to operate effectively;
- you must have identified potential accidents, put in place any necessary measures to minimise the chances of them happening and have plans in place to minimise the effects if the worst occurs;
- you must ensure that you have enough staff and that they are adequately trained in those aspects which could lead to pollution, including dealing with accidents and your responsibilities under your permit;
- have all necessary written operating instructions to ensure that staff know how to operate the plant safely under normal and abnormal situations.

You need to be able to demonstrate that you are doing this, that is, your control of your operations must be auditable. That means that your plans must be written down and you must keep good records. In particular you must have:

- a maintenance checklist and maintenance records;
- an accident management plan;
- a list of the skills and training your staff need and a training record covering each staff member;

- any necessary operating instructions;
- a way of recording any complaints, pollution incidents or breaches of your permit and the actions you have taken to deal with them.

All of the above are the basics of what we mean by your “management system”. More details on them are given in the paragraphs below.

To keep your management system up to date you should review its content and associated accident management plans, site closure plans etc. at least once every four years. You should also review it if there is a significant change to the activities such as a company takeover, major re-structure or expansion of the activities. You should review the relevant parts following an accident or if you find a non compliance, in an audit for example, in order to find the root cause. We too will be looking to identify the management system failure in these cases.

You also should regularly audit your own performance against your management system.

A basic management system described above may be sufficient for a farming installation, rather than an independently certified environmental management system (EMS). Registration to ISO 14001 or EMAS, while valuable in themselves, do not guarantee permit compliance.

### **Operations**

The reference to "operations" in 1.1.1(a) means that you must consider how to minimise the environmental risks and impact of the normal running of the activities. Normal running includes stocking, de-stocking and empty periods. You should have contingency plans that ensure a minimum impact on the environment in the case of equipment breakdown, accidents, disease etc.

### **Maintenance**

Poor maintenance is a common cause of environmental incidents. Failure of plant or infrastructure (e.g. hard-standing, bunds) could increase emissions to the environment.

You must carry out a programme of planned preventative maintenance rather than waiting for equipment to fail.

You should use the manufacturers' recommended inspection and maintenance schedules, or write down your justification for following any other schedule, to check for signs of leakage, corrosion and structural damage, security and correct operation.

### **Incidents and non-conformances**

Even when "incidents and non-conformances" occur, you are responsible for the environmental performance of the installation and for achieving compliance

with the permit. Incidents that require investigation include any malfunction, breakdown or failure of plant, equipment or techniques and any near misses. You should be able to cope with abnormal operation and return the activity to normal operation. You and/or your staff must be able to:

- Detect abnormal operation and investigate the causes.
- Assess the information and decide what to do.
- In the short-term, get back to normal operation.
- In the long-term, take steps to make sure the problem doesn't happen again.
- Where appropriate, make sure that the public would know what to do if a problem arises. You are responsible for minimising the environmental impact of your activities and for responding to the concerns of the local community.
- Have a complaints system and do whatever is necessary to prevent, or where that is not possible, to minimise the causes.
- Unless there are overriding security reasons for not doing so, display an identification notice at or near the site entrance telling the public about the nature of the site and who they can contact for further information or to notify a concern. It should be easily readable from outside the site in daylight hours and should include the following information:
  - emergency contact name and telephone number of the permit holder and/or operator;
  - statement that the site is permitted by Natural Resources Wales;
  - permit number;
  - Natural Resources Wales national numbers, 08708 506506 and 0800 807060 (incident hotline), (or any other number subsequently notified in writing by Natural Resources Wales).

### **Sufficient persons who are suitably competent**

You must have enough competent staff to manage and operate your activities without causing pollution. This includes contractors.

Staff should have clearly defined roles and responsibilities. You should write down the skills required for each post and keep records of how each individual in that post has gained those skills and how they are kept up to date with, for example, refresher training. Where appropriate, you should keep written instructions for the work as well. We will refer to these records and instructions if we need to investigate an incident. You can demonstrate competence in various ways, for example:

- vocational qualifications e.g. NVQs;

- attendance at external or in-house training courses;
- those with approved training to cascade that training to other staff;
- mentoring as part of "on the job" training;
- experience (as long as there is evidence that it is kept up to date).

### **Site security**

You should have site security measures in place to prevent unauthorised access to the site, as far as practicable.

The objective of this is to ensure that the site is secure to prevent vandalism, which is a common cause of pollution incidents. What is appropriate will depend on the risks posed by the activity itself and the particular location.

To comply you should provide the following:

- security checks or supervision of people entering the site during normal working hours;
- gates that are closed and locked outside normal operating hours to prevent people walking or driving onto the site;
- fences or hedges around the site perimeter that prevent unauthorised access;
- individual facilities including slurry tank valves and oil tank outlets should be locked, and buildings should be protected from unauthorised access;
- signs warning people not to enter the site.

The above may not apply if you have a public footpath going through your site.

### **Permit surrender**

When you come to apply to surrender your permit, you will need to be able to show that the site has been returned to a 'satisfactory state'. Paragraphs 6.26 to 6.33 of the Defra and Welsh Assembly Government **Environmental Permitting Guidance** explain what is meant by 'satisfactory state'.

Your management system will need to record details of how the land under the site was thoroughly protected at all times between the date the permit was issued (or when operations started), until the end of operations under the permit. You could do this, for example, by recording the use and maintenance of impermeable surfacing and leak-tight drains. If the land was contaminated before your permit began, we strongly advise that you record details of this contamination. You should also record how you have cleaned up any incidents/spillages as they occur.

We will consider all of these records when you apply to surrender your permit. During compliance checks we will check the records are being collated properly. Section 4.1, Records and the **H5 Site Condition Report Guidance** give further information.

### **Records that demonstrate your management system**

You must keep reliable records. These are an essential part of your management system.

Personnel competency records, for example, should include the date and type of training, the training provider and how the skills and training received meet the requirements. Section 4.1 of the permit tells you how to keep the records. The manner in which records are held is covered by other conditions in the permit.

### **Display your permit**

Staff or contractors whose work may have an impact on the environment must be able easily to see a copy of the permit, displayed near where they work.

They should have ready access to the information they need to ensure that they act in a way to comply with the permit. This could be access to this document or instructions more targeted to their responsibilities.

### **Where can I get further information?**

- **H5 Site condition report – guidance and templates**
- **Environmental Permitting Guidance**, Defra 2009

## **1.2 Accident management plan**

1.2.1 The operator shall:

- (a) maintain and implement an accident management plan;
- (b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
- (c) make any appropriate changes to the plan identified by a review.

You must have an accident management plan and implement it if an accident occurs. You will have to review this plan at least every four years. As soon as practicable after an accident you will have to analyse the reasons why the accident happened and whether your response was adequate. You will have to change the plan if necessary.

All staff should be aware of the location and contents of the accident management plan, and their responsibilities in the event of an accident.

You should keep a site layout plan, showing details of all diverter valves, surface and foul drains, in the site office, with a back-up copy elsewhere in case the office is inaccessible in an emergency.

To produce an accident management plan, you should:

- identify events or failures that could damage the environment, for example flooding; see 'A';
- assess how likely they are to happen and the potential environmental consequences; see 'B';
- take steps to minimise both the potential causes and consequences of accidents; see 'C'.

The easiest way to do this is to follow the risk assessment for accidents in Part 1 of **H1 Environmental Risk Assessment** and describe how you will manage the risks.

#### **A. Identify events or failures that could damage the**

**environment** Hazards you need to think about include:

- transferring substances (e.g. loading or unloading vessels);
- overfilling vessels;
- plant or equipment failure (e.g. over-pressure of vessels and pipework, blocked drains);
- containment failure (e.g. bund or overfilled drainage sumps, slurry tank, wash water);
- fires or failure to contain firewaters;
- making the wrong connections in drains or other systems;
- vandalism;
- flooding.

This is not a comprehensive list. You also need to work out what other situations are relevant to you.

#### **B. Assess how likely they are to happen and the potential environmental consequences**

This can be viewed as addressing four questions:

- Probability: how often is this likely to occur? Several times a year? Once every few years?

- What gets out and how much?
- Where would it go – i.e. what or whom would be affected - the public or an ecologically important site? How would it get there – by air, along a ditch, etc.?
- What would the consequences be?

The level of assessment will depend on the scale of the severity of the consequences and the complexity of the situation. In general it is more important to identify what you need to do – and then do it – rather than performing in depth analyses of, for example, how far an oil spill may spread into the soil.

### **C. Action to minimise the potential causes and consequences of accidents:**

You should take action to minimise the risks you have identified. As a minimum you should:

- Keep a list of substances that would harm the environment if they were to escape – the raw materials inventory would be sufficient. Remember that many apparently innocuous substances or non-hazardous wastes can be environmentally damaging, e.g. a feed spill into a water course.
- Check raw materials and wastes for compatibility with other substances with which they may come into contact.
- Store raw materials, products and wastes properly.
- Have barriers or markers to prevent vehicles from damaging equipment.
- Have appropriate primary and secondary containment e.g. bunds and building containment.
- Prevent overfilling of tanks and drainage sumps by level measurement, separate highlevel alarms or cut-off, and batch metering.
- Install security systems to minimise the risk of unauthorised access.
- Keep a log of all incidents and near-misses.
- Have clear instructions on how each accident scenario should be managed. Should a given spill be contained or dispersed, for example? Should you put a fire out or let it burn? Who is responsible for isolating drains, or alerting emergency services?
- Have appropriate equipment to limit the consequences of an accident, such as oil spillage equipment.
- Check the composition of the contents of a bund or other container before disposal.

- To prevent fires and minimise their impact you should:
  - Store incompatible materials apart.
  - Limit the size of stockpiles of combustible materials and surround them with firebreaks.
  - Not store materials against the site boundary.
  - Store contaminated firewater on-site, where practicable.

#### **D. If an accident happens**

If an accident causes damage to the environment, or risks doing so, we expect you to:

- Immediately do what it says in the accident management plan.
- Do whatever else is necessary to minimise the environmental consequences.
- Find out why the accident happened and take action to stop it happening again.
- Review the plan.
- Tell us.

#### **Where can I get further information?**

- **H1 Environmental Risk Assessment – Part 1**
- **PPG 21 pollution incident response planning**

### **1.3 Energy efficiency**

The operator shall:

- 1.3.1 (a) take appropriate measures to ensure that energy is used efficiently in the activities;
- (b) review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and (c) take any further appropriate measures identified by a review.

The requirement to address energy efficiency will be satisfied provided if: either

- you meet the “Basic energy requirements” below and are a participant to a Climate Change Agreement (CCA)

or



- you meet the “Basic energy requirements” and “Energy supply techniques” below.

Even where a CCA is in place, you should still consider whether your decisions on energy efficiency may impact on the production of other pollutants as part of your integrated environmental assessment.

Further guidance is given in guidance note **H2 Energy Efficiency**.

### Basic energy requirements

The requirements of this section are basic low-cost energy requirements that apply whether or not a CCA is in force for the installation.

1. Prepare a list/diagram of where the energy is used in your process
2. You should regularly review your energy use and provide an energy efficiency plan that identifies CO<sub>2</sub> savings of each potential measure. For those not in a CCA you should turn this into an action plan. As energy prices fluctuate you will need to calculate back to a reference price. An example format of the energy efficiency plan is shown in Table 1.3.2. You may use your own existing format or develop one to suit your needs

**Table 1.3.2 Example format for energy efficiency plan\***

All applicants		Only applicants without CCA		
Energy efficiency measure	CO <sub>2</sub> savings (tonnes)	Equivalent Annual Cost (EAC) £k	EAC/CO <sub>2</sub> saved £/tonne	Date for implementation

\*The energy efficiency plan is required to ensure that you have considered all relevant techniques. However, where a CCA is in place we will only enforce implementation of the measure 1 above. H2 provides an appraisal methodology. If you use a different appraisal methodology you must explain in the application how you have done the appraisal, and provide evidence that you have used appropriate discount rates, asset life and expenditure (£/t) criteria.

## **1.3 You should monitor energy flows and target areas for reductions.**

### **Energy supply techniques**

You should demonstrate that you have considered alternative, more efficient forms of generating electricity and heat where a cost/benefit appraisal shows them to be appropriate. You should use the methodology provided in H2 for your cost/benefit appraisal. The following techniques should be considered where practicable:

- use of Combined Heat and Power (CHP);
- using renewable energy sources;
- generation of energy by co-incineration of your waste;
- joint schemes with other local operators which may make CHP more attractive;
- use of less polluting fuels, such as biomass.

### **Energy efficiency review**

There are a number of audit guides and packages which will help you to produce an energy review (see further information). You should consider the following techniques in your energy review:

- insulating buildings;
- ensure equipment is working to optimum efficiency e.g. ventilation;
- applying low energy lighting;
- selection and control of heating systems.

### **Where can I get further information?**

- **H2 Energy Efficiency;**
- **Saving Money by Reducing Waste.** Waste minimisation manual: a practical guide for farmers and growers, Defra 2006.

## **1.4 Efficient use of raw materials**

The operator shall:

- 1.4.1
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
  - (b) maintain records of raw materials and water used in the activities;
  - (c) review and record at least every 4 years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
  - (d) take any further appropriate measures identified by a review.

### **Raw material selection**

Selecting raw materials and the process techniques presents an opportunity to control emissions at source by reducing usage or substituting materials that are less harmful or which can be more readily abated.

You should make a list of the main materials used which have potential for significant environmental impact, including:

- quantities used;
- chemical composition, where relevant;
- fate of the material (i.e. approximate percentages to air, land, water and products);
- environmental impact potential, where known (e.g. toxicity, bioaccumulation potential, degradability);
- any practicable alternative materials that may have a lower environmental impact;
- justification for the continued use of any substance for which there is a less hazardous alternative (e.g. on the basis of impact on product quality or costs vs. environmental benefits).

These records should be maintained in a format equivalent to that supplied in your permit application and should be made available to us on request.

The raw materials inventory should be included as an appendix to the accident management plan.

You should review this situation every four years and identify whether there are alternatives.

## **Minimising water use**

### ***Review***

You should carry out a review of water use (a water efficiency audit) at least every four years. The first audit shall take place within two years of the issue of your permit unless your application has included details of a satisfactory audit carried out in the two years prior to submission of the application. You may wish to identify livestock water consumption separately from other uses.

When reviewing water use you should:

- inspect water supply pipework systems regularly and repair any leaks as soon as practicable;
- produce a plan identifying all water supply and distribution pipework for water at the installation, including the location of water meters;
- establish water efficiency objectives, based on sector benchmarks (see *Waterwise on the farm*);
- identify constraints on reducing water use beyond a certain level, such as livestock water consumption;
- establish the water quality needs of each use, so that you can identify opportunities for recycling, for example rainwater harvesting;
- use this information to identify opportunities for reducing water use;
- prepare an action plan to reduce water use.

The timescale for implementing the improvements should be agreed with us.

### ***Measures***

You should apply the following general techniques in sequence to reduce emissions to water:

- Use water-efficient techniques at source wherever possible.
- Recycle water within the process from which it issues, by treating it first if necessary. Where this is not practicable, recycle it to another part of the process that has a lower water quality requirement.
- If you cannot use uncontaminated roof and surface water in the process, keep it separate from other discharge streams, at least until after the contaminated streams have been treated in an effluent treatment system.
- Keep more contaminated water streams separate from less contaminated streams where there is scope for reuse – possibly after some form of treatment.
- Consider the use of treated final effluent, perhaps after mixing with fresh water.

- Directly measure and record fresh water consumption regularly, ideally every day, but at least monthly at every significant usage point.
- As part of your ongoing management, you should include general efficiency techniques such as:
  - Vacuuming, scraping or mopping in preference to hosing down.
  - Reusing wash water (or recycled water) where practicable.
  - Using trigger controls on all hoses, hand lances and washing equipment.
- Insulate exposed water pipes above ground, or install suitable systems to reduce the risk of freezing pipes.
- Install stop taps and drain valves in the water distribution system.
- Install covers on water tanks.
- Annually calibrate drinking water installations and meters.

#### **Where can I get further information?**

- **Waterwise on the Farm**, Natural Resources Wales/NFU/LEAF guidance;
- **Saving Money by Reducing Waste**. Waste minimisation manual: a practical guide for farmers and growers, Defra 2006.

## **1.5 Avoidance, recovery and disposal of wastes produced by the activities**

### **1.5.1** The operator shall:

- (a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;
- (b) review and record at least every 4 years whether changes to those measures should be made; and
- (c) take any further appropriate measures identified by a review.

This condition is important because it requires you to demonstrate waste avoidance or reduction measures. It also requires that where waste is produced you do not automatically choose the cheapest waste disposal option but consider recovery options. It requires you to think about the impact on the

environment of all the available options and select the option which is best for the environment.

You will be required to:

- consider if you can avoid producing a waste;
- consider reducing the amount of waste produced;
- characterise and quantify each waste stream arising from the installation;
- describe how each waste stream is to be recovered or disposed of.

If you propose any disposal:

- explain why recovery is technically and economically impossible; and
- describe the measures planned to avoid or reduce any impact on the environment.
- is the waste disposed of in accordance with relevant legislation so that the environmental impact is minimised?

You should carry out a waste minimisation review at least every four years. The first review shall take place within two years of the issue of your permit unless your application has included details of a satisfactory review carried out in the two years prior to submission of the application.

You should submit the methodology used for the review and an action plan for reducing the use of raw materials within two months of completion of the review.

The review should have a content equivalent to the Defra guide '**Saving Money by Reducing Waste**'.

#### **Where can I get further information?**

- **Saving Money by Reducing Waste.** Waste minimisation manual: a practical guide for farmers and growers, Defra 2006

## 2. Operations

In addition to the conditions set out below, there may be additional conditions in this section of your permit, for example, pre-operational conditions or waste acceptance. We expect few farms to have these conditions. The numbering of the conditions in this section of your permit may differ from that described below.

### 2.1 Permitted activities

2.1.1 The operator is authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

Regulations list many different activities but you are only permitted to carry out those listed in your permit. However, you may carry out other activities on the site provided that:

- they do not need a permit under any legislation; or
- they are exempt from the requirement to have a permit, for example because they are carried out on a small scale; or
- you have a separate permit issued by Natural Resources Wales or by another regulator such as the local authority.

### 2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 2 to this permit.

Schedule 2 of your permit will contain a site plan. This will either be the site plan you submitted with your permit application or a plan produced by us. You must ensure that you don't carry out the permitted activities beyond the site boundary. You must tell us if you wish to change your installation boundary and you will need to apply to vary your permit.

### 2.3 Operating techniques

2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1 table S1.2, unless otherwise agreed in writing by the Agency.

(b) If notified by the Agency that the activities are giving rise to pollution, the operator shall submit to the Agency for approval within the period specified, a revision of any plan specified in schedule 1, table S1.2 or otherwise required under this permit, and shall implement

the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Agency.

Table S1.2 of Schedule 1 of your permit will refer to selected documents that you supplied with your application for a permit – for example your management plans or procedures.

We expect you to operate in accordance with these. However, if a pollution problem arises we may require you to revise your plans and procedures.

We expect you to use the operating techniques set out below.

## **Selection and use of feed**

**Technical standard: you must take appropriate measures to provide a diet which minimises the excretion of nitrogen and phosphorus.**

### **Appropriate measures for pigs**

#### **Nitrogen**

- A minimum of two diets should be available for all pigs over the production cycle. Consider the whole production cycle as this may include outdoor rearing.
- **Sows**
  - for the majority of the period between weaning and farrowing, the diet for sows should be formulated to meet the nutritional requirements of the dry sow;
  - for the antenatal period, during lactation, and for some time post weaning the diet should be formulated to meet the nutritional requirements of the lactating sow;
  - the dry sow diet should have a lower level of crude protein than the lactating sow diet.
- **Rearing and finishing pigs**
  - Where a two-diet system is used for rearing and finishing pigs between 25 and 90kg the change over should be made at around 50 to 60kg. The latter diet should have a lower crude protein level. Where higher



numbers of diets are used the change should be appropriate to the lifestage.

- Where rearing and finishing pigs are routinely taken to weights over 115kg, a third diet shall be fed at 90kg and above with a further reduced protein level.

### **Phosphorus**

- Phosphorus levels in rations for pigs should be reduced over their rearing and production cycle.
- The addition of digestible phosphorus, or the use of enzymes such as phytase will ensure optimum performance and maintenance, whilst limiting the excretion of phosphorus.

### **Buildings and associated infrastructure**

- All buildings and associated infrastructure i.e. feed storage bins, should be specifically designed to allow at least a two-stage feeding regime.

### **Appropriate measures for poultry**

#### **Nitrogen**

- Broilers and broiler breeders should be fed a minimum of three diets.
- Commercial laying hens should be fed a minimum of three diets over the whole cycle.
- For replacement layer pullets and rearing of breeding stock, a minimum of two diets should be used between hatching and point of lay for optimum feed utilisation.
- For turkeys, the crude protein levels should decrease with age. Young hens reared for the small, oven-ready market shall be fed a minimum of two diets. Other turkeys reared for less than 16 weeks should be fed a minimum of three diets. Turkeys reared in excess of 16 weeks should be fed a minimum of four diets.
- Ducks should be fed a minimum of two diets.

#### **Phosphorus**

- Phosphorus levels in rations for poultry should be reduced over their rearing and production cycle.
- The use of phytase enzyme may be considered as a means to increase availability of phosphorus from vegetable sources and so reduce total phosphorus levels excreted in the litter/manure.

- Where possible the amount of total and available phosphorus in the diet should be recorded to assist in assessing phosphorus content of litter and manure.

### **Buildings and associated infrastructure**

- All buildings and associated infrastructure i.e. feed storage bins, should be specifically designed to accommodate the required feeding regime.

## **Housing design and management**

**Technical standard: you must take appropriate measures in the design and management of housing to minimise the emissions from those systems.**

Housing which is BAT is fully described in Chapter 5 of the BREF and reproduced in Appendices 2 and 3 to this document.

### **Pig housing design and management**

#### **Appropriate measures for design**

##### ***Drinkers and troughs***

- Drinkers and troughs should be designed to prevent leakage (wastage).

##### ***Slat design and slurry channels***

- Slat design and slurry channels should comprise:
  - slats which facilitate maximum transfer of dung and urine to the transfer channels or pit;
  - channels which transfer slurry to storage facilities (and not store slurry).

##### ***Sows – slurry systems***

- Slurry systems for sows should comprise either:
  - a partly-slatted floor with a reduced area manure pit; or
  - a fully or partly-slatted floor with vacuum system for frequent slurry removal.

##### ***Farrowing sows including piglets – slurry systems***

- Slurry systems for farrowing sows including piglets should comprise a part or fully- slatted floor with:
  - a combination of water and manure channel; or
  - a flushing system with manure gutters; or ▪ a manure pan underneath.

- Farrowing pens should provide a slurry channel at the rear of the sow, away from the feeding area.

### ***Weaners – slurry systems***

- Slurry systems for weaners should comprise a pen:
  - or flatdeck with a fully-slatted or partly-slatted floor with a vacuum system for frequent slurry removal;
  - or flatdeck with a fully-slatted floor beneath which there is a concrete sloped floor to separate faeces or urine; or
  - with a partly-slatted floor (two climate system); or
  - with a partly-slatted floor and a sloped or convex solid floor; or
  - with a partly-slatted floor and a shallow manure pit and channel for spoiled drinking water; or
  - with a partly-slatted floor with triangular slats and a manure channel with sloped side walls.

### ***Growers/finishers – slurry systems***

- Slurry systems for growers/finishers should comprise:
  - a fully-slatted floor with vacuum system for frequent removal; or
  - a partly-slatted floor with a reduced manure pit, including slanted walls and a vacuum system; or
  - a partly-slatted floor with a central convex solid floor at the front of the pen, a manure gutter with slanted sidewalls and sloped manure pit.

### ***Solid floor systems***

- Solid floor systems should comprise:
  - scraped areas that prevent ponding or build up of urine;
  - dung passages and bedded areas sloped to drain urine and prevent ponding.

### ***Appropriate measures for management***

#### ***Slurry systems – slurry management and dunging behaviour***

- The area under slats should be cleared of slurry frequently i.e. when there is sufficient slurry to flow out.
- Lying areas should be kept clean through high standards of management and effective control of environmental conditions.

- Floor space allowances including partly-slatted floor space allowances should be calculated to match to the pigs requirements and welfare or production standards. For example a surplus or shortage of space can result in dunging in the lying area.
- Floors should be kept free from urine or slurry puddles through management to address puddles as they arise – scraping or washing down.
- Where water spray or dripper systems are used for weaners/growers/finishers they should be used over the slats to cool the pigs in hot weather and encourage good dunging behaviour. These should be maintained to prevent leakage or loss of water.

### ***Solid floor systems – slurry/manure management and dunging behaviour***

- Dunging and lying areas should be clearly differentiated to ensure that the lying areas are kept clean and dry.
- Scraped areas should be operated to prevent ponding or build up of urine.
- Dunging areas should be cleaned out by scraping at least three times a week.
- Deep straw systems, bedded areas and straw yards should have sufficient straw or other bedding material to keep the lying area clean and dry, and to bind nitrogen to reduce ammonia emissions.
- Floors should be kept free from urine or slurry puddles, either through:
  - the provision of additional bedding material to soak it up, or
  - management to address puddles as they arise – scraping or washing down.

### ***Ventilation***

- Draughts should be avoided in lying areas.
- Draughts under slatted flooring should be minimised by dividing the airspace with plastic sheet.
- Dunging areas in naturally ventilated buildings should be sited beneath air inlets.
- Lying areas should be sited under baffled inlets in low-pressure fan ventilated buildings.

### ***Temperature***

- The minimum temperature such that pigs do not need to huddle together should be maintained.
- Where artificial heating is provided to weaners, controls should be used to match heating needs to minimise energy wastage.

- Weaner accommodation in 'umbrella buildings' should be provided with sufficient ventilation to keep manure temperatures low.

### ***General management***

- Drinkers and troughs should be operated to prevent leakage.
- Floors and walls should be kept clean. Keeping the pigs clean will help keep walls clean.
- Cracks and damaged areas of walls should be repaired.

### **Where can I get further information?**

- Examples and descriptions of pig housing designs from the BREF (Appendix 2);
- Undertaking a housing review (Appendix 7);
- **Code of Recommendations for the Welfare of Livestock: Pigs**, Defra 2003 PB 7050;
- **Welfare of Farmed Animals (England) Regulations 2007** S.I. 2007 No. 2078;
- Environmental factors in pig production. BPEX/MLC May 1999;
- **Environmental Management for Healthy Pig Production**, BPEX/MLC.

### **Poultry housing design and management**

#### **Appropriate measures for design**

##### ***Drinkers and troughs***

- Drinkers and troughs should be designed to prevent leakage.

##### ***Housing***

- Housing should be well insulated and have a damp proof course;
- Houses should be insulated to a U-value of 0.4 W/m<sup>2</sup>/°C or better;
- Where poultry rearing systems use housing with open sides, insulation is not required.

##### ***Cage systems***

Housing shall be designed with:

- deep pit with ventilated manure store; or
- manure removal, at least twice a week, by way of manure belts to covered storage; or
- vertical tiered cages with manure belt with forced air drying, where the manure is removed at least once a week to a covered storage; or

- vertical tiered cages with manure belt with whisk forced air drying where manure is removed at least once a week to a covered storage; or
- vertical tiered cages with manure belt with improved forced air drying where the manure is removed from the house at least once a week to covered storage; or
- vertical tiered cages with manure belt with drying tunnel over cages, after 24-36 hours, the manure is removed to covered storage; or
- other techniques that provide equivalent or better emission minimisation.

### ***Barn and free-range systems***

Housing shall be designed with:

- litter system with forced air drying; or
- litter system with perforated floor and forced air drying; or
- an aviary system with or without range and or outside scratching area; or
- other techniques that provide equivalent or better emission minimisation.

### ***Broiler, broiler breeders, replacement pullet and turkey systems***

Housing shall be designed with:

- a naturally ventilated house with a fully littered floor and equipped with non-leaking drinking systems; or
- a fan ventilated house with a fully littered floor and equipped with non-leaking drinking systems; or
- other techniques that provide equivalent or better emission minimisation.

Open turkey houses should be aligned at right angles to the prevailing wind direction and located to ensure exposure to natural airflow.

These systems also apply to free-range poultry reared for meat.

### ***Duck systems***

Housing shall be designed with an unrestricted naturally ventilated house or a well-insulated fan ventilated house with:

- a partly-slatted floor with impermeable drainage channels and effluent storage area; or
- a fully-slatted floor with impermeable drainage channels and effluent storage area; or
- a fully littered floor with a water system positioned above a gully and covered drainage channels and effluent storage areas; or
- other techniques that provide equivalent or better emission minimisation.

## **Appropriate measures for management**

### ***Litter and manure***

Litter should be kept loose and friable and its quality should be inspected to ensure it does not become excessively wet or dry. Any changes in quality should be investigated, and steps taken to rectify the problem. Solutions may involve:

- The addition of extra material or provision of heating to the problem area. Capping or wet litter should be avoided and may be due to birds drinking and excreting more due to illness, high temperatures, a feed problem or increased humidity.
- The use of nipple drinkers with drip cups will minimise water spillage. Where drip cups are not used, or other drinkers are provided, water pressure should be checked frequently, and wet litter around drinkers should be addressed.
- Managing the floor of the house to minimise seepage of water either from the ground or entry of rainfall - an impermeable floor and damp-proof course will give the best protection. Where this is not present, a mixture of materials or thicker layers may address wet litter problems.

In layer housing using manure belts, increasing the frequency of belt cleaning may reduce emissions.

Removal of litter from the turkey house at intervals during the growing period reduces the ammonia emissions, as the temperature of the litter and droppings does not increase.

Mixing of manure during the turkey growing period gives maximum uptake of ammonia by sawdust/shavings/chopped straw.

These measures will be appropriate for meeting the fugitive emissions condition (see 3.2).

### ***Temperature***

- Temperature should meet health and welfare needs for the age and number of birds.
- Extremes of temperature should be avoided and draughts should be minimised.
- Where artificial heating is provided, controls should be used to match heating needs to ventilation needs so that heat is not wasted, by being drawn out of the building.
- Insulating housing may provide a more long-term option and will reduce energy consumption.

### ***Ventilation***

- Ventilation should match the health and welfare needs for the age and number of birds. The target rates for different weather conditions should be calculated in conjunction with an equipment supplier or poultry adviser. Air speeds across the house should not be largely different from one area to another, and housing should be free from draughts.
- Ventilation rates and house conditions should at all times be adequate to provide sufficient fresh air for the birds. In particular, accumulations of ammonia, hydrogen sulphide, carbon dioxide, carbon monoxide and dust should be avoided.
- In deep-pit layer housing, air currents should be maintained so that air is drawn over the manure to dry it. Rain should be prevented from entering the manure storage area.
- Belt cleaning systems should be designed and operated to optimise air flow and to maximise drying on the belt.

### ***General management***

- Floors and walls should be kept clean.
- Cracks and damaged areas of floors and walls should be repaired.
- For free-range poultry, the areas around pop-holes should be protected to prevent rain from entering housing. You should manage the ground around pop-holes to prevent capping or erosion of the surface.

### **Where can I get further information?**

- Examples and descriptions of poultry housing designs from the BREF (Appendix 3);
- Undertaking a housing review (Appendix 7);
- Poultry Litter Management, Defra PB1739;
- **Heat stress in poultry – solving the problem**, Defra 2005 PB10543;
- **Code of Recommendations for the Welfare of Livestock: Laying hens** Defra 2002 PB 7274;
- **Code of Recommendations for the Welfare of Livestock: Turkeys**, Defra;
- **Code of Recommendations for the Welfare of Livestock: Meat chickens and breeding chickens**. Defra 2002 PB 7275;
- **Code of Recommendations for the Welfare of Livestock: Ducks**, Defra.



## **Livestock numbers and movements**

2.3.2 The operator shall maintain and implement a system to record the number of animal places and animal movements.

You must keep a record of the capacity of your installation – note that this is not the number of animals on the installation at any one time or over the year. You also need to record animal movements on and off the installation.

These records should be made available to us for inspection and should be supplied on request. This information is required to estimate emissions from the installation, in place of monitoring emissions directly. For example, we will require you to submit a return to the Pollution Inventory annually.

## **Slurry spreading and manure management planning - off-site activity**

2.3.3 The operator shall take appropriate measures in off-site disposal or recovery of solid manure or slurry to prevent, or where this is not practicable to minimise, pollution.

You should maintain written evidence of the arrangements in place when you export slurry and manure such as:

- records of the quantities and the date of transfer for example, to power station or biogas plant for recovery; waste water treatment plant for disposal; or third party for spreading to land;
- the names and addresses and land acreage available where manures and slurries are exported for spreading to land.

If you are already keeping these records, for example as part of your Nitrate Vulnerable Zone (NVZ) obligations, these records should be sufficient.

Where a 'manure agent' or other third party accepts liability for removing manure or slurry from the installation, you should provide acceptable confirmation that:

- as a minimum, the third party will ensure that the manure is spread to land in accordance with the Code of Good Agricultural Practice; or
- that the spreading will be in accordance with a manure management plan for the receiving land.

You should have contingency arrangements in place should there be an emergency or the land becomes unavailable for spreading, such as alternative

land areas to be used or for alternative storage to be provided (this could be part of the accident management plan).

### **Where can I get further information?**

- **Protecting our Water, Soil and Air. A Code of Good Agricultural Practice for farmers, growers and land managers.** Defra 2009.
- **Leaflet 5, Guidance for Farmers in Nitrate Vulnerable Zones, The livestock manure N farm limit.** Defra/Natural Resources Wales, April 2009.

### **Slurry spreading and manure management planning - on-site activity**

2.3.4 The operator shall:

- (a) maintain and implement a manure management plan;
- (b) review and record at least every 4 years whether changes to the plan should be made;
- (c) make any appropriate changes to the plan identified by the review.

This condition applies to either:

- the operator or employees spreading on the site (land owned by the operator); or
- a contractor spreading on the site.

Where manure or slurry is applied to land in an NVZ, the NVZ Rules will apply in addition to the measures described below.

### **Manure management planning**

#### **Implement the manure management plan**

The plan should account for any manures brought onto the installation, including sewage sludge and other organic wastes.

#### **Record keeping**

This should include:

- the nutrient content of the manure and slurry applied to each field;
- the weight of manure and slurry applied to each field.

If you are already keeping these records, for example as part of your Nitrate Vulnerable Zone (NVZ) obligations, these records should be sufficient.

### **Nutrient status of soil, manure and slurry**

- Slurry and manures should be analysed twice yearly, or once per production cycle where that cycle exceeds six months. Analysis should include:
  - total nitrogen
  - available nitrogen
  - total phosphorus
- Soil should be analysed for total phosphorus as a minimum, every five years.
- Records of nutrient sampling and reviews must be maintained.

The requirements for soil and manure analysis may change in light of the information gathered, for example, analysis may be reduced if consistent results are seen or increased if highly variable results are found.

### **Spreading of manure and slurry to minimise emissions to air**

**Technical standard: you must take appropriate measures when spreading manure or slurry to land to prevent, or where this is not possible to minimise the emissions to air in implementing your manure management plan.**

#### ***Appropriate measures for solid manure***

- Applications of solid manure to un-cropped land or bare soil should be incorporated within 24 hours, unless such applications are used to control wind erosion on susceptible soils.
- Incorporation should be achieved by ploughing, discing or using a rotary cultivator.
- Solid manure does not need to be incorporated if it is applied to grassland or other established crops.

#### ***Appropriate measures for slurry (includes duck effluent and***

***wash water)*** Slurry should be applied to land using only the following methods:

- An injector or band spreader.

- Any type of equipment with splash plates, provided slurry is incorporated into the soil within 6 hours of application and provided such equipment is operated to avoid slurry atomisation and drift i.e. operated at low pressure to create large droplets.
- Irrigation – where this method is used the slurry should be applied to a growing crop. The equipment should be operated to provide a low spreading trajectory (operated at low pressure to create large droplets).
- Where dilute pig slurry (less than 2% dry matter) is applied using irrigation then the requirement for this to be to a growing crop does not apply. This is based on Defra funded research (WA0715) which indicates that ammonia emissions from dilute pig slurry (1.7% dry matter) are not significant.
  - Incorporation is unnecessary for wash water with less than 1% dry matter.

### **Spreading of manure and slurry to minimise pollution of water**

**Technical standard: you must take appropriate measures when spreading manure or slurry to land to prevent, or where this is not possible to minimise pollution of water in implementing your manure management plan.**

- You should not apply manure and slurry when soil is:
  - waterlogged
  - flooded
  - frozen hard
  - snow covered
  - cracked down to field drains or back-fill
- You should not apply manure and slurry to steeply sloping fields. Slopes are complex features of the landscape and it is not practicable to define critical angles of slope. As a guide, in NVZs steep slopes are over 12°.
- You should always take care when spreading, regardless of the nature of the slope, as run-off can occur from land that is almost flat. The risk of surface runoff increases with the steepness of the slope.
- Restricting application rates and consequently the loading rate of total solids reduces the risk of run-off and the possibility of carrying organic matter, nitrate, phosphorus and ammonium N into watercourses.
- Applications of manures should be made to maximise the availability of nutrient for the crop and minimise the risk of run-off to watercourses and pollution of groundwater.

- 
- Further restrictions may apply in NVZs.

### **Minimising pollution from, and accumulation of nitrogen (N)**

**Technical standard: application rates of organic manures and slurries, including sewage sludges and other organic wastes, must not exceed 250 kilograms/hectare of total organic nitrogen in any 12 month period.**

- This is equivalent to the organic manure N field limit for NVZs.
- You are required to analyse the nutrient content of your manures - the total and available N content of your manures will be available from this analysis.
- For new installations analysis of N content may be estimated from standard figures available in the Defra Guidance for Farmers in Nitrate Vulnerable Zones leaflet 3.

Duck manure may be treated as farmyard manure rather than poultry manure where a low level (less than 30%) of available N can be demonstrated by analysis.

Tighter limits may apply in NVZs.

Enforcement of this condition will take into account local weather, cropping and soil conditions.

### **Where can I get further information?**

- Protocol for sampling slurry and solid manure for analysis (Appendix 1);
- How to produce a manure management plan (Appendix 6);
- Natural Resources Wales **Factsheet 5** – producing a manure management plan;
- **Protecting our Water, Soil and Air. A Code of Good Agricultural Practice for farmers, growers and land managers.** Defra 2009.
- **Manure Management Plan: a step-by-step guide for farmers,** Defra;
- 'Managing Livestock Manures' booklets available from the **Defra website** or from ADAS Gleadthorpe Research Centre (Tel: 01623 844331):
  - Booklet 1 - Making better use of livestock manures on arable land;
  - Booklet 2 - Making better use of livestock manures on grassland;
  - Booklet 3 - Spreading systems for slurries and solid manures.
- The Fertiliser Manual (RB209);

- 
- **Guidance for Farmers in NVZs, Leaflets 1 - 9**, Defra 2008;
- Ammonia emissions from irrigation of dilute pig slurry, R&D Report WA0715, Defra.

### **Waste sent off-site**

2.3.4 The operator shall ensure that where waste produced at the permitted installation(s) is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

- (a) the nature of the process producing the waste;
- (b) the composition of the waste;
- (c) the handling requirements of the waste;
- (d) the hazard classification associated with the waste; and (e) the waste code of the waste.

2.3.5 The operator shall ensure that where waste produced at the permitted installation(s) is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

With the changes to the rules on landfill disposal and the availability of suitable facilities it is important to distinguish between those waste classified as hazardous and those that would be non-hazardous. The following webpages summarise our current understanding on these particular wastes:

- **Coding and classifying wastes**

- Hazardous waste**

## **2.4 Improvement programme**

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Agency, the operator shall notify the Agency within 14 days of completion of each improvement.

- An improvement programme contains 'improvement conditions' which specify the work that needs to be carried out and in what timescales. It is unlikely that a new farming installation will have an improvement programme, as we expect all installations to meet the requirements of this document when constructing new buildings/structures.

An improvement programme is most likely for existing structures and plant. For example, a farm currently below the threshold expands above the threshold - it would have a mix of existing and new structures – the existing structures will require improvements through an improvement programme, the new structures should be built in accordance with this document. Table 2.4.1 below sets out the standard timescales for improvements. Other timescales will be site specific.

**Table 2.4.1 Improvement Programme timescales for existing structures**

'How to comply' section	Requirement	Timescale (months from permit issue)
2.3 Operating techniques	Selection and use of feed	12
2.3 Operating techniques	Housing review: you should review existing housing within 12 months and implement improvements to a timetable agreed with us (12 months onwards). The review should take into account all the appropriate measures for design and management for new housing and should consider cost-effectiveness. Further guidance is in Undertaking a housing review (Appendix 7)	12
3.2 Fugitive emissions	Drainage review: you should review drainage within 12 months and implement improvements to a timetable agreed with us (12 months onwards). Further guidance is in Undertaking a drainage review (Appendix 8).	12
3.2 Fugitive emissions	Wash water containment and collection	6
3.2 Fugitive emissions	Feedstuff storage, milling, mixing and transferring	6
3.2 Fugitive emissions	Proposals for replacing or covering any existing uncovered slurry stores and lagoons: Proposals for replacing or covering any existing uncovered slurry stores and lagoons must be submitted to us within six months of permit issue. The proposals should include a timetable for the replacement and refurbishment work. The proposals must be implemented subject to such amendments or additions as notified by us in writing. Further guidance is in Producing a proposal for covering slurry stores (Appendix 9).	6
3.2 Fugitive emissions	Proposals for installing an impermeable base with effluent containment for manure stores: Proposals for installing an impermeable base with effluent containment for manure stores must be submitted to us within 6 months of permit issue. The proposals should include a timetable for the construction work. The proposals must be implemented subject to such amendments or additions as notified by us in writing.	6



3.2 Fugitive emissions	Storage of agricultural fuel oil and other chemicals	6
3.2 Fugitive emissions	Feedstuff containment	6

## 3. Emissions and monitoring

### 3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to air, water or land except from the sources and emission points listed in schedule 4, tables S4.1, S4.2 and S4.3.
- 3.1.2 The limits given in schedule 4 shall not be exceeded.

This section only applies if you have point source emissions.

A point source emission is localised in origin (e.g. housing ventilation system outlets, soakaway, a 'breather' vent from an oil storage tank).

#### Emissions to air and water

The sources and emission points will be listed in a table. By default any emissions not listed in the table are considered fugitive emissions. Similarly, point sources listed in a table, (which will either be a whole emission point or a substance from a point) for which an emission limit is not set are treated as fugitive emissions. This category of fugitive emissions can sometimes be identified collectively (e.g. roof fan outlets on animal housing).

You must meet any emission limit values given in the permit.

#### Emissions to land

In general, there should be no direct or indirect releases to groundwater.

If there are releases to groundwater and they are to continue, you must comply with the requirements of the Groundwater Regulations.

#### Appropriate measures

The measures required to collect and control site drainage are relevant measures to prevent pollution by point source emissions to water and land.

- There should be no untreated point source emissions directly into surface water.
- The treatment method should be appropriate to the contamination and the receiving water.

- Suitable treatments can include swales or constructed wetlands; settlement ponds and sediment traps; soakaways.

### Where can I get further information?

- **Groundwater Protection Policy and Practice**
- **Guidance on the treatment of lightly contaminated site run-off**, Northern Ireland Natural Resources Wales, 2006

## 3.2 Fugitive emissions

<p>3.2.1</p> <p>3.2.2</p> <p>3.2.3</p>	<p>Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved fugitive emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.</p> <p>The operator shall:</p> <p>(a) if notified by the Agency that the activities are giving rise to pollution, submit to the Agency for approval within the period specified, a fugitive emissions management plan;</p> <p>(b) implement the approved fugitive emissions management plan, from the date of approval, unless otherwise agreed in writing by the Agency.</p> <p>All liquids, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.</p>
--	--

A fugitive emission is an emission to air, water or land from your activities from a localised or diffuse source which is not controlled by an emission limit or background limit (see section 3.1). A localised source includes substances from a point source which do not have a specific limit.

‘Pollution’ means any emission as a result of human activity which may:

- be harmful to human health or the quality of the environment,
- cause offence to a human sense,
- result in damage to material property, or
- impair or interfere with amenities and other legitimate uses of the environment.

**We do not expect farming installations to produce a written fugitive emissions management plan as part of the permit application.**

**Appropriate measures for preventing and minimising fugitive emissions**

***General building and site maintenance***

- You should maintain buildings in good repair to minimise water leaks into the house which may increase the moisture content of litter and manure.
- You should keep areas around buildings free of any build up of manure, slurry and spilt feed.
- You should maintain impervious surfaces and containment kerbs where these may be contaminated by potentially polluting substances. For example, concrete areas around buildings should be free from cracks (cracks in concrete yards can pose a risk to groundwater).

***Management of drainage systems and run-off***

The measures required for point source emissions are relevant measures to prevent pollution by fugitive emissions to water and land (see section 3.1).

It is acceptable for drainage from **clean** yards to drain to surface waters.

- All drainage systems should be identified in the accident management plan.
- Clean water drainage systems should not be contaminated. Under no circumstances should slurry (including seepage from manure) be allowed to enter surface water drains or drain into the ground.
- The contamination of yard areas should be minimised to reduce the amount of contaminated water that requires disposal. This should include:
  - keeping yards visibly clean;
  - keeping drainage channels clear;
  - cleaning up accumulations of spilt feed and dust.
- Drainage from animal housing and water from cleaning out is considered to be slurry and should be collected in a tank or lagoon prior to landspreading or disposal.
- Drainage from yards in regular use by livestock, or likely to be contaminated by manures or slurries should be collected in slurry or dirty water tanks.
- Tanks and collection systems should be designed and constructed to deal with the volumes to be contained.
- Where the ventilation system has outlets through side-walls, interception is required before drainage reaches surface water systems. Interception may include grassed areas, swales or collection pits.

- Where side-wall outlets are located above grass areas, further interception is not required provided that the grass cover is sufficient to collect the dust and to impede run-off to surface water systems.
- Where side-wall outlets are located above yard areas, the dust should be removed regularly (so that the yard is kept visibly clean).
- Roof water from housing where there are no roof outlets does not require interception and treatment.
- Roof water from systems with high efflux velocity roof fans (i.e. above 5m s<sup>-1</sup>) does not require interception and treatment provided roofs remain clean with no visible signs of dust.
- Filters or first flush retention tanks under downpipes can retain a significant amount of contaminants from rainfall. This is especially effective after a prolonged dry period, during which there may be significant accumulations of dust around vents on roofs.
- Procedures should be put in place to prevent contamination of surface water systems and divert drainage to slurry or dirty water tanks at other times. This can be achieved through the use of temporary bunds around drains, diverter valves or drain blockers.

### ***Disinfectant footbaths***

- Disinfectant footbaths should not overflow.
- Spent disinfectant from footbaths and wheel washes should be added to the manure or slurry store contents and applied to land in accordance with the manure management plan or added to the liquid storage tanks and exported from the site.
- The entry of wheelwashings into surface or groundwater should be prevented so that there is no risk to the environment.

### ***Feedstuff***

- You should store dusty or potentially dusty feedstuff materials in covered containers, purpose-built silos or under cover.
- The milling, mixing and transfer of feedstuff to and from storage areas should be carried out so as to prevent or minimise dust emissions to air.
- Measures may include extraction and abatement of dust from feed preparation areas.

### ***Housing ventilation***

- All ventilation systems should be operated to achieve the optimum air quality conditions levels for the stage of production in all weather and seasonal conditions.
- Control of minimum ventilation rates should be planned to avoid the build-up of moisture (humidity) in the house.
- Ventilation should be appropriate to the age, weight and health of the animal.

### ***Poultry litter management***

- For poultry installations, you must take all reasonable steps to ensure that poultry litter is maintained in as dry and friable condition as possible.
- Duck housing is not expected to maintain dry and friable manure due to the ducks' water requirements. Water use by ducks should be within the normal range for the age of the bird.

### ***Poultry dust management***

- Dust generation may be controlled within the house through the management of the litter and air quality, which needs to be balanced with the need to minimise ammonia and odour.

### ***Slurry storage (including pig slurry, duck effluent and wash water)***

#### **Infrastructure design and construction**

- All new and substantially reconstructed or substantially enlarged slurry storage systems, must:
  - conform with the technical measures detailed in the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991 (amended 1997);
  - be covered.
- Acceptable slurry storage facilities must have the following features:
  - Base of the storage tank, effluent tank, and all parts of the drains and reception pit to be impermeable.
  - Base and walls of storage tank, reception pit and drains should be protected against corrosion as described in BS 5502, Part 50.
  - Slurry storage tank and reception pit designed to BS 5502, Part 50.
  - Reception pit and associated channels normally to hold at least two days slurry production, including rainwater.

- Minimum slurry storage tank capacity to be normally four months production, including allowance for rainwater. The slurry storage tank must be designed to have a minimum 300mm freeboard or 750mm for earth banked stores.
- Minimum 750mm freeboard to be maintained at all times in earth banked stores.
- No part of a structure should be within 10m of a watercourse unless the written agreement of Natural Resources Wales is obtained beforehand.
- Tank, channels and pit to be designed for 20 years' life with routine maintenance.
- Two valves in series on any outlet pipe to be locked shut when not in use. (Ensure adequate spacing between the valves).
- Where walls of the slurry store are not impermeable, perimeter drains and effluent tank must be provided. The base must extend beyond the walls.
- Slurry storage covers should comprise a rigid cover (or other effective technique) to a steel or concrete tank.
- New earth banked lagoons should not be constructed unless an effective covering method can be demonstrated.
- Dilute slurry tanks do not need to be covered if the contents have a dry matter content of less than 1%.
- The options for covering existing slurry stores are:
  - to fit a rigid cover to a steel or concrete tank, or
  - to use a floating cover.
- Materials, such as straw or peat are not acceptable as cover materials for thin slurry, as they do not reduce emissions effectively. They will sink and can also block pipes and pumps. Such covers for pig slurry with a dry matter content of 5% or higher will be considered on a site specific basis.
- If you are in an NVZ you will need to provide six months storage capacity.

### Management

- In the event that structures are designed to work without secondary containment (such as lagoons) we expect maintenance, regular inspections etc. to a level that will provide equivalent protection.
- For existing slurry storage, which do not have a rigid cover, the following measures apply:
  - where floating covers are used, disturbance to the surface must be minimised;

- slurry stirring should be minimised - although it is recognised that slurry mixing may be necessary to produce a suitable material for land application;
- slurry should be introduced below the surface to reduce emissions of ammonia and odour.

### ***Manure storage***

#### *Infrastructure design and construction*

##### *Yard storage*

- Where manure is stored in the yard all new manure storage areas should:
  - have an impermeable base;
  - provide a collection and containment system for liquid run-off (effluent–defined as slurry in SSAFO) which meets the requirements of the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991 (amended 1997).
- Contaminated run-off can be reduced by providing a roof or cover.

##### *Field storage*

- You should not site field heaps:
  - over field drains;
  - within 10m of a watercourse (or a greater distance if there is a risk of effluent run-off into a watercourse);
  - within 50m of a spring, well or borehole that supplies water for human consumption, or is to be used in farm dairies;
  - where they would cause odour problems for nearby residents.
- Manure should be stored in a densely packed heap with an "A" shaped profile. In NVZs poultry manure without bedding/litter which is stored in a field heap must be covered with an impermeable sheet.

#### *Management*

- Maintain effluent channels and collection tanks to avoid blockage.
- Effluent collection tanks should be checked regularly and emptied when necessary so that they do not overflow. The effluent should either be spread to agricultural land in accordance with the manure management plan or disposed of off-site.
- Manure can be stored temporarily in a field for a maximum of 12 months prior to disposal.

- Contaminated run-off and ammonia emissions can be reduced by covering manure with sheeting. For poultry it can be reduced by maintaining the dry matter content above 60%.
- Field heaps may need to be re-sited if there is a risk of pollution or of odour nuisance if the heap is located within 400m of residences.
- Further restrictions may apply in NVZs.

### ***Carcass management***

The regulation of animal by-products is the responsibility of Animal Health.

- Carcasses should be disposed of in accordance with the Animal By-Products Regulations 2003.
- Carcasses should not be buried on the installation other than in accordance with the agreed and dated accident management plan (see 1.2) under the direction of Animal Health.
- Carcasses may be disposed of off-site as part of the National Fallen Stock Scheme, to a licensed knackerman, rendering plant, hunt kennel, maggot farm or authorised incinerator. They should be removed frequently to prevent odour nuisance and be covered to prevent access by birds or rodents using plastic bags or lidded bins where possible.
- Carcasses may be disposed of on-site in an authorised incinerator. Only carcasses may be disposed of in incinerators licensed under the Animal By-Products Regulations 2003. Operation of an incinerator for other wastes would need to comply with the Waste Incineration (England and Wales) Regulations 2002. Ash from a pig or poultry carcass incinerator can be landspread provided it complies with the relevant legislation.

### ***Flies***

- Flies can introduce substances into the environment that may spread disease. Flies shall not cause pollution, unless the operator has used appropriate measures to prevent or where that is not practicable, to minimise, such pollution.
- The measures you decide to use will depend on your individual circumstances. We will expect you to consider the options on the basis of balancing costs and environmental benefits.
- Appropriate measures to prevent or control flies include:
  - regular inspections by nominated personnel;
  - isolation, securing/removal or covering of manure, slurry, carcasses and wastes that are attracting flies, for example, cover manure heaps with sheeting;



- use of physical prevention methods, for example traps, electric fly killers;
- use of pesticides;
- seeding litter with *Carcinops* sp. beetles;
- employing professional pest control contractors.
- The Defra guidance **Statutory Nuisance from Insects and Artificial Light** gives information on flies and their control.
- Your Local Authority may have a Code of Practice for the use of poultry manure which gives more guidance on fly investigation and control.

### **Appropriate measures for bunding and containment**

#### ***Agricultural fuel oil and other chemicals storage***

- Agricultural fuel oil, pesticides and veterinary medicines should be contained in an area capable of retaining any spillage:
  - Agricultural fuel oil storage facilities must be bunded, regardless of size or age. Oil **bunds** must meet the requirements of The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991 (amended 1997).
  - Bunds should:
    - be impermeable and resistant to the stored materials;
    - have no outlet (that is, no drains or taps) and drain to a blind collection point;
    - have pipework routed within bunded areas with no penetration of contained surfaces;
    - be designed to catch leaks from tanks or fittings;
    - have a capacity greater than 110 percent of the largest tank or 25 percent of the total tankage, whichever is the larger;
    - be looked at regularly and any contents removed after checking for contamination;
    - be fitted with a high-level probe and an alarm, where not frequently inspected;
    - have tanker connection points within the bund where possible (otherwise adequate containment should be provided at the connection point);
    - be regularly inspected for their condition (normally visual, but extending to hydraulic testing where structural integrity is in doubt).

- Pesticides and veterinary medicines must also be kept in a store that is resistant to fire, dry, frost-free and secure against unauthorised access.

### **Feedstuff**

- Containment should be provided for feedstuff in order to prevent spillages and minimise waste. Any feedstuff which might flow under the influence of gravity (e.g. liquid feed) should be contained. Containment should consist of:
  - a bunded area, or
  - siting the store in an area isolated from the surface-water system such that any spillage cannot enter any drainage system.
- Storage vessels for feedstuff should be protected from collision damage. Collision protection may be achieved by:
  - careful siting relative to traffic flows with measures such as provision of kerbs or other markers to stop reversing vehicles, or
  - by the use of barriers in more vulnerable locations.

### **Where can I get further information?**

- Undertaking a drainage review (Appendix 8);
- Producing a proposal for covering slurry stores (Appendix 9);
- **Pollution Prevention Guidance Notes;**
- **Statutory Nuisance from Insects and Artificial Light**, Defra PB11577k 2006;
- Poultry Litter Management, Defra PB1739;
- **The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991**. S.I 1991 No. 324;
- **The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) (Amendment) Regulations 1997**. S.I 1997 No. 547;
- **Leaflet 4, Guidance for Farmers in Nitrate Vulnerable Zones, Storage of organic manures**. Defra/Natural Resources Wales, April 2009.
- **Concrete bunds for oil storage tanks**, Natural Resources Wales/CIRIA;
- **Masonry bunds for oil storage tanks**, Natural Resources Wales/CIRIA;
- Construction Guidance Notes, ADAS:
  - **CGN 001** Above-ground circular concrete and rectangular weeping-wall slurry stores;
  - **CGN 002** Earth-banked slurry stores;
  - **CGN 003** In-situ concrete slurry stores;

- **CGN 004** Above-ground circular steel slurry stores;
- **CGN 008** Separation of Clean and Dirty Water, Dirty Water Storage, Yard Area Construction;
- CGN 009 Bunds for Agricultural Fuel Oil Tanks;
- **CGN 010** Sluice valves on steel and concrete circular above-ground slurry stores;
- **CGN 011** The use of covers on circular steel and concrete slurry stores;
- CGN 100 Organising contracts for farm waste structures (manure and slurry);
- **Code of Practice for Using Plant Protection Products**, Defra;
- **Protecting our Water, Soil and Air. A Code of Good Agricultural Practice for farmers, growers and land managers**. Defra 2009.
- CIRIA report 126 '**Farm waste storage - guidelines for construction**'.

### 3.3 Odour

**3.3.1** Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

Where an odour management plan is not required:

**3.3.2** The operator shall:

- (a) if notified by the Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Agency for approval within the period specified, an odour management plan;
- (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Agency.

**It is acknowledged that there is likely to be odour from outside of the installation boundary.** The appropriate measures for this sector prevent and where that is not possible minimise these odour emissions.

You are required to submit a written odour management plan as part of your application where your installation meets the following criteria:

- there are sensitive receptors within 400m of the installation; or
- the installation has been the cause of odour complaints.

You may need to update this plan with further measures as necessary to ensure that the condition continues to be met.

There are a number of options available to control odour. We will expect you to balance the costs and environmental benefits in choosing the measures to meet the condition.

If you currently do not need an odour management plan and circumstances change, for example development occurs around your site such that your activities generate complaints, you will be required to have an odour management plan to prevent or minimise those problems.

#### **Where can I get further information?**

- Odour management at intensive livestock installations (Appendix 4);
- H4 Odour guidance;
- **Protecting our Water, Soil and Air. A Code of Good Agricultural Practice for farmers, growers and land managers.** Defra 2009.

### **3.4 Noise and vibration**

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

Where a noise management plan is not required:

3.4.2 The operator shall:

- (a) if notified by the Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Agency for approval within the period specified, a noise and vibration management plan;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Agency.

**It is acknowledged that there is likely to be noise outside of the installation boundary.** The appropriate measures for this sector prevent and where that is not possible minimise these noise emissions.

You are required to submit a written noise management plan as part of your application where your installation meets the following criteria:

- there are sensitive receptors within 400m of the installation; or

- the installation has been the cause of noise complaints.

You may need to update this plan with further measures as necessary to ensure that the condition continues to be met.

There are a number of options available to control noise. We will expect you to balance the costs and environmental benefits in choosing the measures to meet the condition.

If you currently do not need a noise management plan and circumstances change, for example development occurs around your site such that your activities generate complaints, you will be required to have a noise management plan to prevent or minimise those problems.

### **Where can I get further information?**

- Noise management at intensive livestock installations (Appendix 5);
- H3 Noise guidance.

## **3.5 Monitoring**

1.5.1	<p>The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring specified in the following tables in schedule 4 to this permit:</p> <ul style="list-style-type: none"><li>(a) point source emissions specified in tables S4.1, S4.2 and S4.3;</li><li>(b) surface water or groundwater specified in table S4.5;</li><li>(c) noise specified in table S4.6;</li><li>(d) ambient air monitoring specified in table S4.7;</li><li>(e) process monitoring specified in table S4.8;</li><li>(f) land specified in table S4.9</li></ul>
3.5.2	<p>The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.</p>
3.5.3	<p>Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Agency.</p>
3.5.4	<p>Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 4 tables S4.1, S4.2 and S4.3 unless otherwise specified in that schedule.</p>

There will be few farming installations that will need to meet these conditions. Monitoring may be required, for example of ammonia, if an installation has a sensitive conservation site close by.

These conditions will be enforced on a site-by-site basis. Please contact us for further information on these conditions.

## 4. Information

### 4.1 Records

<p>4.1.1 All records required to be made by the permit shall:</p> <ul style="list-style-type: none"><li>(a) be legible;</li><li>(b) be made as soon as reasonably practicable;</li><li>(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and</li><li>(d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender: (i) off-site environmental effects; and<ul style="list-style-type: none"><li>(ii) Matters which affect the condition of the land and groundwater</li></ul></li></ul> <p>4.1.2 All records, plans and the management system required to be maintained by this permit shall be held on the site where practicable, or other location agreed in writing and controlled by the operator.</p>
---

Keeping records for six years makes sure that there will be sufficient information if we have to investigate an environmental incident. We are required to carry out a formal periodic review of all permits, usually once every four to eight years - keeping records for six years will ensure that there are sufficient records to do so.

You must keep records of any off-site environmental effects including pollution incidents that caused, or are alleged to have caused, harm or health effects until you surrender the site. This enables us, in the future, to investigate any cumulative effects of the activities.

You should keep records related to the condition of land and groundwater until you surrender the site. We expect you to keep all records that demonstrate that emissions to land from your activities have not caused any deterioration. The records relate to the initial state of the site. To demonstrate that there has been no deterioration we will expect you to know what this initial state is. The H5 Site Condition Report Guidance provides advice on the appropriate records to keep.

The records you will need to keep until permit surrender will include the design, construction, inspection, monitoring, maintenance and failure records for pollution prevention measures, such as surfacing and drainage. You will also need to record spills and incidents, what you do to investigate and make good

those incidents and any action taken when an Natural Resources Wales officer notes any relevant non-conformances or failures.

Duty of care records only need to be kept for 2 years.

If you manage hazardous waste you will also need to comply with the additional site record and return requirements arising from Part 7 of the Hazardous Waste Regulations.

Records may be held electronically. Times should be recorded using the 24-hour clock.

A summary of the records, reviews and plans are below:

- raw materials inventory;
- noise and/or odour management plans (where applicable);
- management system including inspection and maintenance schedule, and staff training records;
- accident management plan;
- site condition report;
- site closure plan (this will help you surrender your permit);
- manure management plan for installations spreading manure or slurry on land owned by the operator;
- records relating to arrangements for spreading on third party land for installations disposing of manure and slurry off site;
- records relating to other arrangements for off site disposal of manure or slurry;
- energy review (installations without Climate Change Agreement);
- raw materials review;
- water review;
- waste minimisation review;
- complaints record;
- records of manure/slurry disposal and recovery off-installation;
- records to demonstrate you have implemented the manure management plan;
- records of soil/manure/slurry analysis (for installations spreading on the site);
- livestock numbers and movements;
- record of pollution incidents and remedial action for the site closure plan;
- results of any monitoring carried out;



- any housing and drainage improvement plan;
- any proposals for covering or replacing existing uncovered slurry stores and lagoons;
- any proposals for installing an impermeable base with effluent containment for manure stores.

## 4.2 Reporting

All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency.

- 4.2.1 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report(s) shall include
- 4.2.2 as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

Where you do not have the information specified in condition 4.2.1 or 4.2.2 then you do **not** need to submit a report to us.

Condition 4.2.4 is intended to require a periodic review of BAT for the installation. As the condition sets out this cannot be any more regularly than every four years. We will write to you when such a review is required. Guidance on what to provide will be sent to you with the notice.

## 4.3 Notifications

- 4.3.1 The Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
  - (b) the breach of a limit specified in the permit; or

- (c) any significant adverse environmental effects.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in Schedule 6 to this permit within the time period specified in that schedule.

4.3.3 Where the Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Agency shall be notified in writing at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.6 The Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, the Agency shall be notified within one month of:

- (a) a decision by the Secretary of State and the Welsh Ministers not to re-certify the agreement;
- (b) a decision by either the operator or the Secretary of State and the Welsh Ministers to terminate the agreement; and
- (c) any subsequent decision by the Secretary of State and the Welsh Ministers to re-certify such an agreement.

The phrase “without delay” means that you must notify us as a priority, as soon as is practicable. Significant adverse environmental effects include harm to any sensitive receptors and significant impacts on properties. Examples of incidents or accidents requiring notification might be contaminated run-off causing pollution, containment failure and loss of yard washings to surface water, or a spillage of fuel oil.

During normal working hours, you may be able to contact the site officer or the local Natural Resources Wales office by telephone, fax or email. You can also use Natural Resources Wales’s incident hotline, 0800 807060. Calls are free and the hotline operates 24 hours a day, seven days a week.

Written confirmation should usually be made by fax but could be made by email.

After an incident or accident, you need to review the accident management plan as required by condition 1.2.

## **4.4 Interpretation**

4.4.1 In this permit the expressions listed in Schedule 7 shall have the meaning given in that schedule.

In this permit references to reports and notifications mean written  
4.4.2 reports and notifications, except where reference is made to notification being made “without delay”, in which case it may be provided by telephone.