

Controlling exposure to poultry dust

An occupational hygiene standard of good working practice for poultry farmers

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Introduction

1 People working in poultry houses inhale many different airborne particles which collectively are referred to as poultry dust.¹ The composition of poultry dust depends on several factors, including the growing or production system, the type of housing, the type and age of the birds and the work activity itself.

2 Poultry dust can harm the respiratory system (nose, throat, airways and lungs) and workers may experience a range of symptoms including sore throat, cough, wheezing, shortness of breath, bronchitis and even occupational asthma. Workers may also experience flu-like symptoms. A statement of evidence² has been prepared which describes the composition of poultry dust and its health effects more fully.

3 Poultry dust is a substance hazardous to health as defined in the Control of Substances Hazardous to Health Regulations 2002 (as amended)(COSHH).³ Because the dust can contain asthmagens, exposure at work should be reduced to as low as is reasonably practicable (see Appendix 1).

4 The Health and Safety Laboratories (HSL)⁴ carried out an extensive survey of the industry for HSE during 2006/07. This showed workers undertaking certain tasks in poultry houses were exposed to high concentrations of poultry dust in some cases for prolonged and repeated periods.

5 This good practice guidance was prepared by a Joint HSE/Industry Working Group which included representatives of the British Egg Industry Council (BEIC), the British Poultry Council (BPC), the National Farmers' Union (NFU), service providers (contractors) to the industry and, latterly, the trade union UNITE.

6 The guidance focuses on a range of common activities or tasks which, the HSL survey showed, place workers at greatest risk. It gives simple practical advice on how to protect workers' health. The guidance applies to all production including rearing farms and may be equally applicable to breeding farms, although these were not covered by the HSL survey.

7 Farmers, growers and producers who follow the guidance will normally be complying with their duty to control exposure to poultry dust under the COSHH Regulations. However, they will still need to complete their own risk assessments^{5,6} to validate the application of the guidance to their own circumstances. In some cases, higher standards of control may be necessary while in other cases lower standards may be justified. Other tasks which are not covered by the guidance may involve a risk to health and will require their own risk assessments.

8 In all cases, employers should consult workers or their representatives when assessing risks and making decisions about control measures. Good communication and co-operation are essential if control measures are to be accepted and adopted by the workforce.

9 In many cases, respiratory protective equipment (RPE) is still required for adequate control of exposure. Appendix 2 has additional advice on managing RPE.

10 This guidance only covers the risk of respiratory disease caused by inhalation of poultry dust. It does not cover other health risks that may be associated with exposure to poultry dust, eg zoonotic infections and other risks associated with working in poultry houses, eg thermal stress, manual handling and machinery. All these risks need to be assessed before reaching final decisions on appropriate and, where necessary, compatible control measures.

11 Separate guidance is available on controlling the risk of zoonotic infections on farms⁷ and, in particular, on handling birds in the event of an avian influenza outbreak (www.hse.gov.uk/biosafety/diseases/avianflu.htm).

12 Growers and producers should also consider the need for high standards of biosecurity to prevent the spread of infectious diseases between flocks.

13 Contractors often carry out the tasks covered by this guidance. This sometimes causes confusion over who is legally responsible for providing worker protection. Appendix 3 contains some basic advice which may help to clarify the respective responsibilities of clients (farmers, growers and producers) and contractors for ensuring the health and safety of workers in situations that may occur on poultry farms.

14 Poultry dust can contain allergens and asthmagens so all workers in poultry houses should be subject to regular health surveillance. Appendix 4 describes an appropriate scheme. A suitably qualified medical practitioner or occupational health nurse should be appointed to provide specialist advice and carry out further investigations when necessary.

Good working practice

Work activities: Good Working Practice: Benchmark Standards

15 This section describes a range of common activities observed on poultry farms during the HSL survey and specifies for each activity the measures agreed by the Joint Working Group that should be taken to protect workers' health. These measures constitute 'good working practice' and are the 'benchmark standards' against which you should compare your own controls.

16 The highest exposure levels (total inhalable dust, bacteria, fungi and endotoxins) measured by HSL are listed for each activity that was monitored during the survey. The opportunity was not available to carry out atmospheric sampling for every activity. These levels are time-averaged over the sampling periods. Full details of the sampling results are contained in the HSL report.⁴ **Short-term peak levels may be much higher than the levels recorded in the report.**

Laying down bedding/litter

Laying down (whole) straw by hand

Typical activity:

Daily addition of litter in a duck growing shed, strawing-up nest boxes etc by tearing a slice from a bale and then scattering by hand while holding the slice under the arm.

Highest exposure levels measured:

Total inhalable dust	84.5 mg/m ³
Bacteria	1.4 x 10 ⁸ cfu/m ³
Fungi	2690 cfu/m ³
Endotoxins	38 903 Eu/m ³

Good working practice:

- Minimise application by hand alone, especially by tearing a slice of straw from a bale. Reduce exposure by mechanical spreading, as far as is reasonably practicable, using a straw chopper powered by a tractor with a fully enclosed, ventilated cab and filtered air intake. Keep the cab windows closed.
- Introduce manual working practices that minimise the release of dust (mould).
- Specify clean, dry, mould-free straw for the supplier. Store in a clean, dry well-ventilated space to reduce the growth of mould. Check its condition before use. Rotate straw stores – use the oldest first and reserve best straw for hand application.
- Maximise the shed ventilation (mechanical/natural) without compromising the welfare of the birds.
- Take a precautionary approach to control and wear filtering RPE with APF of at least 20, eg FFP3. Powered respirators are more comfortable to wear.

Laying down (whole) straw by machine

Typical activity:

Laying initial straw bed in duck growing sheds. Bales of whole straw cut and distributed by a straw chopper mounted on or towed by a tractor. Also daily addition of litter during growing period. Usually single, sometimes double, pass through centre of shed from end to end. Assistant walks in front of the tractor to disperse birds when adding straw in houses that have already been populated.

This task was not included in the HSL sampling survey.

Good working practice:

- Use a tractor fitted with a fully enclosed, ventilated cab and filtered air intake.
- Keep cab windows closed during transit through the shed.
- Use a system of work to minimise exposure, eg restrict spreading to a single pass if an assistant needs to disperse birds in front of the tractor.
- Assistant wears filtering RPE with an APF of at least 10, eg FFP2 where dust exposure is likely.
- Specify a re-entry time (eg 30 minutes) for the air to clear after spreading.

Laying down chopped straw, wood shreds or shavings by machine

Typical activity:

Laying down initial layer of litter in rearing or growing sheds. Litter may be received in bale or bulk form and spread by drag-box, plough or rotary spreader mounted on mini-tractor or skid-steer loader. Some spreaders have integral feed hoppers. Litter is hand-raked around roof support posts and into corners.

Highest exposure levels measured:

Total inhalable dust	34.8 mg/m ³
Bacteria	2.0 x 10 ⁷ cfu/m ³
Fungi	6.0 x 10 ⁵ cfu/m ³
Endotoxins	224 Eu/m ³

Good working practice:

- Purchase dust-extracted wood shreds or shavings.
- Purchase mould-controlled dust-extracted chopped straw.
- Introduce procedures that minimise exposure, eg purchase bales rather than bulk to allow direct delivery into sheds.
- Select spreading equipment that minimises airborne dust.
- Fit vehicles, eg tractors or skid steer loaders used for spreading with enclosed, ventilated cabs and filtered air intakes. Phase out vehicles which do not meet this standard as they are replaced, but no later than 31 December 2013.
- Meanwhile, all drivers of vehicles not meeting this standard wear filtering RPE with APF of at least 20, eg FFP3. Powered respirators are more comfortable to wear.
- Reduce exposure by shed ventilation (mechanical and/or natural) during spreading.
- Introduce low-dust practices for cleaning vehicles, machinery and equipment. Wash or use vacuum cleaners. Avoid blowers and compressed airlines.

Laying down chopped straw, wood shreds or shavings by hand

Typical activity:

Laying down of the initial layer of litter or topping-up litter in rearing or growing sheds. Polythene-wrapped bales are opened by hand and litter is spread over the floor using forks or rakes.

This task was not included in the HSL sampling survey.

Good working practice:

- Purchase dust extracted wood shreds or shavings.
- Purchase mould-controlled, dust-extracted chopped straw.
- Reduce exposure by shed ventilation (mechanical and/or natural) during spreading.
- Use systems of work to minimise exposure, eg work upwind, roll up polythene wrapping rather than folding it.
- Wear suitable filtering RPE with an APF of at least 10, eg FFP2.

Populating houses

Egg production: Point of lay (POL) hens: Barn and cage system

Typical activity:

The POL hens are delivered to the farm in crates stacked in wheeled modules. The modules are either pushed or mechanically raised to the unloading station(s). The hens are lifted from the crates and placed in the houses or cages.

Dust comes directly from birds themselves, ie dander, faecal residues and feathers. The dust is high in protein with an increased risk of respiratory sensitisation.

Highest exposure levels measured:

Total inhalable dust	23.8 mg/m ³
Bacteria	5.1 x 10 ⁷ cfu/m ³
Fungi	11 000 cfu/m ³
Endotoxins	1441 Eu/m ³

Good working practice:

- Reduce exposure by shed ventilation (mechanical and/or natural) during population.
- Introduce systems of work to minimise exposure, eg rotate jobs and workstations.
- Wear RPE with an APF of at least 10, eg FFP2 but preferably at least 20, eg FFP3.
- Exclude all bystanders from the shed during population, as far as possible. If supervisory farm staff must attend, consider their need for RPE. Everyone in the shed during population should wear filtering RPE with an APF of at least 10 and continue to wear it until the air has cleared.

Broiler production: Day old chicks (DOCs)

Typical activity:

A pathway is cleared through the litter down the centre of the shed. Wheeled modules carrying trays of DOCs are pushed down this pathway to the centre of the house. The trays are emptied onto the litter on either side of the pathway. The litter is pulled back over the pathway.

Dust comes directly from the birds themselves, ie dander, faecal residues and feathers. The dust is high in protein with an increased risk of respiratory sensitisation.

Highest exposure levels measured:

Total inhalable dust	5.5 mg/m ³
Bacteria	2.7 x 10 ⁶ cfu/m ³
Fungi	38 400 cfu/m ³
Endotoxins	623 Eu/m ³

Good working practice:

- Subdue lighting to keep birds calm.
- Members of chick gangs wear filtering RPE with an APF of at least 10, eg FFP2.

Turkeys and ducks

Typical activity:

As for broiler production, but some birds are moved at later stage, eg when 7 weeks old, to fresh accommodation. At this later stage, birds are transferred in wheeled modules as POL hens (see 'Populating houses: Egg production').

Dust comes directly from the birds themselves, ie dander, faecal residues and feathers. The dust is high in protein with an increased risk of respiratory sensitisation.

This task was not included in the HSL sampling survey.

Good working practice:

- Reduce exposure by shed ventilation (mechanical and/or natural) during population.
- Introduce systems of work to minimise exposure.
- Catchers and FLT drivers wear RPE with an APF of at least 10, eg FFP2 but preferably at least 20, eg FFP3.

Routine flock management

Typical activity:

Routine flock management covers a range of tasks including inspection, weighing, beak trimming, vaccination, collection of stray eggs etc. The tasks depend on the type of farm and the point in the production cycle.

This task was not included in the HSL sampling survey.

It is difficult to give specific advice about each activity because working practices vary from sector to sector, farm to farm and throughout the growing/production cycle. An additional risk is broken eggs. The contents, when dry to dust, can be inhaled and lead to sensitisation.

Good working practice: General

- Assess the health risks for individual tasks and their ancillary activities, such as egg packing, to determine the appropriate control measures.
- Workers wear RPE with an APF of at least 10, eg FFP2 when performing tasks that involve handling live birds (eg beak trimming, vaccination by hand). This is the normal expectation.
- Reduce exposure by shed ventilation (mechanical and/or natural).
- Disturb the birds and litter as little as possible.
- Perform tasks when dust levels are naturally lowest, eg when birds are not dust-bathing.

Routine house cleaning (Egg production: Cage system only)

Typical activity:

Routine house cleaning involves a mixture of tasks including:

- Clearing dust and debris from the aisles, walkways and ends of the houses using a portable blower.
- Sweeping and mopping floors.
- Dusting ends of egg and feed conveyors.
- Blowing down cages.
- Scraping deposits from muck elevators.

Dust contains large amounts of bird proteins and mite residues. The dust carries a high risk of respiratory sensitisation.

Such dust may also affect bird health.

Maximum exposure levels measured:

Total inhalable dust	4.0 mg/m ³
Bacteria	1.4 x 10 ⁶ cfu/m ³
Fungi	6000 cfu/m ³
Endotoxins	249 Eu/m ³

Good working practice:

- Critically examine cleaning routines and eliminate all unnecessary tasks.
- Discontinue dry sweeping, use of portable blowers and compressed airlines.

- Introduce 'low dust' cleaning methods, eg vacuum cleaning, wet cleaning.
- Never use blowers or compressed airlines to clean clothing.
- Reduce exposure by shed ventilation (mechanical and/or natural).
- Provide good washing facilities.
- Assess the risk of all working practices and consider the need for RPE.

Catching/depopulating

Typical activity:

Catching/depopulation or thinning of birds by hand, often using a modular transport system.

Dust contains large amounts of bird proteins and mite residues. The dust carries a high risk of respiratory sensitisation.

Highest exposure levels measured:

Total inhalable dust	10.4 mg/m ³
Bacteria	9.2 x 10 ⁷ cfu/m ³
Fungi	39 300 cfu/m ³
Endotoxins	16 600 Eu/m ³

Good working practice:

The industry should promote automated or mechanical catching of broilers where this is a viable alternative to manual catching.

- Introduce systems of work^{8,9} that minimise bird disturbance and dust exposure.
- Rotate work activities/stations to reduce the individual worker's exposure (especially for removal of birds from cages).
- Reduce exposure by shed ventilation (mechanical and/or natural).
- Subdue lighting to keep birds calm.
- All catchers, including fork-lift truck drivers wear suitable filtering RPE with an APF of at least 10, eg FFP2, but preferably of at least 20, eg FFP3.

Litter/manure removal

Broilers

Typical activity:

Litter/manure removal may involve the use of:

- a portable blower to clear cobwebs and dust from roof trusses and dislodge residual feed from pans and conveyors;
- a front end or skid steer loader to scrape/shovel litter/manure from the floor;
- a rotary brush mounted on a loader to remove all traces of solid litter/manure from the floor;
- a portable blower or compressed airline to clear dry deposits from around the bases of roof supports;
- a compressed airline to remove dust deposits from fans and fan casings.

Highest exposure levels measured:

Total inhalable dust	33.1 mg/m ³
Bacteria	2.0 x 10 ⁸ cfu/m ³
Fungi	26 700 cfu/m ³
Endotoxins	1140 Eu/m ³

Rotary brushing of shed floors can cause exceedingly high peak dust levels (up to 500 mg/m³). This is approaching a dust concentration that if ignited could result in a dust explosion.

Good working practice:

- Design new sheds to eliminate horizontal surfaces that collect dust, with smooth surface finishes to facilitate cleaning. Also, eaves should be high enough to allow the use of a machine fitted with a cab to clean the whole of the floor.
- Electrical installations and equipment, especially fan motors, should be constructed and installed to prevent water ingress.
- Build smooth, level concrete floors in sheds. Maintain these in good condition.
- Introduce procedures that minimise dust production.
- Discontinue the use of portable blowers and compressed airlines inside sheds to remove cobwebs and dust deposits from roof trusses etc and from around the bases of roof supports or stanchions. If removal is necessary, then introduce alternative 'low-dust' methods such as washing or vacuuming.
- Where the construction of the shed allows, fit vehicles used to remove litter/manure with enclosed, ventilated cabs with filtered air intakes. In this case, replace or phase out vehicles which do not meet this standard before 31 December 2013. Examples of vehicles include front-end loaders, skid-steer loaders and tractors.
- Meanwhile, and in other situations, provide vehicle drivers with filtering RPE, having an APF of at least 20, eg FFP3. Powered respirators are more comfortable to wear.
- Reduce exposure by shed ventilation (mechanical and/or natural). Open all shed doors and vents. Operate all ventilation fans.
- Station the collection lorry/trailer so that the loading machine is upwind when tipping.
- Prevent dust build-up outside the shed, and reduce dust dispersed by vehicle movements. When necessary clean or hose down the loading apron.
- In sheds where the litter/manure is dry and where a high level of cleaning is necessary on hygiene grounds, use cleaning methods that create low dust levels, eg a fixed brush mounted on a skid-steer loader or a road-sweeper type cleaner. Assess the need for additional control measures. Stop dry sweeping with a rotary brush mounted on a skid-steer loader or similar machine.
- Stop the use of compressed airlines to remove dust from extraction fans and casings fitted in side walls of sheds. Wash fans and casings providing fan motors and associated electrical equipment are suitably protected against water ingress.
- If fan motors and associated electrical equipment are not suitably protected against water ingress, it is acceptable to use compressed air to clean wall fans, provided that nozzles are noise-suppressed, cleaning is done from outside in the open air and operators wear RPE with an APF of at least 20, eg FFP3. Powered respirators are more comfortable to wear.
- Never use compressed airlines to clean clothing.

Egg production (cage system)

Typical activity:

Litter/manure removal is similar to broiler sheds except for less, if any, blowing down of cobwebs and dust from structures.

Highest exposure levels measured:

Total inhalable dust	35.4 mg/m ³
Bacteria	8.0 x 10 ⁶ cfu/m ³
Fungi	41 200 cfu/m ³
Endotoxins	6192 Eu/m ³

Good working practices:

Controls are the same as for broiler houses (see 'Litter/manure removal: Broilers').

Egg production (barn system)

Typical activity:

Removal of litter/manure from farms operated on the barn system is different from other farms because all furniture (except the nest boxes) has to be removed before the litter/manure can be accessed. The furniture is dismantled by hand.

Highest exposure levels measured:

Total inhalable dust	107.7 mg/m ³
Bacteria	9.1 x 10 ⁷ cfu/m ³
Fungi	81 000 cfu/m ³
Endotoxins	1190 EU/m ³

Good working practice:

Controls are the same as for broiler houses (see 'Litter/manure removal: Broilers') and, in addition,

- All furniture should be cleaned before dismantling and removal from the sheds. Use 'low dust' cleaning methods, eg low pressure washing.
- Reduce exposure by shed ventilation (mechanical and/or natural).
- Resident farm staff, eg those engaged in cleaning furniture, should wear filtering RPE with APF of at least 20, eg FFP3. Powered respirators are more comfortable to wear.

House cleaning, disinfection and fumigation¹⁰

Broilers

Typical activity:

Sheds are washed down and disinfected after removal of litter/manure. The internal structure is first sprayed with detergent to loosen deposits, then pressure hosed with clean water and finally sprayed with biocidal disinfectant. Furniture is removed and pressure washed. Sheds are sometimes fogged or fumigated with biocide.

This task was not included in the HSL sampling survey.

Good working practice:

- Wear waterproof suit, wellington boots, gloves and ear defenders when using a pressure washer.
- Follow manufacturer's instructions when using a disinfectant. Avoid products labelled R43 (*may cause sensitisation by skin contact*) or H317 (*may cause an allergic skin reaction*) if possible. Wear suitable personal protective equipment, including respirator and face shield or goggles when spraying disinfectant.
- Follow manufacturer's instructions when fogging/fumigating sheds.
- All fogging/fumigation technicians must be competent. The British Pest Control Association (BPCA) runs suitable training courses.
- Prevent access to sheds when fogging/fumigation in progress. Keep sheds secure while under fumigation to prevent unauthorised access. Display warning signs at all entry points.
- Wear suitable respiratory protective equipment to enter the plant room at the end of the fogging/fumigation period to start the ventilation fans. Check the product instructions for details.
- At the end of the fogging/fumigation period, the person in charge should declare the shed safe for reoccupation.

Egg production (barn system)

Typical activity:

See 'Broilers'.

This task was not included in the HSL sampling survey.

Good working practice:

Controls are the same as for broiler houses (see 'House cleaning, disinfection and fumigation: Broilers').

Egg production (cage system)

Typical activity:

Use compressed airlines to blow deposits from cages, conveyors and surrounding structures. Remove and scrape out trays of egg conveyors. Remove dried-on deposits on floors. Sweep floors. Steam clean and sterilise ends of cage system, especially the egg conveyors.

Maximum exposure levels measured:

Total inhalable dust	67.9 mg/m ³
Bacteria	4.4 x 10 ⁶ cfu/m ³
Fungi	10 000 cfu/m ³
Endotoxins	4014 Eu/m ³

Good working practice:

Controls are the same as for broiler houses (see 'House cleaning, disinfection and fumigation: Broilers') where appropriate. Also:

- Critically examine the cleaning routines and eliminate all unnecessary tasks.
- Manage and organise the cleaning of laying areas to minimise exposure of other workers, eg contractors working in the pit.
- Stop dry sweeping, the use of portable blowers and compressed airlines etc as far as reasonably practicable. Only use compressed airlines and blowers where absolutely necessary. Use noise-suppressed nozzles on compressed airlines used to remove dust from cages, conveyors and surrounding structures.
- Introduce 'low dust' cleaning methods, eg vacuum cleaning, wet cleaning (mopping).
- Never use blowers or compressed airlines to clean clothing.
- Assess the exposure risks from all working practices and consider the need for workers to wear RPE (with the appropriate protection factor).

Appendix 1: Adequate control of exposure to poultry dust

- 1 Regulation 7(1) of the Control of Substances Hazardous to Health Regulations 2002 (as amended) (COSHH) requires every employer to ensure that employees' exposure to substances hazardous to health is either prevented or, where this is not reasonably practicable, adequately controlled.
- 2 Poultry dust is a substance hazardous to health and may contain allergens and asthmagens as defined in the Regulations.
- 3 Furthermore, COSHH regulation 7(7) states that where it is not reasonably practicable to prevent exposure to a hazardous substance, control of that exposure shall only be treated as adequate if:
 - the principles of good practice for the control of exposure (set out in Schedule 2A to the Regulations) are applied;
 - any workplace exposure limit (WEL) is not exceeded;
 - exposure is reduced to as low as is reasonably practicable.
- 4 No workplace exposure limit has been set for poultry dust.
- 5 The Regulations place emphasis on securing good control practice which in turn should result in exposure being reduced to as low as reasonably practicable.
- 6 Good control practice includes engineering controls such as enclosure and ventilation, systems of work and personal behaviour. For certain particularly dusty activities, suitable respirators will also be necessary. Respirators should only be used as a last line of protection to control exposure, in addition to and not as a substitute for other control measures.

Appendix 2: Respiratory Protective Equipment (RPE)

- 1 Respiratory protective equipment (RPE) will remain the main means of controlling exposure to poultry dust for many workers.
- 2 The benchmark standard lays down the minimum levels of protection that should be provided for a range of common activities. Local risk assessment should confirm that the standard will provide adequate protection in actual working conditions. A different level of protection may be appropriate or required in some cases.
- 3 RPE should be capable of providing adequate protection and should fit the wearer properly. Take all factors into account when selecting the equipment, eg the nature of the work, the working environment and the features of the wearer, eg face shape, facial hair, spectacle wearer. Other risks, eg the risk of eye infection, may also need to be taken into account.
- 4 The workers themselves should be involved in the selection process.
- 5 All RPE should be manufactured to a suitable standard and should be CE marked. Nuisance disposable dust masks do not provide protection against harmful dusts and should never be used at work. They are not CE marked.
- 6 Selecting the right respirator for each user is essential. It is unlikely that one particular type or size of respirator will fit everyone.
- 7 Face-fit testing (either qualitative or quantitative) must be carried out for all respirators that rely on a good face seal to be effective, ie disposable, half and full-face masks.
- 8 Face-fit testing ensures that the respirator is capable of fitting properly.
- 9 Fit testing is not required for loose-fitting equipment such as ventilated visors and hoods.
- 10 Facial hair affects the performance of close-fitting respirators, so faces should be clean shaven for optimum performance. Workers with beards should be provided with ventilated hoods or visors.
- 11 All users of RPE should be adequately instructed and trained in its correct use and, in particular, should be shown how to check the fit before each use. The simplest seal check is as follows:
 - Put on the respirator and tighten the straps.
 - Block the filter or the filtering surface with the hands without deforming it.
 - Inhale gently to create a slight vacuum and the respirator should flatten slightly. If not, there is a leak in the seal.
- 12 The procedure is illustrated in the *Toolbox talk on poultry dust*.¹¹
- 13 Workers must make full and proper use of RPE and farm managers, as well as team leaders and supervisors, have a duty to ensure that it is worn properly at the correct times. RPE should be worn continuously throughout the work period, otherwise its benefit will be lost.

14 All re-usable RPE should be checked for correct operation before each use, in accordance with the manufacturer's or supplier's instructions. The equipment should be regularly cleaned and maintained and should be disinfected between use on different farms. The equipment should be stored in a clean and safe place when not in use. It should not be left lying around the workplace or in the back of a van.

15 Experience should determine how often disposable respirators are changed but they should never be used for more than one shift. Replacement masks should be readily available at the point of use.

16 More detailed information on managing RPE can be found in the HSE guidance, *Respiratory protective equipment at work: A practical guide*.¹²

Appendix 3: Managing contractors

1 This Appendix is intended to help poultry farmers to understand their legal responsibilities for health and safety when they use contractors to carry out work on their farms, eg laying down litter, catching birds, removing manure, cleaning houses etc. It explains good practice which should ensure that all risks are properly managed.

2 In this situation, the farmer and the contractor share responsibility for managing the health and safety of the contractor's workers but the extent of each party's responsibility will depend on the exact circumstances. Although primary responsibility remains with the contractor, as their employer, the farmer attracts a range of duties which include:

- selecting a competent and reliable contractor;
- preparing and agreeing a service contract;
- providing site induction;
- co-ordinating activities to minimise the risks;
- checking the performance of the contractor;
- reviewing the contractor's performance.

Selecting a competent and reliable contractor

3 Contractors should be selected with care and health and safety should be a key consideration in the selection process. Before awarding a contract, the farmer should assess the ability and competency of all potential contractors to manage health and safety. Useful evidence includes copies of health and safety policy statements, risk assessments and training records.

4 The selected contractor should be familiar with this industry benchmark standard and should have sufficient resources, especially suitable equipment and machinery, to ensure workers are adequately protected.

Preparing and agreeing a service contract

5 Contractors invited to tender should be made fully aware of how the work should be done and the standard of health and safety expected of them. Contractors' responsibilities for health and safety, eg the provision of RPE should be agreed and confirmed in writing in the terms of a formal contract. The contract should spell out exactly what the contractor has to do to meet his responsibilities for health and safety. The arrangements for first aid and welfare should also be agreed. There should be no doubt about who is responsible for what.

Providing site induction

6 Communication is a key element of managing contractors. Every contractor should be made aware of any hazards on the farm that may affect his workers, eg traffic movements and should be made aware of the farm's health and safety rules and procedures.

7 All workers should be given a brief site induction on first arrival to explain the safety rules and procedures; especially what to do in the event of an emergency.

8 A site contact should be appointed to liaise with the contractor's representative. This person should normally be the farm manager.

Co-ordinating activities to minimise the risks

9 The activities of resident farm workers and those of the contractor should be co-ordinated to minimise the risks to both sets of workers, eg resident workers should avoid blowing down cages whilst contractors are removing manure from the pit below.

Checking the performance of the contractor

10 Contractors are responsible for supervising their own workers and monitoring their own health and safety performance. However the farmer should make periodic checks on the contractor to make sure that the work is being done as agreed in the contract. Farmers should not just leave contractors to get on with the job and turn a blind eye to unsafe practices and disregard for safety rules. Farmers should be positive and carry out checks and inspections. Farm staff should know what action to take if they find any problems. This should be agreed and included in the contract at the outset.

Reviewing the contractor's performance

11 Both the farmer and the contractor should review the execution of the contract at regular intervals to see if the performance could be improved in the future.

12 Good communication and co-operation are the crucial factors in the successful management of contractors.

Appendix 4: Health surveillance

1 Poultry dust may contain elements that are respiratory sensitisers. It is therefore essential that health surveillance is undertaken to enquire positively about any early symptoms of ill health. Employers have a legal duty to carry out health surveillance under COSHH (see regulation 11 and Appendix 3).

2 The objectives of health surveillance are to:

- protect the health of individual workers by detecting, as early as possible, symptoms that may be caused by exposure to substances hazardous to health;
- help evaluate the effectiveness of measures taken to control exposure;
- collect information to update knowledge of health hazards in the workplace.

- 3 As a **minimum**, health surveillance should include:
 - Pre-employment screening that includes a questionnaire about present or past asthma or chest illness.
 - Informing new starters about what symptoms they should look out for and report.
 - Completion of a questionnaire for all workers after employment at 6 weeks, 12 weeks (or similar intervals) and at least annually thereafter to enquire about any developing symptoms. The questionnaire should be administered by a responsible trained person who understands the purpose of the questionnaire and knows how to interpret the answers and what action to take if any adverse effects are found.
 - Keeping an individual health record for each worker. This should not include any personal clinical or medical data. Any such information should be treated in confidence and kept separately and securely.
- 4 Lung function testing may also help with assessing a worker's respiratory health.
- 5 Each employer should also identify a named occupational health professional (doctor or nurse) who can:
 - help to develop the scheme;
 - train the responsible person;
 - advise on any adverse findings from the questionnaire and, in particular, fitness to continue in the work;
 - make arrangements for further investigations where necessary.
- 6 Each employee should be given information about the health risks associated with exposure to poultry dust, the relevant symptoms to look out for and the need to report any symptoms to the nominated responsible person.

Appendix 5: References

- 1 *Poultry dust: Definition* HSE 2009 www.hse.gov.uk/agriculture/poultry
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- 5 *A step by step guide to COSHH assessment* HSG97 (Second edition) HSE Books 2004 ISBN 978 0 7176 2785 1
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8 *Joint industry welfare guide to handling of end of lay hens and breeders
(domestic fowl)* www.defra.gov.uk/animalh/welfare/layers/layerscode.pdf

9 Freedom Food Standard *RSPCA welfare standard for chickens* 2008
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out fumigation operations* HSG251 HSE Books 2005 ISBN 978 0 7176 2999 2

11 *A toolbox talk on poultry dust: Preventing occupational respiratory disease in
poultry farm workers* HSE 2009 www.hse.gov.uk/agriculture/poultry/toolboxtalk.pdf

12 *Respiratory protective equipment at work: A practical guide* HSG53
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