

# Environmental permitting: new technology acceptance



## Evidence requirements for intensive farming

v2, July 2013

**We are always keen to hear about new technologies for reducing emissions of air pollutants and odour. To judge whether the technologies can be considered an effective means of control, and to understand the extent to which they work, we need to see robust evidence.**

### **We need to know:**

- What the idea/innovation you are proposing is. Is there a clear explanation for how the technology works and evidence to show that the theory behind it works in practice.
- If the proposed method of applying the technology offers a plausible way of allowing its proposed benefits to be delivered in practice. Evidence for this could come from trials of the technology under realistic operating conditions.
- If the proposed arrangement at any given site has sufficient capacity to deal with the volumes or air/livestock it will be required to treat. Evidence for this will come from full scale studies carried out under the full range of conditions likely to be experienced in operation.
- About the management procedures and ongoing monitoring required to ensure that the technology keeps on working. Will it need cleaning or replacing? If so, how often? What may go wrong with it and what measures will be in place to prevent harm should failure occur?

### **Sources of robust evidence that we will accept are:**

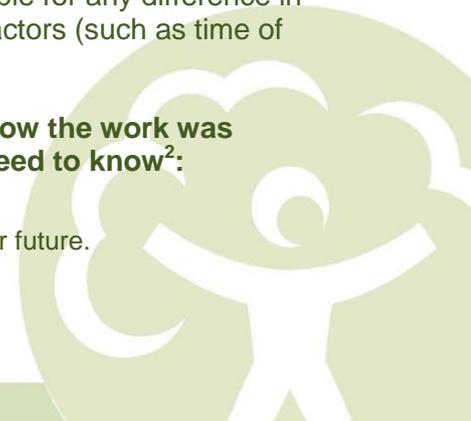
- existing scientific literature or reports;
- well-designed and executed monitoring trials.

### **A well-designed and executed monitoring trial would include<sup>1</sup>:**

- a comparison between the new technology and a control case.
- information on the variation between measurements; measurements over one crop cycle will not be sufficient. Measurements need to show that the results are repeatable and not due to chance/probability or noise in the data.
- controls to demonstrate that it is the new technology that is responsible for any difference in pollution/odour concentrations rather than a change in some other factors (such as time of year or type of feed).

**Any monitoring trial report or existing study must include full details of how the work was carried out as well as the final data and results. For example, we would need to know<sup>2</sup>:**

<sup>1</sup> We will aim to provide examples of successful submissions on our website in the near future.



- that the conditions were representative of 'real-life' operating conditions;
- what temperature, humidity and ventilation rate were used;
- the breed and number of animals involved and over what part of the growth cycle;
- if all the data are reported or whether some have been left out (if so, why).

**We would also need to know details about the monitoring equipment, for example:**

- what monitoring equipment was used?
- was it sufficiently sensitive and properly calibrated?
- where was it positioned, were the measurements representative of what was happening everywhere or were they influenced by local factors? It is highly likely that more than one sensor will be required in a shed.

**Timeframes:**

We strongly recommend applicants and manufacturers to contact us at an early stage in experiment planning to discuss monitoring design set up and reporting requirements. Completed monitoring trials or reports should then be submitted during pre-application discussion to avoid delays during permitting. Submitted reports will be reviewed by an innovation panel comprising members of the Intensive Farming permitting team, Operational Technical Services, Air Quality Evidence and E&B site-based regulation.

**What we will say about new technologies after we have assessed the evidence provided to us:**

- We will only provide general statements about the technology rather than specific manufacturers or products.
- Where the technology is dependent on how it is installed, maintained or other factors we will only give a qualified statement as to its effectiveness in making environmental improvements.

**Who to contact:**

For site specific queries contact the local officer responsible for pre-application discussions. National manufacturers should call the customer service line which will route calls to the most appropriate contact.

**Telephone:** 03708 506 506 (Monday - Friday, 8am - 6pm)

**Telephone from outside the UK:** 00 44 1709 389 201 (Monday - Friday, 8am - 6pm)

**Email:** [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)

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<sup>2</sup> Examples of variables given do not represent an exhaustive list. The variables that will need to be reported will depend on the nature of the technology and the monitoring setup.