

How to comply with your environmental permit for intensive farming

Appendix 7

Undertaking a housing review

Version 3

February 2012

Published by:

Environment Agency
Horizon House
Deanery Road
Bristol, BS1 5AH
Tel: 03708 506 506

Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

© Environment Agency

GEHO0110BRSD-E-E

First published April 2008
This version February 2012

All rights reserved. This document may be reproduced with prior permission of the Environment Agency.

This is an uncontrolled document. To ensure you are using the latest version please check the Environment Agency website www.environment-agency.gov.uk

Record of changes:

Version	Date	Change
1	April 2008	Published version
2	January 2010	Guidance republished as an appendix to version 2 of How to comply with your environmental permit for intensive farming. Technical content of guidance is unchanged.
3	February 2012	Amended to reflect the need to submit review with application. Technical content of guidance is unchanged

Introduction

All farms permitted under the Environmental Permitting Regulations (formerly the Pollution Prevention and Control Regulations) are required to work to achieve Best Available Techniques (BAT).

All new installations must meet BAT (Best Available Techniques) standards **before** a permit is issued. If you have an existing farm which is expanding above the threshold, you should review any existing livestock housing and identify all aspects of the design and management which does or doesn't meet BAT standards. Where you identify any improvements you can make to either the design or management of housing to reduce any emissions, you should submit an Improvement Plan with a timetable for implementation **with your application**. This plan may be included as part of an improvement programme within your permit.

Any plan should take account of the appropriate measures identified in S5.2 & S6.2 of Technical Guidance Note (TGN) How to Comply, Version 1 (or Version 2). It should identify measures to reduce emissions to all media and the likely cost of these measures.

Reviews which include planned improvements for future implementation will be assessed against the risks of pollution before a permit is issued.

- For some installations with uniform, modern and purpose built buildings, the review of housing may be simple, and may result in very little action required to be included in the plan. For others, with a range of building types, often utilising outdated technologies and not specifically designed for their present role, the resulting actions may be more extensive.
- The review should identify the aspects of your housing design and management that contribute to emissions from the installation. This will help you to identify whether any improvements are needed. These may be either by changing management practises (doing things differently) and/or adapting or installing physical structures. The changes you identify will form the actions in your plan.
- There may be a large range of building types and production systems within a single installation. The following guidance explains a systematic approach to carrying out a review of housing on your farm whatever type of buildings you have. This can help you to produce a plan that identifies where improvements may be needed and how they may be achieved.
- Where an installation includes multiple sites, you will need to complete a housing review for each individual site.

Before you start

- For permits that reference version 1 of How to Comply, you will need to refer to the IPPC Technical Guidance Note 'How to Comply – *Guidance for intensive pig and poultry farmers* – April 2006' (chapter 5 for poultry, chapter 6 for pigs). For permits that reference version 2, you will need to refer to chapter 2 of this document. This How to Comply document sets out Best Available Techniques (BAT) for the intensive farming sector.
- You must complete a review for **each** livestock building in an installation. The template can be used for any building whatever its role.
- We don't expect your plan to compromise the health and welfare of your livestock.

Using this guidance

Step 1 – Follow the flow chart on page 5 to **identify if each building's design conforms to BAT** as described in How to Comply.

- The flow chart will identify the relevant section in How to Comply which will show the standard of design and management that's required to achieve BAT.
- There are additional guidance checklists on pages 7 and 8 of this document.

Step 2 - Follow the flow chart on page 6 to **identify if the management of each building conforms to BAT** for manure management, temperature management and ventilation management. Answer each question in turn.

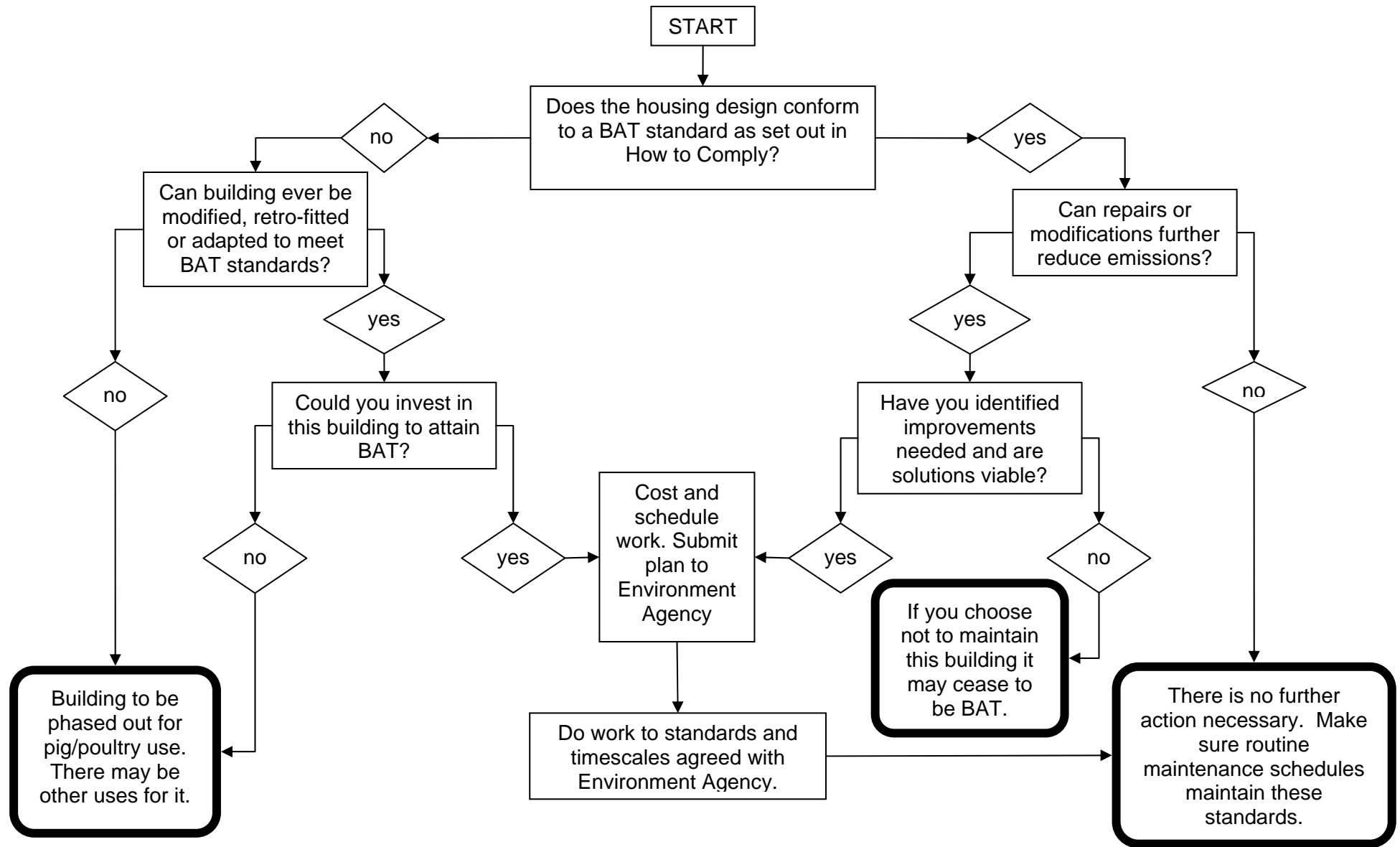
- The flow chart will identify the relevant section in How to Comply which will show the standard of design and management that's required to achieve BAT.
- There are additional guidance checklists on pages 7 and 8 of this document.

Step 3 – **Summarise the buildings.** Page 9 of this document is a table for you to provide a summary of all of the housing on the installation. It records whether each building has reached BAT for both design and management. Any building in which either the design or management isn't yet BAT should be recorded on the Improvement Plan (see Step 4).

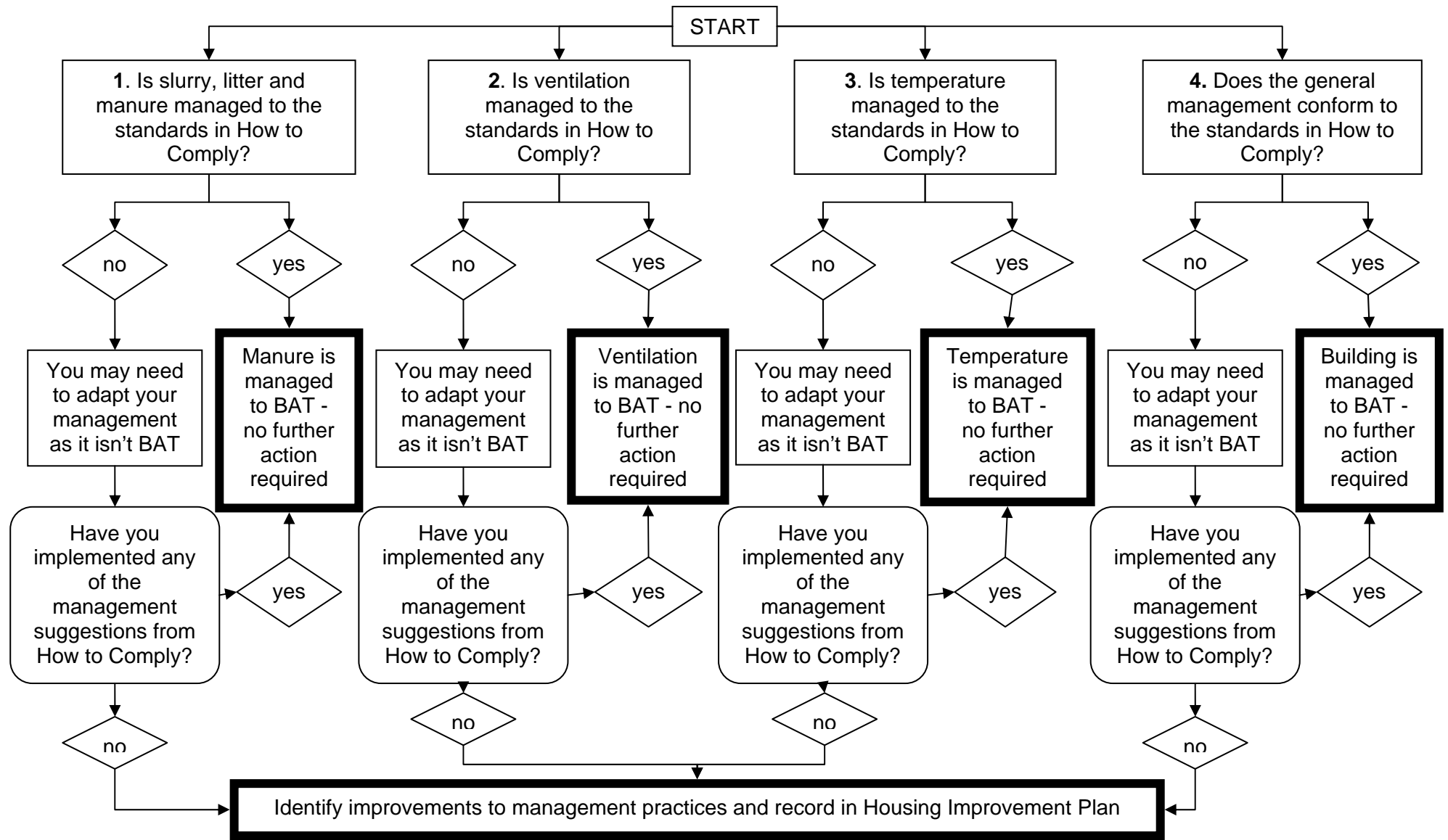
Step 4 – **Produce the Improvement Plan.** Where you identify any improvement you can make to either the design or management of the housing which will help to reduce the emissions, then you should enter this in the Improvement Plan at the back of this guidance, with a timetable for implementing it.

Step 5 – **Submit the plan** to your Environment Agency officer within 12 months of your permit being issued. Timescales for improvement must be agreed with the officer before you implement them.

Housing design – the route to BAT



Housing management – the route to BAT



The following list identifies a number of emission reduction measures that may be considered as part of your housing improvement plan when reviewing housing design and management. It isn't exhaustive and not all measures will be appropriate for all housing types. It's in addition to the suggestions in [How to Comply](#) (Version 1 or Version 2).

Piped systems – there may be mains pressure drinking supplies, pressurised washer lines or pumped feed lines. Check that:

- there are low pressure cut-off valves at the pump for liquid feed systems to protect against pipe failures;
- there are anti-back siphoning measures installed where appropriate;
- if they are above or below ground, isolation taps or gate valves are present;
- there is protection from frost, impacts and livestock.

Drinkers and feed troughs – these may be tanks/troughs, bowls, nipples, bell, metal or glazed ceramics. Check as appropriate that:
Drinkers

- are set at the correct height;
- shut off correctly;
- can be altered during the production cycle;
- spills can be either caught (in troughs under drinkers), absorbed by litter, or are able to drain away quickly.

Feed troughs

- feeder pipes are tamper-proof;
- automatic feeding systems have emergency cut-out mechanisms installed.

Manure management - this will vary according to the systems employed in any individual building. Check that:

- the location of dunging areas is not being adversely influenced by draughts, damp, temperature;
- the removal of manure and slurry from buildings is frequent and that it works (this may rely on slopes, pumps or vacuum systems) – laying hens with long production cycles may involve removal only at the end of each batch;
- deep littered housing – for both pigs and poultry – has an impermeable base;
- passageways without channel or drain inlets at intervals along their length are scraped and/or littered frequently enough to avoid ponding (which is a source of ammonia and odour).

Ventilation and temperature – when considering how well the building reaches and maintains the desired temperature it may be necessary to look at all aspects of ventilation including both its design and its operation. The following factors can all influence emissions of dust, ammonia and odour from a building.

If the answer to any of the following points is **yes** then you may wish consider addressing them in your Housing Improvement Plan:

- If fans discharge through roofs or side-walls can the dust contaminate otherwise clean roof or surface water run-off?
- Is insulation lacking, damaged or wet? Ineffective insulation contributes to condensation and may adversely affect litter dry matter.
- Does ventilation management cause noise problems – duration, volume, pitch and frequency?

Also, if the answer to any of the following points is **no** then you could consider addressing them in your Housing Improvement Plan:

- Have humidistats or thermostats been checked to ensure that they work and have been calibrated?
- Are vents maintained, efficient, clean, and adequately sized?
- Are automatic ventilation systems which utilise both fans and vents achieving effective temperature and humidity control?
- Is the air filtered?
- Is the formulation and the transport of feed managed to minimise dust risk? Meal is inherently dustier than nuts or pellets.
- Is litter introduced into buildings with consideration to minimising the creation of airborne particles?

Housing Improvement Plan – Examples of possible improvements, solutions and timescales

Area needing Improvement	What needs to be done – possible solutions	Proposed cost	Proposed timescale for completion	Timescale agreed with Environment Agency
Building design changes – these are likely to involve the largest costs. They may need a staged approach to design, finance, build and commission. You may need flexible milestones to allow external agencies (planning and appeals) to grant approvals etc.				
<i>Weaner house is not BAT (converted sow house)</i>	<ul style="list-style-type: none"> • <i>Replace building:</i> <ol style="list-style-type: none"> 1) <i>engage consultant and agree design and location</i> 2) <i>apply for planning permission to construct new building</i> 3) <i>start using new building</i> 4) <i>de-commission old building</i> 		<i>6 months</i> <i>9 months</i> <i>24 months</i> <i>28 months</i>	
Building management changes – these are likely to involve the least costs.				
<i>Damp litter at west end of Broiler Shed 3 during rainfall if wind from east</i>	<ul style="list-style-type: none"> • <i>Block up any holes</i> • <i>Monitor litter during rainfall events and add extra litter/install space heater to dry wet litter</i> • <i>Extend fan hood at end of building to protect it from rain</i> • <i>Damp-proof wall at west end of building to prevent seepage</i> 		<i>1 month</i> <i>6 months</i> <i>9 months if fan hood extension doesn't solve problem</i>	
<i>Manure juice leaking from finisher shed muck passageway doors</i>	<ul style="list-style-type: none"> • <i>Check floats in drinker to minimise spillages</i> • <i>Can spillages be collected by troughs beneath drinkers</i> • <i>Use more bedding – especially near doorways</i> • <i>Use end pen as straw storage</i> • <i>Install sleeping policeman in doorway</i> 		<i>ASAP If no improvement will install barrier at end of current batch</i>	

The above examples show a range of solutions. The first possible solution is the least cost option and this should be tried first to achieve the desired improvement. If this doesn't have the desired effect then you should move onto the next option and continue to work through the options until the improvement is satisfactory. The solutions may need to become more complex and cease to be management changes and become building design changes which may need longer timescales and involve higher costs.

Housing Improvement Plan

Area needing Improvement	What needs to be done – possible solutions	Proposed cost	Proposed timescale for completion	Timescale agreed with Environment Agency
Building design changes				
Building management changes				