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Food & Rural Affairs

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Notifiable Avian Disease Control Strategy for Great Britain

January 2012

Revised September 2015



Llywodraeth Cymru
Welsh Government



The Scottish
Government



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1 Foreword and introduction

1.1 Purpose and structure of document

This document describes how an outbreak of exotic notifiable avian disease (NAD) in Great Britain (GB) would be managed and sets out the measures that would be applied. It also describes the measures and wider framework in place to prevent and limit an incursion of NAD.

The strategy aims to enable all affected during an outbreak of NAD to be better prepared to respond quickly and effectively to controls and limit the outbreak, thereby mitigating the likely impact of the control measures described.

A glossary of terms and acronyms used in the strategy is contained in Annex 1 - Glossary of Terms.

1.2 Approach

Since NAD could spread throughout GB irrespective of regional and political boundaries, the approach to managing an outbreak seeks complementary, consistent and coordinated measures in all regions. This control strategy is endorsed by the Department for Environment, Food and Rural Affairs (Defra), Scottish Government (SG) and Welsh Government (WG) (referred to as *Government* in this document). Responsibility for managing an outbreak in respective regions falls to the respective Governments.

Northern Ireland is recognised as a separate epidemiological unit and would expect to operate separate but similar controls in the event of an outbreak of NAD, in accordance with European legislation (see also the [All Island Animal health and Welfare Strategy](#))

This control strategy was prepared in consultation between Government, delivery agents, the veterinary profession and a group of stakeholders with expertise relating to NAD outbreaks and their impact on owners/keepers of poultry and other captive birds.

The strategy reflects various pieces of legislation which set out the control measures to be implemented when NAD is suspected or confirmed in GB (see Annex 2 – European and GB legislation for the control of NAD).

1.3 Strategic fit

This control strategy is consistent with the following:

- The GB Animal Health and Welfare Strategy's principle that "prevention is better than cure."
- Compliance with European law and international obligations to trading partners.

- Ongoing obligations for the welfare of animals.
- Wildlife management policies.
- Government's exotic disease contingency plans ([Defra's Contingency Plan for Exotic Diseases of Animals](#), [Scottish Government's Exotic Animal Disease Contingency Framework Plan](#) and the [Welsh Government Contingency Plan for Exotic Animal Diseases](#)).

1.4 Disease strategic control framework

1.4.1 Disease management principles

Managing NAD involves managing risk. Exotic diseases are defined as those not normally present in the country and therefore risk management in this case consists of:

- Reducing the likelihood of outbreaks of NAD by putting in place appropriate preventive measures.
- Ensuring such diseases are rapidly detected if incursion does occur.
- Taking preparatory measures to reduce the impact of such an incursion.

Whilst the majority of the elements in this control strategy will only come into force if NAD is detected, readiness to operate these measures and minimise their impacts needs to be put in place in advance. This document is also therefore aimed at assisting all keepers of poultry or other captive birds in their contingency planning and preparation.

1.4.2 Disease control objective

If NAD is detected within GB, the key objective is to ensure a swift and effective response to the incident, rapidly assessing and closing down all risk pathways to poultry and other captive birds and resolving uncertainties as soon as possible. Government's aim is to prevent the spread of infection to domestic poultry and other captive birds through proportionate and evidence-based control measures which also:

- Ensure maximum protection of human safety and in particular worker safety in the event of an outbreak in poultry or other captive birds.
- Provide due protection for the welfare of poultry or other captive birds.
- Minimise the impact on international trade, the economy and the sustainability of the poultry industry/other captive bird sector.

In achieving this aim, and in accordance with Government's Framework Response Plans for Exotic Animal Diseases, the disease control strategy aims first and foremost to restore the United Kingdom's (UK) disease free status as quickly as possible. In doing so, Government seeks to select control strategies which:

- Protect public health.

- Minimise the number of animals which need to be culled either to control the disease or on welfare grounds.
- Cause the least possible disruption to the food, farming and tourism industries, to visitors to the countryside, and to rural communities in the wider economy.
- Minimise damage to the natural environment.
- Minimise the burden on the taxpayers and the public.

1.4.3 Approach to disease control

Key principles include:

- Early detection and reporting of suspicion of NAD to limit the extent to which disease can spread before controls are brought into force, thereby reducing the extent of the outbreak.
- Containing disease at premises where it is detected and eradicating it swiftly and effectively.
- Limiting the risk of any further spread of disease from premises connected with the infected premises (IP).
- Limiting the risk of any further spread of disease to other premises in the vicinity of the IP.
- Undertaking risk assessments based on an epidemiological assessment before easing restrictions.
- Continuing heightened surveillance before easing restrictions.
- Complying with European legislative obligations.

2 Definitions of notifiable avian disease

There are two NADs – avian influenza (AI) and Newcastle disease (ND). A notifiable disease is one that must be notified by law if it is suspected or diagnosed.

Anyone in possession of any bird or bird carcass (excluding a wild bird or wild bird carcass) which they suspect may be infected with NAD must immediately notify the duty vet at their [local Animal and Plant Health Agency \(APHA\) office](#). In addition, any person who has in their possession a mammal or mammal carcass which they suspect may be infected with influenza virus of avian origin (see Section 12) must inform their [local APHA office](#).

At this stage, an important clarification must be made. Only certain AI viruses and avian paramyxoviruses (of which avian paramyxovirus type 1 (APMV-1) virus causes ND) require government intervention (definitions for AI and ND are provided in Annex 1 - Glossary of Terms). These can only be distinguished from viruses not requiring government intervention (i.e. those that fall outside these definitions) through laboratory testing. Therefore, any clinical signs or laboratory test results that lead to suspicion of infection with NAD viruses must be immediately notified to the duty vet at the [local APHA office](#).

2.1 Avian influenza

2.1.1 Avian influenza in poultry and other captive birds

There are many strains of AI viruses, which vary in their ability to cause disease. AI viruses are categorised according to this ability to cause severe disease (pathogenicity) in avian species as either highly pathogenic or low pathogenic. They are also categorised according to the properties of their surface proteins (haemagglutinin (H1-H16) and neuraminidase (N1-N9)). To date, only AI viruses of subtypes H5 and H7 have caused highly pathogenic infection in birds. Based on this and for the purposes of the NAD control measures outlined in this document, AI is defined as:

- An infection of poultry or other captive birds¹ with any highly pathogenic influenza A virus (see Annex 1 - Glossary of Terms: *Highly pathogenic avian influenza*).
- An infection of poultry or other captive birds with influenza A virus of H5 or H7 subtype that is not classified as highly pathogenic (see Annex 1 - Glossary of Terms: *Low pathogenic avian influenza*).

Highly pathogenic avian influenza (HPAI) can rapidly cause severe disease, usually with high mortality, in chickens and turkeys (and other “galliform” poultry) but may not cause obvious disease in waterfowl. Infection in galliform poultry is associated with severe

¹ For definitions of *poultry* and *other captive birds*, please see Annex 1 - Glossary of Terms.

systemic disease, possibly sudden death, and signs include quietness, depression, drops in feed/water intake and in egg production, followed by respiratory signs (such as sneezing, coughing, ocular and nasal discharge, and sinusitis) or nervous signs (such as incoordination, twisted necks and drooping wings). There may also be diarrhoea, swelling of the head and blue discolouration of the comb and wattles.

Low pathogenic avian influenza (LPAI) does not always cause obvious disease in birds but this can be aggravated by secondary infections or stressors. Infection may be associated with significant drops in feed/water intake and in egg production in laying birds. There may be respiratory signs such as sneezing, coughing, ocular and nasal discharge, and sinusitis.

AI is predominantly spread by movement of infected birds or contact with respiratory secretions, and in particular faeces, either directly or through contaminated objects.

2.1.2 Avian influenza in wild birds

AI viruses are known to circulate in the global wildfowl population. These viruses may be of all influenza A subtypes and are usually LPAI viruses. However, there has been evidence of HPAI virus spread in wild birds (e.g. HPAI H5N1). In relation to AI in wild birds, action will only be taken in the event of HPAI H5N1 being confirmed in a wild bird or wild bird carcase (see Section 13).

2.1.3 Avian influenza in humans and other mammals

AI is caused by influenza viruses closely related to human influenza viruses. Transmission to humans in close contact with poultry or other captive birds occurs rarely and only with some strains of AI viruses. In rare cases, some strains have led to severe disease and deaths in people where infection has resulted from close contact with infected birds. To date, such strains have been associated with limited human to human transmission. There is evidence that AI viruses can exchange genetic material with human influenza viruses in humans and result in the emergence of new viruses that may be capable of being spread easily between people. The global human population may have little or no immunity to a new influenza virus that significantly differs from recent or existing strains of human influenza viruses. Therefore, for any outbreak of AI (or viruses that include a re-assortment of genetic material including AI virus) workers and veterinarians in close contact with infected birds must be appropriately protected (see Section 7.3). More information is available from the [World Health Organisation](#).

In addition to human infection, AI viruses can also infect other species of mammals (see Section 12).

(For further information on AI, see: [World Organisation for Animal Health](#); [European Commission](#); [Defra](#); [Scottish Government](#); [Welsh Government](#)).

2.2 Newcastle disease

2.2.1 Newcastle disease in poultry and other captive birds

For the purposes of the NAD control measures outlined in this document, ND is defined as:

- An infection of poultry or other captive birds caused by any avian strain of the paramyxovirus 1 fulfilling certain criteria for virulence (see Annex 1 - Glossary of Terms: *Newcastle disease*).

Newcastle Disease can produce variable clinical signs in affected birds but mortality can be high and young birds are particularly susceptible. The disease can present as a very acute form ranging to mild or sub-clinical disease. The signs depend on which body system the strain of the virus predominantly affects (the respiratory, digestive or nervous system) and can have a sudden onset and high mortality. Signs can include quietness, depression, drops in feed/water intake and in egg production in laying birds with a high proportion of eggs laid with abnormal (soft) shells. There may be respiratory distress (with gaping, coughing, sneezing, gurgling and rattling), yellowish green diarrhoea or nervous signs (such as tremors, incoordination, twisted necks and drooping wings and paralysis).

APMV-1 viruses are known to circulate in wild bird populations. Usually these are viruses of low virulence. However, there have been reports of probable spread of virulent strains by wild birds. There is also evidence that low virulence viruses may rarely mutate to high virulence strains in poultry.

(For further information on ND, see: [World Organisation for Animal Health](#); [European Commission](#); [Defra](#); [Scottish Government](#); [Welsh Government](#)).

2.2.2 Pigeon paramyxovirus type 1

A pigeon-adapted strain of APMV-1 also occurs, also known as pigeon paramyxovirus type 1 (PPMV-1). In pigeons infected with this virus, clinical signs include diarrhoea, reluctance to move or take exercise, depression, anorexia, quietness and nervous signs. In the GB domestic pigeon population there are, on average, 15-20 cases of the disease per annum, principally in pigeon lofts (see Section 10.1.3 and 10.2.4 on control measures specific to outbreaks of PPMV- 1 in pigeons).

Infections are usually restricted to pigeon lofts. However, occasionally virulent strains of this virus strain can infect poultry causing ND (e.g. outbreak of ND in East Lothian in 2006): in such events, the control measures detailed in this strategy in relation to ND apply.

2.3 Previous outbreaks in GB

There have been several outbreaks of NAD in GB over the past decade. These are summarised in the table below.

Notifiable Avian Disease	Incidences in GB since 2006
Avian influenza	
Highly pathogenic avian influenza (HPAI)	H7N7, Lancashire, July 2015 H5N8, Yorkshire, November 2014 H7N7, Oxfordshire, June 2008 H5N1 (wild birds), Dorset, January 2008 H5N1, Norfolk, November 2007 H5N1, Suffolk, February 2007 H5N1 (wild birds), Cellardyke, April 2006
Low pathogenic avian influenza (LPAI)	H7N7, Hampshire, February 2015 H7N2, Merseyside, May 2007 H7N2, Conwy, May 2007 H7N3, Norfolk, April 2006
Newcastle disease	East Lothian, October 2006

3 Maintaining disease freedom

Where appropriate, or required by European legislation, countermeasures are put into place which aim to reduce the risk of the introduction of NAD to GB.

3.1 Vigilance and prompt reporting

Early detection of NAD in poultry and other captive birds is key to lessening the extent of disease spread. Keepers of poultry and other captive birds are strongly encouraged to remain vigilant for clinical signs of NAD in their birds and must promptly notify suspect cases to their [local APHA office](#).

3.2 Biosecurity

Good biosecurity is a vital part of keeping disease away from poultry and other captive birds. All keepers of poultry need to maintain high biosecurity standards for protection from disease (not just those that are notifiable). Keepers should also prepare a contingency plan and consider arrangements in the event that they are within a movement control zone during an outbreak of NAD so that they are prepared for any increase in the risk of disease and the effects of movement restrictions. Keepers of other captive birds (especially of larger collections – e.g. zoos) should also consider biosecurity and contingency planning arrangements.

This risk of disease is always present and keepers are strongly recommended to plan for the impact of a disease outbreak:

- Directly – e.g. if their premises were to be infected (see Section 7) or in a disease control zone (see Sections 9 and 13).
- Indirectly – e.g. if usual trade/movement outlets were affected.

Keepers are strongly recommended to limit the movement of poultry, people, vehicles and equipment between farms and keep records of the types of movements that take place to assist APHA in carrying out tracings (see Sections 3.7 and 8).

Government makes biosecurity advice available to keepers of poultry and other captive birds on its website: www.gov.uk/avian-influenza-bird-flu#biosecurity-guidance.

Welfare codes for laying hens, meat and breeding chickens, ducks and turkeys are published on the GOV.UK website ([Defra](#), [SG](#) and [WG](#)). Defra have also published a [Code of Practice for the Welfare of Gamebirds Reared for Sporting Purposes](#).

3.3 Surveillance

Government carries out surveillance for NAD in accordance with European legislative requirements.

3.3.1 Avian influenza surveillance – poultry

Government carries out active surveillance through the national survey for avian influenza of subtypes H5 and H7 in domestic poultry. The aim of the survey is to identify the circulation of AI viruses in poultry (in particular, waterfowl poultry species) before they become widespread in the poultry population. Samples are taken from a random selection of premises and are subject to serological testing for AI antibodies. It is not unusual for a small number of samples taken to test positive for H5 or H7 antibodies each year during the survey. These trigger further enquiries at the premises in question (see Section 5.1) and further laboratory testing (see Section 5.5). If these tests show that disease is present, the control measures described in Section 7 will apply. If the tests show that the initial positive results were due to past infection with AI and the disease is not now present in the flock, restrictions are lifted at the premises.

3.3.2 Avian influenza surveillance – wild birds

European Union (EU) Member States (MSs) are required to contribute to the knowledge of the threats posed by wild birds in relation to AI. The aim of surveillance is to ensure the timely detection of HPAI H5N1 by investigating increased incidence of morbidity and mortality in wild birds, particularly in selected target species and areas.

Government carries out surveillance through the UK wild bird survey for avian influenza viruses. Section 13 describes the measures put in place if HPAI H5N1 is detected in a wild bird or wild bird carcase as a result of such surveillance.

3.4 Imports

In order to maintain GB's animal and public health status, various measures are put in place to ensure that imported animals and products of animal origin do not present unacceptable risks to the health of other animals or to people. Imports of live animals and products of animal origin are controlled to prevent the import of disease into GB. [Further information on imports](#) is available.

3.4.1 Imports to the United Kingdom from within the European Union

If an EU MS experiences an outbreak of NAD, legislation and trade rules set out the measures that must be adopted by that MS to prevent the spread of the disease. If the situation demands it, the European Commission (EC) will impose additional safeguard measures.

Intra-community trade in live poultry and hatching eggs has to be accompanied by veterinary certificates (ITAHCs) indicating the poultry or hatching eggs do not come from

flocks or premises that are located within areas under restrictions for outbreaks of NAD. The import of table eggs from such areas may be permitted if such products are handled and treated in accordance with European legislation. Separate rules are in place governing the import of poultry meat products, poultry by-products, other captive birds and pet birds from the EU into the UK.

3.4.2 Imports to the United Kingdom from outside the European Union

Imports are only permitted from a restricted list of Third Countries which meet EU standards for the control of NAD.

Poultry and eggs imported into the EU must enter at designated Border Inspection Posts, where they are subject to veterinary inspections. All consignments are subject to documentary and identity checks to ensure that the conditions of import are met. All imported birds must undergo a period of quarantine. From the time of import, live poultry, or eggs once hatched, must be isolated for at least 6 weeks at the premises of destination to ensure they are not carrying any disease.

Separate rules are in place governing the import of poultry meat products, poultry by-products, captive birds and pet birds from outside the EU into the UK.

3.5 Preventive vaccination

Preventive vaccination is recognised as a potential disease control measure. The approach adopted differs according to the disease.

3.5.1 Avian Influenza

Subject to the approval of the European Commission (EC), MSs can introduce preventive vaccination of poultry or other captive birds as a long term measure where certain areas, type of premises or categories of poultry or other captive birds are deemed to be exposed to the risk of AI.

GB is not currently exposed to such a risk of AI, and preventive vaccination of poultry against AI is not recommended as a means to protect GB against outbreaks of LPAI and HPAI. In addition, the GB poultry sector is structured differently to that in other MSs where this strategy has been adopted.

There are also a number of disadvantages relating to currently available vaccines:

- Although the vaccines are able to reduce mortality, it is likely that some vaccinated birds would still be capable of transmitting AI virus if they became infected, increasing the time taken to detect and eradicate this virus.
- Influenza viruses can mutate rapidly, which could render a vaccine less useful. This is relevant when trying to get a good match between an outbreak virus and the vaccine held in a vaccine bank. The outbreak virus cannot be predicted with any certainty.

- The vaccines present serious practical limitations in that they need to be delivered by individually injecting each bird. It can take up to 3 weeks for the birds to deliver optimum immunity, and some poultry require 2 doses, with a 4-6 week interval between these.
- There is no proven efficacy of the vaccines in species such as ducks, geese and game birds.
- It is difficult to differentiate infected from vaccinated birds.
- There are welfare implications for birds through increased handling, especially when speed is necessary.
- Vaccination may induce a false sense of security, resulting in a relaxation of biosecurity and vigilance.
- There will be a risk to workers from the increased handling of birds.

This policy may be subject to review if, in the future, there are major changes to the structure of the poultry industry in GB, major changes in the epidemiology of AI or significant progress in vaccine development.

3.5.2 Avian influenza – zoo birds

Due to the role of zoos in global conservation, vaccination of zoo birds is permitted in England subject to meeting eligibility criteria. Permission must be sought from Defra by contacting Contingency.Planning@ahvla.gsi.gov.uk. England's zoo bird vaccination plan was approved by the EC.

Vaccination of zoo birds against AI is not permitted in Scotland or Wales on the basis of veterinary risk assessment (VRA). This will be reviewed should the risk of AI to zoo birds change.

3.5.3 Newcastle disease

Vaccines for ND with marketing authorisations are commercially available and bird owners can choose whether or not to vaccinate their birds. Vaccination is common in most, if not all, commercial layers, layer breeders and broiler breeders. It is also common in most turkey breeders and some commercial turkeys and broilers. It is a legal requirement to keep a record of all medicines (including vaccines) administered to food-producing animals (see [Health and Safety Executive](#) and [Veterinary Medicine Directorate](#) guidance). Criteria for live vaccines for ND are set out in European legislation (Annex 2 – European and GB legislation for the control of NAD).

3.5.4 Pigeon paramyxovirus type 1

Legislation requires that pigeons must be vaccinated against PPMV-1 if they are to be raced or shown. It is the responsibility of the organiser of a race or show to ensure that pigeons entered have been vaccinated.

3.6 Great Britain Poultry Register

It is a legal requirement that premises where 50 or more poultry are kept must be registered on the [GB Poultry Register](#) (GBPR). The aim of the GBPR is to provide information regarding the location and density of poultry populations in GB. In a disease outbreak, it provides essential information which assists Government in the delivery of disease control measures. Upon confirmation of disease, the register allows the initial location of premises containing poultry in the infected area to be identified. Text alerts can also be sent en-masse to those on the register in the event of an outbreak.

Owners/occupiers of premises with less than 50 poultry are encouraged to register on a voluntary basis, as are those with significant populations of other captive birds.

3.7 Movement records

Owners/keepers of flocks of poultry of over 250 birds are required to keep records of poultry leaving or entering their premises. Similarly, any person involved in the transport or marketing of any poultry or eggs must keep a record of all poultry or eggs they transport or market. These records must be kept for 12 months and are vital in cases where NAD is suspected or confirmed and contact premises need to be identified.

In addition to legal requirements, all keepers of poultry or other captive birds are encouraged to consider and, where appropriate, implement record keeping measures that would assist APHA in carrying out tracings (see Section 8) in the event of an outbreak of NAD.

3.8 Bird gatherings

Under European legislation, bird gatherings are prohibited unless authorised in that MS by a VRA. Government's risk assessment is that bird gatherings can take place subject to compliance with the conditions in a general licence. Separate licences apply for gatherings taking place in [England](#), [Scotland](#) and [Wales](#).

3.9 Raising stakeholder awareness

Advice on maintaining disease free flocks is made available to poultry keepers on the GOV.UK website, including the following:

- [Biosecurity and preventing disease in captive birds](#)
- [Avian Influenza: Biosecurity information for all bird keepers](#)
- [Newcastle Disease: Advice for bird keepers](#)

Keepers of poultry or other captive birds are encouraged to consult private veterinarians as soon as possible if they are concerned about their flock's health, biosecurity practices or disease risk.

4 Heightened risk of incursions of notifiable avian disease into Great Britain

4.1 International surveillance and monitoring

With regards to outbreaks of NAD in other countries, Government monitors the [international disease situation](#). [Preliminary outbreak assessments](#) may be published on the GOV.UK website upon notification of a disease outbreak from the EU or World Organisation for Animal Health (OIE). For outbreaks of NAD in an EU MS, a country bordering the EU or a trading partner, more in-depth [qualitative risk assessments](#) may be carried out by Government. These are designed to give a balanced account of the threat of the disease incidence to GB at present and in the future. Both assessments are used to inform Government's decision on the risk level of AI or ND in GB and inform the consideration of preventive controls.

Any changes to the level of risk of the introduction of NAD into GB are underpinned by risk assessment as set out above. Stakeholders will be updated on such changes.

4.2 Prevention zone

Following a qualitative risk assessment, it may be considered necessary to assess whether any preventive action is required to reduce the risk of transmission of NAD from wild birds to poultry or other captive birds.

If considered necessary, measures can be applied for AI through a prevention zone, including:

- Provision of bedding, feed and water to which wild birds have no access for poultry and other captive birds.
- Enhanced biosecurity at premises where poultry or other captive birds are kept.
- Banning or limiting bird gatherings.
- Banning or limiting the use of live decoys during bird hunting.
- Housing of poultry and other captive birds, or their separation from wild birds (may be applied to certain categories of birds dependent on risk)².

Government's position is that it is unlikely that such a zone and associated measures would be applied, except in exceptional circumstances³. This could include developments

² Products of free range flocks that are required to be housed can retain their free range status, provided the housed period does not exceed 12 weeks (see the [guidance](#) on GOV.UK for further information). The 12 week exemption does not apply in situations where the owner voluntarily decides to house their birds.

in Europe concerning a highly pathogenic strain of the virus causing high mortality and morbidity in domestic poultry, where wild birds have been demonstrated to be involved in the spread of the virus.

Any such decision would be based on the evidence and risk assessments available at that time and expert ornithological advice, and would be discussed in advance with the Avian Disease Core Group. This would be supplemented by:

- Analysis of the costs associated with imposing a prevention zone (e.g. industry response, production and welfare costs) compared to the benefits in terms of reduced risk of disease spread.
- Assessment of the impacts a prevention zone may have on consumer confidence (e.g. if housing were required in such a zone).

³ Note that if considered necessary to reduce the risk of spread of avian influenza, similar measures could be applied through a wider restricted zone (RZ) when HPAI is confirmed in poultry (see Section 9.4.2) or through a wild bird control area (WBCA) or wild bird monitoring area (WBMA) when H5N1 is found in wild birds (See Section 13.7). When H5N1 is confirmed in poultry, it is a requirement under European legislation that a RZ must be declared. The measures applied could include those listed here and would be based on VRA (See Section 9.4.3).

5 Suspicion of notifiable avian disease in Great Britain

5.1 General principles

Government surveillance or the reporting of clinical signs consistent with those of NAD in poultry or other captive birds may lead to suspicion being raised regarding the presence of NAD. Official investigations (veterinary inquiries) are triggered, with laboratory testing of samples/swabs being carried out if disease cannot be ruled out on clinical grounds. Measures may also be imposed on and in the area surrounding suspect premises, depending upon the level of suspicion and legislative powers. The strategic aim of these measures is to:

- Establish whether NAD is present.
- Establish the origin and any potential routes of spread if disease is confirmed.
- To put in place appropriate measures to prevent disease spread.

5.2 Notification to Animal and Plant Health Agency

Anyone in possession of any bird or bird carcass (excluding a wild bird or wild bird carcass) which they suspect may be infected with NAD must immediately notify the duty vet at their local [APHA office](#). Avenues of notification include the following:

- Directly by the owner/person responsible for the birds in question.
- By a private veterinarian called by the owner/person responsible for the birds in question to assess or treat these birds.
- By an inspector (e.g. from the Local Authority) attending the premises on other business (e.g. animal welfare grounds).
- As a result of active government surveillance (e.g. the GB Poultry Survey).
- By Food Standards' Agency (FSA) staff at a slaughterhouse suspecting disease as a result of ante/post-mortem inspections (NB the following section (and Section 5.1) does not apply if this is the case – see Section 5.7 specific to slaughterhouses).

Upon reporting, the duty vet at the local APHA office will discuss the clinical signs and health status of the birds in question over the phone with the person reporting suspicion of NAD. Such discussions may allow the duty vet to rule out NAD. Alternatively, an APHA vet will be dispatched within 30 minutes of the initial phone call to the premises to carry out an official investigation as set out in Section 5.3. If this is the case, the duty vet will remind the owner/person responsible of the legal requirement that the birds and things liable to transmit/spread disease must not be moved off the premises (e.g. live birds, manure etc.) and that no live birds can be moved on to the premises. Any movements already in

transit/process should be raised in this conversation so that appropriate measures can be put in place.

5.3.1 Testing for Exclusion Scheme and Consultation Cases

For private veterinary surgeons (PVS), where NAD cannot be excluded from the differential diagnosis of a flock health or production problem, the PVS can contact the local [APHA office](#) and, in consultation with the duty vet, agree that either:

- NAD is not suspected from the clinical signs and the PVS can submit samples for testing to exclude the involvement of a NAD under a [pilot scheme launched in April 2014](#). Usually official disease control restrictions will not be applied, although the farmer should consider, with their PVS, any voluntary restrictions that may be appropriate and should report any changes in the birds that result in suspicion of infection with NAD. Please note that under the pilot (as at June 2015) this scheme is only available for chicken and turkey flocks and the PVS will be charged the full cost for testing. Negative results will be sent directly to the submitting PVS and non-negative results will trigger an official investigation by APHA.

or:

- NAD cannot be ruled out and an APHA vet will attend the premises to carry out a “consultation case”. Disease control restrictions will not be triggered but the PVS must remain in constant supervision of the premises to prevent any high risk movements until the consultation is completed, where either agreement is reached that there is no suspicion of a NAD, or that suspicion cannot be ruled out and an official investigation started by the APHA vet, as set out in Section 5.3.

5.3 Actions at suspect premises

5.3.1 Suspect premises

Upon arrival at the premises, the visiting APHA vet will examine the birds and other records as necessary (e.g. production records) and discuss the case with APHA’s Veterinary Exotic Notifiable Disease Unit (VENDU). If disease can be ruled out on clinical grounds, the APHA vet will lift restrictions placed on the premises. If disease cannot be ruled out on clinical grounds, the premises will be declared a suspect premises. Blood samples and swabs will be taken from an appropriate selection of birds and submitted for testing at the national reference laboratory. The following measures will also apply at the premises. APHA will apply these measures according to the premises type.

Key measures at suspect premises:

- Records – the visiting APHA vet will examine production records for poultry and other captive birds kept at the premises. These must include the number (or approximate number) of birds within each species which are alive, have died, are ill or are hatched. Records must also be kept in relation to domestic mammals at the premises.
- Housing or isolation – poultry and other captive birds must be kept in their buildings or kept isolated as far as practicable from other poultry and wild birds.
- Movements of poultry and other captive birds to and from the premises – these will be prohibited and are highly unlikely to be licensed at this stage.
- Movements of other things liable to transmit disease (including people, vehicles and eggs) – low risk movements may be licensed subject to certain conditions (e.g. people off the premises).
- Disinfection at entrances and exits – a means of cleansing and disinfection (C&D) must be provided at the entrances and exits of the premises and of buildings there which house poultry or other captive birds (this may not be applied where NAD is suspected in other captive birds at non-commercial premises – e.g. where the premises is a domestic dwelling).
- Warning signs – warning signs must be erected at appropriate places at the premises.

5.3.2 Veterinary inquiry

An epidemiological investigation will begin to establish, as far as possible:

- How long the disease may have been present on the premises.
- The likely source of infection.
- Whether the disease is a potential primary case or whether it originated from another premises.
- Whether any other premises may have been exposed to the disease as a result of the suspect case.
- The extent to which the disease may have been carried to or from the suspect premises.

This will inform any initial further investigations to be carried out (e.g. if live birds were moved to/from the premises during the incubation period).

5.4 Diagnostic investigation at the Animal and Plant Health Agency

The National Reference Laboratory for both AI and ND is:

APHA Veterinary Investigation Centre,
Woodham Lane,
New Haw,
Addlestone,
Surrey,
KT15 3NB.
Telephone: 01932 357 335.
Fax: 01932 347 838.

Upon arrival at APHA, samples will be tested for NAD. A series of pre-agreed tests will be carried out, with results reported by the APHA laboratory to VENDU.

Initial results, that suggest that one or both of those viruses is present, can be expected within 12 hours of the tests beginning. However, confirmatory tests do take longer – e.g. for the full characterisation of the virus or pathogenicity of any AI or ND virus.

Final negative results that inform VENDU's decision regarding the lifting of restrictions in Section 5.4.1 are likely to be available from six days after the submission of samples.

As the European and International Reference Laboratory for both AI and ND, the APHA continually works to reduce the time taken for validator testing to be completed, in accordance with European and international standards.

5.5 “High” level of suspicion

If considered necessary by Government to control the disease, legislation provides for more stringent measures to be implemented at suspect premises. The killing of poultry or captive birds can be carried out, with carcasses and eggs having to be disposed of, tracings made and initial C&D (see Section 7.8) of premises carried out by APHA.

At present, Government does not foresee circumstances outside of an existing outbreak of NAD in GB under which we would require the culling of poultry or other captive birds without laboratory confirmation of disease. On welfare grounds, the owner/occupier of the premises can choose to cull birds prior to confirmation (see Section 7.6 on compensation).

5.6 Suspicion at slaughterhouses

Legislation sets out different rules if poultry or poultry carcasses at a slaughterhouse are suspected of being infected with NAD. Notification must be made in the usual way to the local APHA office. A further investigation will then be necessary and the following legal requirements apply:

- No other poultry must be brought into the slaughterhouse (subject to consideration of the welfare of poultry at or en route to the slaughterhouse).
- Things liable to transmit disease (e.g. carcasses, poultry meat, waste), people and vehicles will not be allowed to leave the premises until licensed by a VO.
- Any suspect live poultry, live poultry from the same premises as the suspect poultry and any poultry they have had contact with must be slaughtered according to the instructions of a VO.
- If any of those poultry have already been slaughtered, the carcasses and any carcasses they have been in contact with must be isolated: the operator must ensure that they do not come into contact with other poultry or carcasses.

Simultaneously, an investigation at the premises of origin will be carried out as described in Section 5.1.

On arrival at the slaughterhouse the APHA vet will examine the poultry or poultry carcasses. If they cannot rule out NAD on clinical grounds, a notice is served on the operator setting out the restrictions that apply. After inspection and the taking of samples, the following will be required to be slaughtered separately from other poultry:

- All suspect poultry.
- All poultry from the same premises as the suspect poultry.
- Any poultry that have had contact with suspect poultry.

Carcasses from these poultry must be stored separately from carcasses of other poultry. Samples will be taken to test whether NAD is present in the slaughterhouse or not. If the occupier completes C&D in accordance with instructions from APHA (i.e. of areas potentially contaminated by infected poultry or poultry carcasses) during this time, live poultry may be allowed to enter the slaughterhouse again for slaughter.

Laboratory testing as described in Section 5.5 will be carried out. If the test results are negative, the APHA vet will inform the occupier in writing that the measures above cease to apply. Throughout the investigation, the slaughterhouse operator remains responsible for maintaining the carcasses in line with food hygiene regulations. Where disease is negated and restrictions are lifted, and subject to compliance with food hygiene regulations and official checks throughout the period of restrictions, poultry meat may enter the food chain.

For confirmation of NAD in a slaughterhouse, see Section 7.11.

5.7 Area restrictions around the suspect premises

Powers exist for additional measures to be implemented in the area around suspect premises if they are deemed necessary to minimise the risk of the spread of NAD from a suspect premises.

To date, area restrictions have not been implemented upon suspicion of a potential first case of NAD in GB. At present, it is unlikely that area restrictions would be imposed for such a first case without laboratory confirmation of disease.

5.8 Confirmation of influenza A virus or APMV-1 infections in poultry or other captive birds outside the definition of notifiable avian disease

Subsequent sections deal with actions on confirmation of NAD (as defined in Annex 1 - Glossary of Terms). For isolation of influenza A virus and APMV-1 viruses that fall outside of these definitions, restrictions at suspect premises are lifted (see Section 7.3 for measures that may still be required in relation to worker protection).

6 Confirmation of an index case of notifiable avian disease in Great Britain

6.3 Confirming notifiable avian disease

NAD is confirmed by the relevant CVO upon laboratory confirmation of the presence of NAD virus. It is important to note that, at this stage, further laboratory tests may still be ongoing (e.g. AI virus of the subtype H5 or H7 has been confirmed, even though pathogenicity and N type may yet to be established).

Once disease is confirmed, a series of actions is initiated through the implementation of Government Contingency Plans. These include declaring relevant disease control zones, confirming measures within the zones and carrying out certain actions at the IP.

6.4 International notification obligations

The UK CVO notifies the OIE of the presence of NAD in the UK within 24 hours of confirming disease. The EC is also notified. Regular reports are submitted to the OIE and EC as the outbreak progresses. On notification of disease to the EU and OIE, the UK will lose its disease free status for that particular disease if the outbreak occurs in poultry (i.e. outbreaks in other captive birds or wild birds do not affect the UK's status, although there may be implications for trade with some Third Countries).

6.4.1 Exports to other European Union countries

Trade in live poultry, other captive birds and hatching eggs from the UK to other Member States usually continues unaffected by an outbreak provided that the poultry or eggs do not come from premises under restrictions or within disease control zones (see Section 9). In outbreaks of HPAI H5N1 in poultry, additional restrictions on bird by-products and wild game products may apply (see Section 9.4.3). Additional safeguard measures may be applied by the EC which could impose additional restrictions (e.g. to areas outside of disease control zones).

6.2.2 Exports to non-European Union countries

Export health certificates agreed with non-EU countries vary and reflect the destination country's import conditions. Some Third Countries will suspend imports from the UK even though export health certificates can be signed.

7 Actions at infected premises

7.1 Measures

Notice will be served on the premises declaring it to be an IP. Certain actions must be carried out at the IP to minimise the possibility of the onward spread of the disease as set out in legislation. The measures described in Section 5.4.1 (suspect premises) will continue to apply.

Key measures at infected premises:

- Culling – the default position is that all poultry and other captive birds at the IP will be culled (see Section 7.5).
- Disposal – all carcasses, eggs and any other contaminated material must be disposed of (see Section 7.7).
- Initial C&D will be carried out by APHA (see Section 7.8).

7.2 Derogations

See Section 10.1 for circumstances under which deviation from this policy position may be considered.

7.3 Worker protection

Overall responsibility for protecting public health during an outbreak rests with the National Health Service. In the event of an outbreak or suspected incidence of AI, it is a priority to protect the health of those coming into direct contact with diseased birds (e.g. poultry workers, APHA staff). Government, the Department of Health, SG Health Directorate, the Health Protection Agency, Public Health Wales, Health Protection Scotland and APHA will all be involved to ensure that appropriate measures are taken to control disease and protect the health of such people.

There are two main concerns regarding human health during an outbreak of AI:

- Protection of the health of those in close proximity to infected birds (e.g. poultry workers) by reducing exposure to material contaminated by the virus and ensuring access to appropriate preventive medication.
- Protection of the health of the wider human population by reducing the likelihood of genetic re-assortment of the virus, which could occur if an individual is simultaneously infected with both human and AI viruses. This involves both protecting the individual from infection with AI and vaccinating them against human influenza.

In cases where individuals, such as poultry workers, have had, or are likely to have, contact with infected birds, measures may be recommended following a risk assessment by the responsible health protection authority, including:

- Guidance to those at risk of infection.
- Monitoring of health status of persons exposed to infected birds.
- Limiting exposure to potentially infected birds and other birds.
- Wearing of appropriate personal protective equipment, including respiratory protection, and its safe disposal.
- Vaccination for seasonal influenza (routine vaccination with seasonal influenza vaccine is recommended for all poultry workers).
- The prophylactic use of antiviral medicine.

The implementation of these measures will be based on the probability of transmission of the virus to employees and the likely severity of disease in people, factors which are dependent on, for example, the virus strain and type of IP. Virus strains which fall outside of the definition for AI in poultry or other captive birds may still require measures to be implemented to protect human health.

In all cases, health protection authorities will work with the premises' owner/occupier to ensure that proportionate and appropriate measures are put in place to protect human health.

The Health and Safety Executive have published [guidance](#) on the GOV.UK website. This advice should be communicated to keepers of birds or those working with birds under such circumstances and in the case of larger poultry companies, be integrated into contingency plans.

During an outbreak, Government will take measures to protect its workers with the necessary anti-viral drugs and equipment, if appropriate.

7.4 Food safety

FSA advice is that neither AI nor ND pose a food safety risk for consumers if poultry meat and eggs are properly handled and prepared (on AI, see guidance from the [FSA](#) and [Food Standards Scotland](#)). However there are requirements for the tracing of such products from an IP in order to protect animal health (See Section 8.1).

7.5 Culling of birds

Key principles apply in the culling of birds for disease control purposes, including:

- Human health and welfare considerations are paramount.
- Birds to be culled to control disease spread must be culled as soon as possible.

- Birds must be culled in such a way as to minimise the risk of the onward spread of disease.
- In very limited circumstances and subject to a VRA, birds may be moved from the premises (e.g. to a slaughterhouse) to be culled.
- Samples may be taken as directed by expert epidemiological opinion.
- Welfare of birds to be culled is an important consideration and is subject to strict legal controls.

For large poultry premises, gassing of birds is the preferred option, either by containerised gassing units or whole house gassing (where poultry houses are suitable and the technology is available). Ventilation shutdown may be considered where there is no practical alternative and there is a threat to public health. Ventilation shutdown is a method of last resort when consideration of all other methods has been exhausted. It is only permitted in England.

For smaller numbers of birds (e.g. a backyard flock or small collection of other captive birds) or for larger or flightless birds, individual techniques such as neck dislocation, percussion/electrical stunning or lethal injection may be more appropriate. Maceration may be used for day old chicks.

7.6 Compensation and valuation

7.6.1 Compensation

In line with the Animal Health Act 1981, Government's current policy on compensation for NAD is as follows:

- For poultry not diseased at the time of killing, compensation is payable at the value of the birds immediately before killing.
- For poultry dead or diseased at the time of killing, no compensation is payable.

The following principles also apply:

- Only poultry killed under orders from Government can be compensated for.
- APHA makes an assessment of the disease status of the poultry, based on clinical inspection and veterinary judgment of the number of birds considered to be affected with the disease for which they are being killed. The assessment is made shortly before the killing of birds at the IP begins.
- Compensation will be paid for other things that have to be seized by Government (for example eggs that have not originated from the IP but may have been subsequently exposed to the virus in a hatchery) because they pose a risk of transmitting disease and cannot be cleansed and disinfected. This will be at the value of the item at the time of seizure (and could mean that the item has very little or even no value if it is considered contaminated following a VRA).

- Compensation is not paid for poultry meat or eggs that are required to be disposed of at the IP or following trace investigations from an IP (as they are from affected birds) (see Sections 7.7 and 8.1). This also applies to any carcasses of birds that have died before culling has commenced.
- Compensation is not paid for consequential losses, including business interruption caused by control measures, for example losses due to movement bans or lost sales opportunities.
- Any money received from an insurance policy that covers compensated loss as a result of disease, will be subtracted from compensation paid by Government, or if already paid then must be reimbursed.

7.6.2 Valuation

Determination of the value of poultry must be carried out by one of the following methods:

- Valuation by APHA using a valuation rate card – this is the default option where this is available for the species and type of poultry to be killed. These are available to download from the GOV.UK website [here](#). The Agricultural Development and Advisory Service update these cards periodically for APHA.
- Valuation by an approved valuer who is suitably qualified and experienced to value the species and type of poultry – APHA maintain a list of approved valuers by species and breeds. APHA will appoint the nearest suitably qualified valuer to the affected premises.
- Specialist poultry consultants – these are used when no other method of valuation is possible.

7.7 Disposal

APHA is responsible for the disposal of carcasses of birds culled for disease control purposes.

Where there are other carcasses (birds that have died before the cull), poultry meat, table and hatching eggs on the IP, which have been produced from susceptible animals originating at the IP, these must be disposed of by the owner/occupier and compensation is not payable to the producer. These products must be disposed of in a bio-secure manner (following liaison with the APHA vet at the IP) and in compliance with Animal By-Products Regulations at a designated disposal facility. For LPAI, under certain circumstances it may be possible to license the movement of table eggs to a designated egg packing centre or egg processing plant.

Further information about disposal is available in Government's exotic disease contingency plans ([Defra's Contingency Plan for Exotic Diseases of Animals](#), [Scottish Government's Exotic Animal Disease Contingency Framework Plan](#) and the [Welsh Government Contingency Plan for Exotic Animal Diseases](#)).

7.8 Initial cleansing and disinfection

Once birds at the IP have been culled, production of the virus ceases. APHA spray disinfectant on:

- All parts of the premises (other than parts where disinfectants would have no effect, such as fields).
- All equipment which poultry or other captive birds have had access to.
- Any contaminated material remaining at the IP (e.g. litter).
- Anything contaminated during killing.

This initial C&D is important as its completion is taken into account in determining the minimum length of time disease control zones (see Sections 9.6 and 9.7) will remain in place.

7.9 Lifting premises restrictions (and secondary cleansing and disinfection)

Following initial C&D, restrictions will remain in place at the IP as NAD virus is still likely to exist there. This is due to the fact that it will take time for virus to decay naturally which, in turn, will depend on a number of factors (e.g. exposure to the elements, temperature). A notice will be served on the owner/occupier of the IP requiring them to carry out secondary C&D at their own expense, to the satisfaction of the APHA vet.

APHA and other agencies/operational partners will work with the owner/occupier to agree which procedures need to be carried out and the timeframe for doing so. The secondary C&D process involves cleansing, degreasing and disinfecting, and then repeating the process to ensure that NAD virus on the premises is eliminated to the extent possible. Once APHA is satisfied with the work, sentinel birds can be introduced for restocking after 21 days (see Section 7.10).

Secondary C&D is the most rapid method for the UK to regain its official disease free status from the OIE (see Section 14.3). Not being able to carry this out, or delays in completing the procedure, will therefore have serious implications on trade with Third Countries.

7.10 Restocking of depopulated premises

The repopulation of commercial poultry holdings is not permitted until at least 21 days after secondary C&D has been completed to the satisfaction of APHA (see Section 7.9). For the majority of production systems, birds have to be introduced at the full stocking rate. Restrictions will remain in place until it is certain that there is no recurrence of disease.

During the 21 days following repopulation, poultry will undergo official examination by a VO. Sampling for laboratory testing may be carried out. Restrictions on the premises will remain in place until at least the completion of the following:

- Clinical surveillance showing no evidence of infection.
- Any samples taken have returned negative test results for the relevant disease. For ND, any birds used for repopulation must be fully vaccinated against the disease.

For an IP that is not a commercial poultry premises, the principles described in this section will apply: a VRA will determine any deviation from this position.

7.11 Confirmation of notifiable avian disease in a slaughterhouse

The above sections do not apply in relation to confirmation of NAD at a slaughterhouse. In the event of NAD being confirmed, the isolated carcasses (i.e. those from infected poultry, poultry from the same premises or carcasses potentially contaminated during the killing/production process) will be destroyed under official supervision. The slaughterhouse owner/operator will be required to carry out C&D of the parts of the slaughterhouse that may be contaminated (e.g. areas used for culling or storage) in accordance with instructions from the VO. The premises of origin will be traced and an investigation carried out to determine what action is required, including depopulation if appropriate and further actions as applicable to an IP, including tracing.

As stated in Section 5.7, in the time following the submission of samples, if the occupier completes C&D in accordance with instructions from APHA (i.e. of areas potentially contaminated by infected poultry or poultry carcasses), live poultry may be allowed to enter the slaughterhouse again for slaughter.

8 Tracing and contact premises

Assessing the risk of any potential spread of NAD from the IP and the likely source of disease is a vital task in ensuring that the disease is stamped out as quickly as possible.

8.1 Tracing of poultry meat and eggs from an infected premises

There are legal requirements for the tracing of poultry meat and eggs from an IP, which vary according to the form of NAD confirmed. Within the flexibility of this framework, tracing will be carried out at the direction of the relevant CVO.

FSA advice is that neither AI nor ND pose a food safety risk for consumers if poultry meat and eggs are properly handled and prepared. Tracing therefore has the rationale of closing down potential pathways of the spread of NAD virus to poultry, other captive birds or wild birds to protect animal health.

In the event of NAD being confirmed at premises, the following activities will be carried out:

- Tracing of hatching eggs from poultry laid during the unregulated period of infection (see Annex 1 - Glossary of Terms).
- Tracing of poultry hatched from eggs laid during that period.
- Additionally, for HPAI and ND, tracing of poultry meat and table eggs may be carried out.

Given the nature of, and clinical signs associated with HPAI and ND (e.g. high mortality, drop in egg production), the ante and post-mortem checks that take place at slaughterhouses and the nature of the production systems in question, it is considered unlikely that either diseased birds/eggs from diseased birds will have been dispatched from the farm of origin, or poultry meat or eggs from an IP will enter the food supply chain. Tracing will be carried out at the direction of the relevant CVO, however given the factors listed above it is unlikely that tracing will require the withdrawal of poultry meat and eggs beyond the primary processing stage (e.g. cutting plant, egg packing centre).

The following table summarises the activities that must be carried out where poultry meat or eggs are traced. In the event of disposal of poultry meat and eggs being required, they must be disposed of in a bio-secure manner at the expense of the owner in compliance with Animal By-Products Regulations at a designated disposal facility. Compensation is not paid (See Section 7.6.1).

Notifiable Avian Disease	Requirements where poultry meat and eggs are traced from an IP			
	Poultry meat	Table eggs	Hatching eggs laid during the unregulated period of infection	Poultry hatched from eggs laid during the unregulated period of infection
HPAI	Must be disposed of by person in possession of it	Must be disposed of by person in possession of them or moved directly to an egg processing plant	Must be disposed of by person in possession of them	Poultry placed under surveillance and not allowed to move off the premises for at least 21 days
LPAI	No requirements for tracing	No requirements for tracing	Veterinary enquiries carried out at premises, as considered necessary by a VRA	Veterinary enquiries carried out at premises, as considered necessary by a VRA
ND	Must be disposed of by person in possession of it	Must be disposed of by person in possession of them or moved directly to an egg processing plant	Must be disposed of by person in possession of them	Poultry placed under surveillance and not allowed to move off the premises for at least 21 days

8.2 Contact premises and other suspect cases

8.2.1 Assessing and classifying contact premises

As detailed in Section 5.3.2, an epidemiological investigation is initiated when premises are declared suspect premises. Upon confirmation of NAD, such inquiries are critical in determining where the disease is most likely to have originated and where it may have spread. Premises considered as a possible source or place to which disease may have spread are regarded as *contacts*. A level of risk is attributed to the contact based upon many factors, including:

- Nature of epidemiological link (e.g. movement of live poultry, movement of people or movement of vehicles between premises).
- Species, type of premises and levels of biosecurity (e.g. broiler farm, feed mill, slaughterhouse).

- Frequency of contact and time since that contact (e.g. daily, one-off).
- Level of infection on the confirmed premises (e.g. all poultry showing clinical signs or only one shed affected, outside stock only).

The level of risk can generally be classified as one of the following:

- High risk contact – where the link between premises identified is of sufficient magnitude that the disease is very likely to have spread either to or from that premises. Two examples of high risk events are the movement of poultry at a time when the disease was considered to be present or the movement of personnel who do not practise good biosecurity (e.g. farm workers who work on two separate premises and travel frequently between them without practising good biosecurity).
- Medium risk contact – where the link identified is not of the same magnitude as for high risk but there is a common link between premises. A typical medium risk event is the movement of personnel between farms at a time when the disease was considered to be present but they undertook good biosecurity with regards to footwear and overalls. An example of good biosecurity is only to visit one poultry farm per day and to use protective clothing and footwear provided by that farm.
- Low risk contact – where the link identified is not of the same magnitude for medium risk but there is a common link between premises. A typical low risk event is the movement of a person who does not enter the areas where the poultry are kept (i.e. inside the pens within buildings or fields) between farms at a time when the disease was considered to be present.

Once identified, all contact premises will be treated as potential suspect premises and subject to the restrictions and measures detailed in Section 5.1.

Birds at “high-risk” contact premises (referred to as *dangerous contacts*) may be preemptively culled on the basis of a VRA. In such circumstances samples will be taken from culled birds (on a statistical basis) for laboratory analysis to determine whether the virus was present on the premises. If laboratory results confirm NAD infection, the premises is declared as an IP and therefore subject to the measures laid down in Sections 7 and 8. Zones will also be declared accordingly (see Section 9). If laboratory results do not confirm NAD infection, there may still be a risk that infection is present and subsequent actions (e.g. time before restrictions are lifted, the degree of secondary C&D required) will be based on a VRA. The principles outlined in Section 7.6 apply with respect to compensation.

In the case of “medium and low-risk” contact premises, the premises are restricted and put under surveillance for a period of time (normally 21 days from the date of last contact), during which samples may be taken for testing.

8.2.2 Other suspected cases

Notification of suspected NAD during an existing outbreak (other than contact premises identified through earlier epidemiological enquiries) will be investigated. If the premises is not a contact premises, the procedures outlined in Section 5 will be followed.

9 Disease control zones

9.1 General principles

In addition to controls at the IP, zones are usually put in place depending on the disease in question and in accordance with relevant legislation. Section 10.2 describes the circumstances in which deviation from this policy position may be considered. Within these zones, restrictions are placed on premises containing poultry or captive birds. Movements of poultry, other captive birds and other things likely to transmit disease to, from and within the zone are also liable to be subject to restrictions. Again, the rationale behind these measures is to minimise the risk of onward spread of disease to other birds in the vicinity and to rapidly establish whether this already occurred prior to confirmation at the initial IP. Poultry or other captive birds at such premises within the zones may be subject to inspection or examination by a VO.

9.2 Cross-border zones in Great Britain

When disease is confirmed, the Government will establish zone(s) using the IP as a centre within their administration (first country). In the event of an IP being close to a border and where legislation requires that the zone be extended beyond this border, the relevant Government will declare the zone within their administration (second country). There will be close dialogue between each affected administration to discuss, and agree where possible, on the measures to be declared if zones straddle the Welsh-English or Scottish-English border. Close communication is maintained throughout the outbreak to ensure consistency of approach and measures wherever possible (e.g. the issuing and conditions of movement licences, the ending of zones).

In such events where zones are imposed up to borders but are not required to extend further (e.g. in the case of a prevention zone), there will be close dialogue between each affected administration to discuss the extent of the zones. Any decisions on extending zones beyond borders (or not) will be based on an assessment of the risk of disease spread and also a consideration of any potential economic implications of movement controls.

9.3 Size of zones

European legislative requirements determine the minimum size of and measures within zones (see table in Section 9.7). Expert advice regarding measures within the zones and their size is sought during the course of an outbreak as more information regarding the disease situation becomes available. If further IPs are confirmed, zones are reshaped (if the IP occurs in existing zones) or newly established (if the IP occurs outside existing zones).

9.4 Types of zones

Scenario	Zones	Section
AI of subtype H5 or H7 (N-type and pathogenicity not yet confirmed)	Temporary control zone (TCZ) Temporary movement restriction zone (TMRZ)	9.4.1
HPAI (except H5N1 in poultry)	Protection zone (PZ) Surveillance zone (SZ)	9.4.2
HPAI H5N1 in poultry	Protection zone (PZ) Surveillance zone (SZ) Restricted zone (RZ)	9.4.3
LPAI	Low pathogenic restricted zone (LPAI RZ)	9.4.4
ND	Protection zone (PZ) Surveillance zone (SZ)	9.4.5

Details of the principles, measures and requirements within each of the zones are detailed in Section 9.7.

9.4.1 Avian influenza of subtype H5/H7 confirmed (N-type and pathogenicity not yet confirmed)

When laboratory tests confirm AI of the subtype H5 or H7 but the virus N-type and pathogenicity have not been confirmed, area restrictions may be put in place.

If expert opinion is that the virus present on the premises is likely to be HPAI H5N1, two temporary zones (in the form of a TCZ and a TMRZ) will be declared. The following factors will be taken into account when deciding on the extent of the two zones:

- The results of veterinary enquiries at the IP.
- The geographical features of the area around the IP.
- The location and proximity of other poultry premises in the area.
- Patterns of movements and trade in poultry and other captive birds in the area.
- The facilities and personnel available to control movements within the zone.

Legislation requires that the TCZ must have a radius of at least 10km centred on the IP.

If expert opinion is that the virus is not likely to be HPAI H5N1, the appropriate zones will be applied when the pathogenicity has been confirmed and temporary zones will not normally be declared. In exceptional circumstances, when expert opinion is that it is necessary to reduce the risk of spread of avian influenza from the IP, a TCZ could be declared. This would generally be equivalent to the zone that would be applied if disease were confirmed. A TMRZ could also be declared (generally equivalent to an RZ – see Section 9.4.3) but it is also considered that this is highly unlikely to be necessary given past experience of HPAI outbreaks in GB.

Once further laboratory tests confirm the N-type and pathogenicity, the principles in the relevant subsequent sections apply (i.e. Section 9.4.2 if highly pathogenic, Section 9.4.3 if HPAI H5N1 or Section 9.4.4 if low pathogenic).

9.4.2 Highly pathogenic avian influenza confirmed

A PZ and SZ will be declared. Legislation also provides powers for Government to declare a wider RZ if deemed necessary to reduce the risk of the spread of HPAI. Given past experience of HPAI outbreaks in GB, it is unlikely that an RZ would be declared for such outbreaks (other than HPAI H5N1 – see Section 9.4.3).

9.4.3 Highly pathogenic avian influenza H5N1 confirmed in poultry

A PZ, SZ and RZ will be declared. Unlike as detailed in Section 9.4.2, it is a requirement under European legislation that an RZ is declared.

Flexibility is available in terms of the size of the RZ; however, the EC will review and approve the measures imposed. In GB, the size of the zone will be based on expert advice and the emerging epidemiological situation. The RZ's size and associated measures may be refined as further evidence becomes available (e.g. expert ornithological advice).

9.4.4 Low pathogenic avian influenza confirmed

A LPAI RZ will be declared.

Outbreaks of LPAI can bring with them their own particular set of issues. Given that the infected birds may have shown no clinical signs of disease, it is possible that detection will have been delayed, increasing the possibility of spread during the unregulated period of infection. This is especially true for non-commercial poultry premises. Such circumstances increase the importance of tracing and surveillance activities carried out by APHA.

Legislation allows for certain measures in the zone to be removed based on VRA concluding that disease control would not be jeopardised. However, such discretion would only be considered in highly favourable epidemiological circumstances – i.e. a VRA concluded that the origin of the disease had been established and that the risk of spread had been assessed as negligible.

Widespread LPAI outbreaks have occurred in other EU MSs, caused by spread prior to detection and incursions of wild birds spreading the virus to domestic poultry.

9.4.5 Newcastle disease confirmed

If ND is confirmed (or PPMV-1 is confirmed in poultry), a PZ and SZ will be declared.

9.5 Surveillance within the zones

Legislation determines the level of surveillance for further cases of NAD carried out within the zones in order to rapidly establish if disease has spread. This is carried out in addition to the tracing activities described in Section 8. The following key principles apply in disease control zones (except the RZ declared for HPAI H5N1 in poultry):

- Premises within the zone containing poultry (and, depending on legal requirements, other captive birds) will be identified as soon as possible.
- Such premises are initially identified using the GBPR and other sources of data.
- Such premises may be subject to visits by APHA. During visits, poultry (and, depending on legal requirements, other captive birds) may be examined. If NAD is suspected, the principles and measures described in Section 5.1 will apply.
- Visits are prioritised according to the type of premises (e.g. large commercial premises) and associated risk factors (e.g. proximity to IP; outdoor/free-range units). Several visits may be made over the course of an outbreak.
- The relevant local authority/authorities (and SG Rural Payments and Inspections Directorate in Scotland) play a key role in carrying out foot patrols to ensure that the requirements within the zone are understood and in enforcing these.
- In addition, for outbreaks of LPAI, testing at commercial poultry premises within 1km of the IP will be carried out as a minimum.

9.6 Duration of zones

Legislation determines the minimum duration of zones in terms of the time elapsed since the completion of initial C&D at the IP within the zone (see the table in Section 9.7) In the event of multiple IP within a zone, this duration relates to the time elapsed since initial C&D was completed at the last premises to undergo this procedure.

In addition to this minimum requirement, a zone will not be ended if suspect premises remain (see Section 5) within the zone at which veterinary inquiries are ongoing or for which laboratory results are pending.

The following principles also apply:

- A TCZ and TMRZ become permanent zones on receipt of results from further confirmatory laboratory tests.
- A PZ becomes part of the wider SZ when ended.
- When an SZ or RZ is ended, area controls will cease to apply.

9.7 Measures within zones

The table below summarises the key measures that will apply in the relevant disease control zone: the Declaration (for AI) or Declaratory Order (for ND) will detail the exact requirements within the zone(s).

In addition, the following key principles apply:

- Powers exist for additional measures to be imposed if deemed necessary to reduce the risk of disease spread. These are only likely to be considered in the event of the failure of the standard measures described in the table below or in the event of delayed detection of disease. Government policy is to keep the countryside open for business as far as possible during a disease outbreak.
- In relation to measures under which movements are subject to licence, see Section 14.1.

Type of NAD confirmed	HPAI		HPAI H5N1 in poultry			LPAI	ND	
	TCZ ⁴ PZ	TCZ ⁴ SZ	TCZ PZ	TCZ SZ	TMRZ RZ	TCZ ⁴ LPAI RZ	PZ	SZ
Restriction	Zone(s)							
Minimum radius (km)	3	10	3	10	N/A	1	3	10
Minimum length of time in place since initial C&D at IP (days)	21	30	21	30	30 ⁵	21	21	30
Record keeping	X	X	X	X	X			
Housing or isolation	X	X ⁶	X	X ⁶	* ⁷		X	
Movement restrictions – poultry	X	X	X	X	X	X	X	X
Movement restrictions – other captive birds	X	X	X	X	X	X	X	
Movement restrictions – mammals	X	X	X	X		X		
Movement restrictions – eggs	X	X	X	X	X ⁸	X	X	X ⁸
Movement restrictions – poultry meat/carcases	X		X				X	

⁴ Declaration of a TCZ in the case of HPAI and LPAI would only be considered in exceptional circumstances.

⁵ The RZ will be removed at the same time as the SZ, in line with European requirements.

⁶ This will be based on expert ornithological opinion.

⁷ If a housing/isolation requirement is imposed in the SZ, this may be considered appropriate for the RZ and will be informed by a VRA.

⁸ Restrictions only on hatching eggs.

Type of NAD confirmed Restriction Zone(s)	HPAI		HPAI H5N1 in poultry			LPAI	ND	
	TCZ ⁴ PZ	TCZ ⁴ SZ	TCZ PZ	TCZ SZ	TMRZ RZ	TCZ ⁴ LPAI RZ	PZ	SZ
Movement restrictions – bird by products			X	X	X			
Movement restrictions – wild game products			X	X	X			
Restrictions – poultry litter, manure and slurry	X	X	X	X		X	X	X
Requirements – fresh meat and meat products			X	X	X			
Biosecurity	X	X	X	X		X	X	
Ban on bird gatherings	X	X	X	X	X	X	X	X
Ban on the release of game birds	X	X	X	X		X		

Key:

Record keeping: movements of poultry, eggs and visitors (the latter to/from premises where poultry or other captive birds are kept).

Housing or isolation: poultry and other captive birds must be kept in their buildings or kept isolated from other poultry/captive birds and wild birds. Products of free range flocks that are required to be housed can retain their free range status, provided the housed period does not exceed 12 weeks (see the [guidance](#) on GOV.UK for further information). The [biosecurity guidance on GOV.UK](#) includes advice on how to protect your birds from wild birds when housing is not possible.

Movement restrictions: movements of the things listed are subject to restrictions.

Restrictions – poultry litter, manure and slurry: cannot be removed from premises or spread except under licence.

Requirements – fresh meat and meat products: requirements relating to marking, sourcing, cutting, transportation and storage will be in place.

Biosecurity: appropriate measures must be put in place for people entering or leaving premises where poultry, other captive birds or eggs are kept.

Ban on bird gatherings: bird gatherings are not permitted within the zone.

Ban on the release of game birds: the release of game birds is not permitted within the zone.

9.8 Firebreak cull

Additional powers exist for the control of NAD outbreaks in the form of the culling of any poultry required to prevent disease spread. This is termed a preventive or firebreak cull and would aim to prevent further spread of disease to poultry in an area around IP. Such a cull has not been used in outbreaks of NAD to date in GB and it is unlikely that such measures would be required to control outbreaks of NAD virus circulating worldwide at present. In experiences of outbreaks of NAD in GB to date, other measures described up to this point in the control strategy have been successful in stamping out the disease. Therefore such measures would only be considered if these strategies were failing to control disease spread.

Government would be required to publish a *slaughter protocol* prior to carrying out a firebreak cull in England or Wales. The power cannot be used unless the protocol has been published and vaccination has first been considered to prevent the spread of disease. Separate arrangements exist in Scotland in relation to exercising such powers, including the making of a statement by Scottish Ministers.

9.9 Controls outside zones

9.9.1 General

Legislation does not require any specific controls outside the declared zones, although as described in Section 8.2, contact premises will be identified and these may be located outside existing control zones.

9.9.2 Bird gatherings

Any decision to impose wider controls on bird gatherings outside of disease control zones will be based on the disease situation and an assessment of risk.

9.10 Communication

Throughout the various stages of a disease outbreak, steps are taken locally and regionally to ensure that all (and especially those in charge of poultry or other captive birds) are made aware of the restrictions and requirements in force in the area. In conjunction with key stakeholders and other bodies representing keepers of poultry or other captive birds, Government will deliver a communications' programme to inform keepers/owners of poultry and other captive birds, veterinarians and other stakeholders of:

- The disease situation.
- The measures being implemented within zones.
- The need for vigilance for and prompt reporting of clinical signs of disease in birds.
- The need to maintain strict biosecurity.

Communication methods will vary according to the messages required. For example, signs must be displayed by APHA in and around IP. Premises on the GBPR will be notified of any restrictions or the need for increased vigilance and an appraisal of biosecurity measures on site. Members of the public can sign up to receive such updates through the [APHA subscription service](#). The GOV.UK website will also be updated regularly to reflect the changing disease situation and measures being implemented within control zones. Each affected administration will have overall control of all communications for an outbreak in their country.

10 Derogations

10.1 Derogation from culling birds

10.1.1 Avian influenza

Limited derogation exists that would allow birds to be spared from culling at the IP on certain types of premises only (listed below). This is subject to a VRA.

Types of premises at which derogation may be considered:

- Non-commercial premises.
- Circuses.
- Zoos.
- Pet shops.
- Wildlife parks.
- Fenced areas where poultry or other captive birds are kept for scientific purposes or for purposes related to the conservation of endangered species.
- Premises or parts of premises where only breeds of poultry or other captive birds that are considered rare are kept (see below).

This will only be considered if a VRA concludes that disease control is not threatened by exercising this discretion. Factors taken into account when making such a decision include:

- Whether the AI virus at the IP is of high or low pathogenicity.
- Whether the birds in question are infected or not.
- The biosecurity arrangements that can be put in place at the IP to minimise the risk of onward spread of the AI virus.
- The trade implications of not imposing a stamping out policy (i.e. culling and C&D).

The [UK Breeds at Risk List](#) has been compiled by the Farm Animal Genetic Resources (FAnGR) Committee. FAnGR is a UK Government committee with participation from the Devolved Administrations which provides advice to Government on all issues relating to farm animal genetic resources, particularly its conservation and sustainable use.

If the derogation is applied, birds must be brought indoors or isolated, and kept in such a way that they do not have contact with other poultry or other captive birds. Similar steps must also be taken to minimise contact with wild birds.

Birds not culled will be subject to further surveillance and testing and not be allowed to move off the premises (unless licensed) until laboratory tests indicate that they no longer pose a risk to the further spread of the AI virus.

10.1.2 Newcastle disease

In relation to ND, the principles and approach to that described above for AI will be adopted wherever possible.

10.1.3 Pigeon paramyxovirus type 1

If PPMV-1 is confirmed in pigeons, the default position is that pigeons are not culled. Restrictions imposed on suspicion (see Section 5.4.1) will remain in place on the premises until clinical signs of disease no longer exist. At this point, where live (potentially recovered) pigeons remain on the premises, restrictions will be maintained for a further 60 days after the disappearance of clinical signs of the disease.

APHA will advise the owner/keeper that they should inform anyone whose pigeons may have recently mixed with the infected pigeons. This will alert others to the existence of disease and to increase their vigilance for clinical signs of disease in their birds.

10.2 Derogation from declaring control zones

10.2.1 Highly pathogenic avian influenza

If HPAI is confirmed in a hatchery, there is provision for flexibility in terms of declaring zones as described in Section 9. Similarly, the declaration of zones is likely not to be required in the event of confirmation of NAD in a slaughterhouse. In both cases, a VRA will inform the action taken. The premises of origin will be traced and an investigation carried out to determine what action is required, including depopulation if appropriate and further actions as applicable to an IP, including tracing.

If HPAI is confirmed at a premises listed below, derogation exists in relation to the measures imposed within the zones.

Types of premises at which derogation may be considered:

- Non-commercial premises.
- Circuses.
- Zoos.
- Pet shops.
- Wildlife parks.
- Fenced areas where poultry or other captive birds are kept for scientific purposes or for purposes related to the conservation of endangered species.
- Premises or parts of premises where only breeds of poultry or other captive birds which are considered rare are kept.

In the case of HPAI, the default position is that zones are declared as per Section 9. Any decision to deviate from this position would be based on a VRA that concluded that the origin of the disease had been established and that the risk of spread had been assessed as negligible.

10.2.2 Newcastle disease

In relation to ND, the principles and approach to that described above for AI will be adopted wherever possible.

10.2.3 Low pathogenic avian influenza

If LPAI is confirmed in a hatchery or in poultry or other captive birds at a type of premises listed in Section 10.2.1, legislation allows for flexibility in terms of declaring a zone (and the measures within as described in Section 9. In reaching such a decision, the principles in Section 10.2.1 apply.

10.2.4 Pigeon paramyxovirus type 1

Zones are not declared for outbreaks of PPMV-1 in pigeons or other captive birds.

11 Emergency Vaccination

Vaccination is not recommended for the control of LPAI or HPAI. Stamping out is the most effective means of controlling an outbreak. For preventive vaccination, see Section 3.6.

11.1 Avian influenza

11.1.1 European legislation

European legislation allows MSs to introduce emergency vaccination in poultry or other captive birds as a short term measure to contain an outbreak when a risk assessment indicates there is a significant and immediate threat of AI spreading within or into a MS. If emergency vaccination were to be introduced in GB, a plan would need to be submitted to the EC for approval.

11.1.2 Government's position

Vaccination is not a routine control measure and is a practice restricted by legislation. Vaccination of poultry or other captive birds is not the most effective defence against outbreaks of AI: outbreaks in GB to date have been stamped out through application of the control measures detailed in Sections 5, 7, 8 and 9.

11.1.3 Scenarios

Emergency vaccination in GB is not recommended as a means of controlling an outbreak. However, this strategy may be reconsidered by experts if there is a significant change in the epidemiology of AI in reservoir populations. In these circumstances it may be prudent to vaccinate poultry at risk. Monitoring and surveillance, including a "Differentiate Infected from Vaccinated Animals" (DIVA) strategy with stamping out of infected vaccinated birds, would need to be put in place and carried out intensively if the virus is to be eradicated. An exit strategy would be put in place accordingly.

11.2 Newcastle disease

Vaccines for ND with marketing authorisations are commercially available and bird owners can choose whether or not to vaccinate their birds. Under legislation there is provision for the imposition of a compulsory vaccination zone in the event of an outbreak. At present, Government cannot foresee circumstances under which we would declare such a zone for an outbreak of ND. Instead, communications will highlight the availability of vaccine against the disease. Any consideration of compulsory vaccination would be based on a VRA and other factors, such as the density of poultry farms in the area and the disease situation.

12 Avian influenza: pigs and other mammals

12.1 Overview

Birds and many mammals can be infected with influenza A virus. From time to time, influenza viruses evolve into new strains of influenza. This can happen within species or through the mixing of viruses from different species. Pigs have been described as possible 'mixing vessels' for the various influenza virus strains.

Swine influenza is largely endemic in most pig producing countries, including the UK. Swine influenza is not notifiable; however a voluntary [code of practice](#) is in place covering the prevention and control of influenza in pigs.

The viruses that cause AI (i.e. of H5 and H7 subtypes) are not known to circulate in pigs, although they could in theory become infected with these strains. Other influenza viruses of avian origin – H1 and H3 subtypes – have entered pig populations and circulated.

The aim of the controls described in this section is to minimise the risk of pigs acting as agents for further evolution or spread of influenza viruses (including viruses causing AI) to other species including humans.

12.2 Avian influenza confirmed at infected premises where pigs are kept

In cases where AI is confirmed in poultry or other captive birds and pigs are kept at the IP, the pigs will be tested for infection with the virus. This can also be applied to other mammals on the IP. Testing will be carried out as soon as possible after confirmation of the disease in poultry and then again 21 days after the date of culling of the poultry or other captive birds. No action will be taken if both these sets of results are negative. However, the movement of pigs off the premises will already have been restricted (see Section 5.4.1) and such restrictions are likely to remain in place until the latter set of laboratory results confirm that AI virus is not present in the pig herd.

If the same virus is confirmed in pigs, powers exist for the culling of infected animals or those exposed to the virus. Action in the event of such an occurrence would be assessed on a case-by-case basis, drawing on expert opinion, both from a veterinary and human health perspective. Government would where possible seek to implement measures in line with the principles of the [code of practice](#) in place for the prevention and control of influenza in pigs, however, culling cannot be ruled out.

12.3 Suspect influenza in pigs

Pig owners/keepers' private vets can routinely submit samples to the APHA or Scottish Agricultural College for swine influenza testing.

12.4 Influenza A virus of avian origin confirmed in pigs not at an existing infected premises

The confirmation in pigs of influenza A virus of avian origin occurs through an unexpected isolation of the virus reported from laboratory testing as described in Section 12.3. The [local APHA office](#) must be informed of such an occurrence. In such cases, the disease control approach will follow the principles detailed in Section 12.2.

12.5 Preventing avian influenza in wild birds from transmitting to pigs

If HPAI H5N1 is confirmed in wild birds (see Section 13) near to a pig unit, a VRA may be carried out which would provide the basis for advice given to keepers of outdoor pigs in the area. Such advice is likely to reinforce messages of increased vigilance for clinical signs of disease, prompt reporting of disease and vigilance for any diseased or dead wild birds in the vicinity. Other measures aimed at minimising contact between pigs and wild birds have not been necessary to date in outbreaks of HPAI H5N1 in wild birds in GB. Any consideration of such measures will take into account the epidemiological situation at the time, the transmissibility of the virus in question and the risk of reassortment.

12.6 Preventing avian influenza in poultry or other captive birds from transmitting to pigs and other mammals

Powers are available to declare an AI (Restrictions on Mammals) Zone, allowing any measures deemed necessary to control disease spread to be implemented. These could include testing of pigs or other mammals for influenza virus causing AI, restrictions on the movements of pigs and other mammals or requirements for enhanced biosecurity or the housing of pigs or other mammals. Such measures have not been necessary to date in an outbreaks AI in GB. Any consideration of such measures will take into account the epidemiological situation at the time, the transmissibility of the virus in question and the risk of reassortment.

13 Highly pathogenic avian influenza H5N1 in wild birds

13.1 Confirming highly pathogenic avian influenza H5N1 in wild birds

If HPAI H5N1 is confirmed in a wild bird or wild bird carcass, requirements under European legislation apply. If other subtypes of AI are found in wild birds, it is the default position that no action will be taken. If action is considered, this will be based on expert opinion, ornithological advice and consideration of trade implications.

Communication to owners/keepers of poultry or other captive birds emphasising the need for increased vigilance for clinical signs of AI and industry-led initiatives would be considered prior to any Government intervention.

13.2 Culling of wild birds

It is not current policy to cull wild birds, although powers exist to do this. The control of AI infection in wild bird populations is not feasible from a logistical, environmental and biodiversity perspective. Indiscriminate culling of wild migratory bird populations is unlikely to be effective in preventing further spread of AI, and their hunting would likely cause the dispersion of the birds. At present, we cannot foresee circumstances that would lead to a change in this policy, although this position will be assessed on a case by case basis.

13.3 General principles

Legislation provides for controlled areas around the location of the confirmed case of HPAI H5N1 (i.e. the location from which the wild bird/wild bird carcass was collected). Measures implemented have the aim of preventing the spread of the disease to poultry or other captive birds and are put in place through the declaration of disease control areas: the default position is that a wild bird control area (WBCA) and wild bird monitoring area (WBMA) are declared.

13.4 Size of areas

Legal requirements determine the minimum size of disease control areas. Expert ornithological advice regarding measures within the areas and their size is sought during the course of an outbreak as more information regarding the disease situation becomes available. If further infected wild birds/carcasses are confirmed, areas are reshaped (if the wild bird/carcass was collected from an existing area) or newly established (if the wild bird/carcass was collected outside existing areas).

Legislation allows for the size and shape of the areas to be based on an assessment of the risk of disease spreading to poultry or other captive birds. This means that there is scope for each outbreak to be assessed throughout its duration and treated accordingly on a case by case basis. Expert ornithological advice will be drawn upon throughout the outbreak. Factors taken into account in the size of the declared areas will include:

- Geographical features.
- Administrative boundaries (e.g. county or unitary council boundaries).
- Those relating to the water environment in the locality.
- Ecological factors.
- The extent of the outbreak.
- Monitoring facilities.
- Location/extent of poultry and other captive bird populations.

There may be limited circumstances under which zones may not be declared. The following conditions have to be satisfied through a VRA:

- That the virus is not present in poultry, other captive birds or wild birds in the area.
- That the wild bird or carcass did not present a risk of spreading the virus to these birds in that area.

This could be considered, for example, when evidence suggests that the affected wild bird was not resident to the area where its carcass was found and therefore the declaration of control areas would not be a proportionate or effective response.

13.5 Surveillance within zones

The principles and surveillance activities listed in Section 9.5 apply.

13.6 Duration of zones

The WBCA is usually in place for at least 21 days following the date of collection of the samples from the infected wild bird, at which point it becomes part of the WBMA. Its duration will take account of surveillance in the area showing that there is no disease present in poultry or other captive birds. Under legislation, there is however scope for the collapsing of the WBCA prior to 21 days. This can only be considered following a favourable VRA and the completion of surveillance activities listed in Section 9.5. This will not occur if there is/are suspect premises (see Section 5) within the zone at which veterinary inquiries are ongoing or for which laboratory results are pending. If no laboratory results are pending and no premises are suspected of housing poultry infected with the virus, the WBCA may become part of the WBMA before 21 days.

The WBMA will be in place for at least 30 days following the date of collection of the samples from the infected wild bird. Its duration will take account of surveillance in the area showing that there is no disease present in poultry or other captive birds.

13.7 Measures within zones

The table below details the key standard measures that will apply in the relevant disease control area. In addition, the following key principles apply:

- The Declaration will detail the exact requirements within the area(s).
- In relation to measures under which movements are subject to licence, see Section 14.1.
- Legislation allows for the measures within the control areas to be based on an assessment of the risk of disease spreading to poultry or other captive birds. This means that there is scope for each outbreak to be assessed throughout its duration and treated accordingly on a case by case basis. As such:
 - Additional measures can be applied if considered necessary. These could, for example, relate to housing, feeding, watering and biosecurity requirements aimed at reducing the risk of transmission between wild birds and poultry or other captive birds.
 - After 21 days following the declaration of the disease control areas, certain measures in the WBCA and WBMA may be relaxed subject to a favourable VRA and to there being no outbreak of HPAI H5N1 confirmed or suspected in poultry or captive birds in the WBCA or WBMA (see Section 13.5).

Restriction	HPAI H5N1 in wild birds		
	Zone(s)	WBCA	WBMA
Default radius (km)		3	10
Minimum length of time in place since the collection of samples from the infected wild bird (days)		21 ⁹	30
Movement restrictions – poultry or other captive birds		X	X
Movement restrictions – hatching eggs		X	
Movement restrictions – bird by products		X	
Restrictions/Requirements – controlled meat		X	
Restrictions – poultry/other captive bird manure		X	
Biosecurity		X	X
Ban on bird gatherings		X	X
Ban on the release of game birds		X	X
Ban on hunting/taking of wild birds		X	X

⁹ See Section 13.6 for circumstances where this may become part of the WBMA before this date.

Key:

Movement restrictions: movements of the things listed will be subject to restrictions.

Restrictions/Requirements – controlled meat¹⁰: movements will be subject to restrictions and requirements in place in relation to the marking and separation of such meat from other meat.

Restrictions – poultry/other captive bird: may only be removed from premises or spread under certain circumstances. *Requirements – fresh meat and meat products:* requirements relating to marking, sourcing, cutting, transportation and storage will be in place.

Biosecurity: appropriate measures must be put in place for people entering or leaving premises where poultry or other captive birds are kept (other than slaughterhouses).

Ban on bird gatherings: bird gatherings will not be permitted within the zone.

Ban on the release of game birds: the release of game birds will not be permitted within the zone.

Ban on hunting/taking of wild birds: the hunting of wild birds or the taking of them from the wild will be banned unless licensed¹¹.

¹⁰ Controlled meat means any fresh meat, minced meat, meat preparation, mechanically separated meat or meat product which has not undergone heat treatment at a minimum temperature of 70°C (which must be reached throughout the meat) derived from poultry or wild game birds originating from within a wild bird control area (for definitions of fresh meat, minced meat, meat preparation, mechanically separated meat or meat product, see legislation listed in ⁸).

¹¹ Licensed here refers to a licence issued under the Avian Influenza (H5N1 in Wild Birds) England Order 2006 in England, the Avian Influenza (H5N1 in Wild Birds) (Wales) Order 2006 in Wales or the Avian Influenza (H5N1 in Wild Birds) Scotland Order 2006 in Scotland.

13.8 Controls outside disease control areas

13.9.1 General

Legislation does not require any specific controls outside of the declared zones. However, as detailed in Section 4.2, a prevention zone may be declared if it is determined that there is a heightened risk of AI infection or spread in GB from wild birds to poultry and other captive birds.

13.9.2 Bird gatherings

So long as evidence suggests that HPAI H5N1 infection remains confined to wild birds and does not spread to poultry or other captive birds, it can be expected that bird gatherings will be permitted to continue, subject to compliance with the relevant general licence (see Section 3.9).

14 Exiting from movement restrictions

14.1 Disease control zones

14.1.1 National movement ban

Imposition of a national ban on movements including poultry, other captive birds, eggs and poultry meat/carcases is **not** proposed for outbreaks of NAD. The nature of the diseases and experience gained in their control across the EU suggests that such a ban would add little benefit in terms of disease control.

14.1.2 Licensing

The legal framework underpinning the measures described in Section 9 and Section 13 in disease control zones allows for the licensing of certain movements or activities in certain circumstances. Where there is licence provision and, based on expert opinion, it is concluded that allowing a movement or activity would not risk spreading disease, a licence may be issued. Licences will have conditions which are considered necessary to reduce the risk of possible disease spread. Licences may be in the form of a:

- Specific licence – applied for at the local APHA office, allowing a one-off movement/activity subject to conditions.
- Multiple licence – applied for at the local APHA office, allowing a number of movements/activities to take place over a certain period, subject to conditions, without having to apply for separate licences for each movement/activity.
- General licence – placed on the GOV.UK website, allowing a movement/activity to take place without applying for a licence. So long as the conditions of the licence can be met, the movement/activity can be undertaken.

As part of good contingency planning, Government maintains a library of template licences for NAD that can be used in an outbreak.

14.1.3 Licensing strategy

Experience of controlling outbreaks of NAD in both GB and across the EU has, to date, largely involved the early detection of disease leading to a single/low number of IPs. Control measures required by European legislation detailed in this control strategy have been successful in stamping out disease.

During previous outbreaks in GB, movement controls within disease control zones have been able to be gradually eased, subject to an assessment of risk of the spread of disease. As such, the principles detailed below are based on this experience: as epidemiological circumstances may vary in future outbreaks, decisions on movements and licences are also subject to variation.

It is important to note that the impact of movement restrictions will depend on the nature of the activities related to the poultry/other captive bird sector within the declared disease control zones including:

- The number, size and type of premises containing poultry or other captive birds within the zones.
- The types of related premises within the zones (e.g. location of slaughterhouses, hatcheries) and whether these are *designated* or not (i.e. premises which meet high biosecurity standards and are registered as such with Government/APHA).
- The type of activities normally carried out within the zone (e.g. bird gatherings, shooting/hunting of wild birds).

Upon confirmation of NAD, it is vital that such information is established as soon as possible. However, the role of key stakeholders is crucial in drawing to Government's attention the potential "pinch-points" caused by restrictions. As such, mitigating action can be initiated at an early stage of the outbreak in an attempt to minimise such impacts. Government sources, such as the GBPR, are also used to establish the likely impact of movement restrictions within the zone.

14.1.4 Low risk movements

Under normal circumstances, it can be expected that certain *low risk* movements may be licensed within the first few days after confirmation of disease. The following movements fall into such a category, subject to the disease concerned and certain conditions being met (including those of the respective licences):

- Movement of table eggs to a designated¹² packing centre.
- Movement of table eggs or hatching eggs to an egg processing plant or for disposal.
- Movement of hatching eggs to a designated hatchery.
- Movement of specific pathogen free eggs to a designated laboratory, institute or vaccine manufacturer for scientific, diagnostic or pharmaceutical uses.
- Movement of day-old chicks from designated hatcheries (other than into a PZ).
- Movement of poultry for slaughter in a designated slaughterhouse.
- Carcasses for diagnosis (other than for NAD).
- Carcasses for disposal (subject to animal by-products regulations and biosecurity instructions).
- Movement of table eggs within the PZ direct to retail premises, or at/from such premises¹³.

Some of these movements may be licensed from the outset of an outbreak.

¹² See Glossary and Section 14.1.5 for definition of *designated*.

¹³ Applicable to Newcastle disease **only** due to differing legislation.

14.1.5 Designation

In certain circumstances during an outbreak it is a legal requirement that a premises/plant is officially designated. A designated premises/plant is one that has been specifically approved to operate either in a particular disease control zone, or with birds (or meat or eggs from such birds) that originated from certain disease control zones. Designation usually requires an application, official inspection and a formal official approval. To become designated there are requirements for enhanced biosecurity and in some cases additional requirements for special marking of products, separation of restricted products, and record keeping/traceability.

Premises in disease control zones may only send poultry to slaughter where the movement is licensed and the receiving slaughterhouse is designated. There are similar licensing requirements for the movement of table eggs to a designated egg packing centre (if not being sent for disposal or to an egg processing plant) and hatching eggs to a designated hatchery. Premises in disease control zones may only receive day-old chicks where the movement is licensed and they originate from a designated hatchery. A slaughterhouse, egg packing centre or hatchery located within a disease control zone must be designated if it is to receive poultry or eggs from any premises (whether originating from premises within or outside disease control zones), movements of which must be licensed.

Premises wishing to operate during an outbreak may apply for designation during an outbreak. They may also apply in advance of an outbreak for provisional approval allowing any deficiencies to be corrected in advance by contacting their [local APHA office](#). However, provisionally approved premises/plants will need to apply for their designation to be activated for a specific outbreak. Those provisionally designated in advance should find formal approval of designation is quicker compared to making a new application at the time of an outbreak.

14.1.6 Other movements

Other movements, such as live poultry/other captive birds (to live rather than for slaughter) and poultry litter/manure/slurry within or out of zones carry a greater risk of further spreading NAD virus. Consequently, such movements are not likely to be considered by experts for licensing until the epidemiological situation has become clearer, the outbreak had been thus far contained and evidence suggests that there had been no further onward spread of the virus. Government will work with key stakeholders to understand where there are potential issues developing and, where a VRA indicates that disease control can be maintained, will seek to release key licences as soon as possible. Additional conditions such as veterinary inspections and sampling/testing poultry may be required as part of these licence conditions which will need to be arranged by the licence applicant.

14.2 Exports

14.2.1 Exports to other European Union countries

Once disease control zones are lifted, and provided that any additional safeguard measures imposed on the UK during an outbreak have also been lifted, the export of poultry and poultry products to other MSs can resume as normal.

14.2.2 Exports to non-European Union countries

Export health certificates agreed with non-EU countries vary and reflect the destination country's import conditions. Some Third Countries will suspend UK imports even though export health certificates can be signed. During outbreaks of NAD, Government will liaise with exporters, British Embassies overseas and non-EU countries' veterinary authorities to keep export markets open and facilitate exports. Priority will be given to those markets most important to exporters. *Customer Information Notes* are issued on the GOV.UK website to inform exporters about trade restrictions. Defra's role in such discussions with Third Countries may continue for a significant period of time following an outbreak of NAD.

14.3 Gaining disease freedom

The OIE sets out requirements which determine whether a country is regarded as disease free. For both AI and ND, the quickest way to regain disease free status following an outbreak is 3 months after a stamping out policy has been completed, which includes the disinfection of all IP (i.e. secondary C&D as described in Section 7.9) and surveillance met under obligations to European legislation. Alternatively, disease free status can be obtained when it has been shown, through surveillance, that infection with either ND or AI viruses in poultry has not been present for the past 12 months.

Annex 1 - Glossary of Terms

APHA Animal and Plant Health Agency. A Government Executive Agency responsible for safeguarding animal and plant health in GB. The APHA is the national, European Union and international reference laboratory for avian influenza and Newcastle disease.

AI Avian influenza. Highly pathogenic avian influenza (see: *HPAI*) or low pathogenic avian influenza (see: *LPAI*).

APMV-1 Avian paramyxovirus type 1. The virus responsible for Newcastle disease. Currently, there are nine serologically distinguishable groups of avian paramyxoviruses (APMV-1 to APMV-9).

Birds Poultry and other captive birds (see: *Poultry* and *Other captive birds*).

Commercial premises Premises where poultry or other captive birds are kept for commercial purposes. This does not include premises where all such birds and their eggs are kept by their owners for their own consumption or use or as pets.

Contacts Premises that have an epidemiological connection, including by proximity, with infected premises.

CVO Chief Veterinary Officer. A Government official who is responsible for veterinary advice to government and ministers on all aspects of animal health and welfare. The UK has CVOs in Scotland, Wales and Northern Ireland. The CVO has a dual role with responsibility in respect of England and in representing the UK in the EU and internationally on veterinary matters.

Dangerous contacts Contact premises that have been exposed to infection to such a degree that they are likely to develop disease.

Defra Department for Environment, Food and Rural Affairs.

Designated (slaughterhouse, egg packing centre or hatchery). Official approval of a plant to handle animal products during a specific disease outbreak. This may be required to receive birds or their products that originate from disease control zones or to operate within disease control zones.

EC European Commission. An executive of the European Union with responsibilities including proposing legislation and implementing decisions.

EU European Union. An economic and political union currently comprising 27 Member States.

FSA Food Standards' Agency. An independent government department set up to protect the public's health and consumer interests in relation to food.

GB Great Britain. England, Scotland and Wales.

GBPR Great Britain Poultry Register.

Government The UK Government, the Welsh Government and the Scottish Government.

HPAI Highly pathogenic avian influenza. An infection of poultry or other captive birds caused by: avian influenza viruses of subtypes H5 or H7 with genome sequences codifying for multiple basic amino acids at the cleavage site of the haemagglutinin molecule to that observed for other HPAI viruses, indicating that the haemagglutinin molecule can be cleaved by a host ubiquitous protease; or avian influenza viruses with an intravenous pathogenicity index in six-week old chickens greater than 1.2.

Index case The first case of an outbreak of exotic disease confirmed by the competent authority (i.e. Government/APHA). NB. This is not to be confused with “primary,” “secondary” etc cases, which reflect the true sequence of infection after disease entered Great Britain. The index base is the starting point for an epidemiological investigation which may indicate the source of disease and possible routes of spread.

IP Infected premises. Premises at which Notifiable Avian Disease virus has been officially confirmed.

ITAHC Intra (Community) Trade Animal Health Certificate. Trade in certain animal products, certain live animals or germoplasm with a European Union Member State requires an ITAHC.

Local authorities Usually county or unitary authorities, are responsible for enforcing the majority of animal disease control legislation.

LPAI Low pathogenic avian influenza. An infection of poultry or other captive birds caused by avian influenza viruses of subtypes H5 or H7 that do not come within the definition for highly pathogenic avian influenza (see: *HPAI*).

LPAI RZ Low pathogenic avian influenza restricted zone.

Mammal An animal of the class *Mammalian*, except humans.

MS Member State. A state that is a member of the European Union by virtue of signing and ratifying the treaties of the European Union.

NAD Notifiable avian disease – avian influenza and Newcastle disease (see: *AI* and *ND*).

ND Newcastle disease. An infection of poultry or other captive birds caused by any avian strain of the paramyxovirus (APMV-1) with an intracerebral pathogenicity index (ICPI) in day-old chicks greater than 0.7.

Non-commercial premises Premises that are not commercial premises (see: *Commercial premises*) where poultry or other captive birds are kept by their owners for their own consumption or use as pets.

OIE World Organisation for Animal Health

Other captive bird Any bird kept in captivity which is not poultry and includes a pet bird and a bird kept for shows, races, exhibitions, competitions, breeding or for sale.

Pig Any domesticated species of the *Suidae* family.

Pigeon Any species of the *Columbidae* family that are *poultry* or *other captive birds*.

PPMV-1 Pigeon paramyxovirus type 1. An infection of pigeons with a pigeon adapted strain of avian paramyxovirus type 1.

Poultry All birds that are reared or kept in captivity for the production of meat or eggs for consumption, the production of other products, for restocking supplies of game birds or for the purposes of any breeding programme for the production of these categories of birds.

PZ Protection zone.

RZ Restricted zone.

SAC Scottish Agricultural College.

SG Scottish Government.

Slaughterhouse An establishment used for slaughtering poultry, the meat of which is intended for human consumption.

SZ Surveillance zone.

TCZ(s) Temporary control zone(s).

TRACES Trade Control and Expert System. Veterinary authorities from the UK and abroad use TRACES to track the movement of consignments across Europe.

UK United Kingdom. England, Scotland, Wales and Northern Ireland.

Unregulated period of infection The period from the date when, according to veterinary opinion, Notifiable Avian Disease may first have been introduced to a premises to the date when measures were imposed upon suspicion of disease in relation to that premises.

VENDU Veterinary Exotic Notifiable Disease Unit. Part of APHA, VENDU provides veterinary policy advice and risk assessments. VENDU works closely with Government and the National Reference Laboratory (see: *APHA*) when there is a exotic notifiable disease investigation and has a vital role in disease reporting during an outbreak.

VRA Veterinary risk assessment.

WBCA Wild bird control area.

WBMA Wild bird monitoring area

WG Welsh Government.

Wild birds Birds that are not poultry or other captive bird (see: *Poultry* and *Other captive bird*).

Zoo birds Any captive bird kept at a zoo or other collection holding a current Zoo Licence (obtained from the relevant local authority).

Annex 2 – European and GB legislation for the control of NADⁱ

a) Avian Influenza

Scope	European Commission	England	Wales	Scotland
Avian Influenza – outbreak control	2005/94/EC (as amended by 2008/73/EC (national reference library), 2006/437/EC (diagnostic manual)). 2005/734/EC (as amended by 2005/745/EC, 2005/855/EC, 2006/405/EC, 2006/574/EC, 2009/6/EC, and 2009/818/EC extending application until 31/12/10).	The Avian Influenza and Influenza of Avian Origin in Mammals (England) (No.2) Order 2006	The Avian Influenza and Influenza of Avian Origin in Mammals (Wales) (No.2) Order 2006	The Avian Influenza and Influenza of Avian Origin in Mammals (Scotland) Order 2006
Avian influenza – H5N1 in poultry (additional measures)	2006/415/EC (Annex amended regularly to reflect EU outbreaks; as amended by 2009/495/EC, extending application until 31/12/10).	The Avian Influenza (H5N1 in Poultry) (England) Order 2006 The Avian Influenza (H5N1) (Miscellaneous Amendments) Order 2007	The Avian Influenza (H5N1 in Poultry) (Wales) Order 2006	The Avian Influenza (H5N1 in Poultry) (Scotland) Order 2007
Avian influenza – H5N1 in wild birds	2006/563/EC (general requirements; as amended by 2007/119/EC, marking of meat products).	The Avian Influenza (H5N1 in Wild Birds) (England) Order 2006 The Avian Influenza (H5N1) (Miscellaneous Amendments) Order 2007	The Avian Influenza (H5N1 in Wild Birds) (Wales) Order 2006	The Avian Influenza (H5N1 in Wild Birds) (Scotland) Order 2007
Avian influenza – further preventive measures (bird gatherings, poultry premises registration, vaccination at zoos)	2005/734/EC, (as amended by 2005/745/EC, 2005/855/EC, 2006/574/EC, and 2009/818/EC, extending until 31/12/10). 2007/598/EC (preventive measures at zoos). 2005/94/EC (identification of poultry premises).	The Avian Influenza (Preventive Measures) England Regulations 2006	The Avian Influenza (Preventive Measures) (Wales) Regulations 2006	The Avian Influenza (Preventive Measures) (Scotland) Order 2007 The Avian Influenza (Preventative Measures in Zoos) (Scotland) Regulations 2005 (as amended)

Avian influenza – vaccination (H5/H7)	2005/94/EC (Chapter IX)	The Avian Influenza (Vaccination) (England) Regulations 2006 The Avian Influenza (Fees for the Licensed Vaccination of Birds) (England) Regulations 2007	The Avian Influenza (Vaccination) (Wales) Regulations 2006	The Avian Influenza (Slaughter and Vaccination) (Scotland) Regulations 2006
Avian influenza – surveillance in domestic poultry	2005/94/EC (general requirement for surveillance). 2010/367/EU (implementation of surveillance – Annex 1).	The Avian Influenza and Influenza of Avian Origin in Mammals (England) (No.2) Order 2006	The Avian Influenza and Influenza of Avian Origin in Mammals (Wales) (No.2) Order 2006	The Avian Influenza and Influenza of Avian Origin in Mammals (Scotland) Order 2006
Avian influenza – surveillance in wild birds	2005/94/EC (general requirement for surveillance). 2010/367/EU (implementation of surveillance – Annex 2).	The Avian Influenza and Influenza of Avian Origin in Mammals (England) (No.2) Order 2006	The Avian Influenza and Influenza of Avian Origin in Mammals (Wales) (No.2) Order 2006	The Avian Influenza and Influenza of Avian Origin in Mammals (Scotland) Order 2006
Avian influenza – other powers and requirements (including compensation)	N/A	The Avian Influenza and Newcastle Disease (England and Wales) Order 2003 The Avian Influenza and Newcastle Disease (Biosecurity Guidance and Disease Control (Slaughter) Protocol) (England and Wales) Order 2003 The Avian Influenza and Newcastle Disease (Contingency Planning) (England) Order 2003	The Avian Influenza and Newcastle Disease (England and Wales) Order 2003 The Avian Influenza and Newcastle Disease (Biosecurity Guidance and Disease Control (Slaughter) Protocol) (England and Wales) Order 2003	N/A
		Animal Health Act 1981 as amended in 2002	Animal Health Act 1981 as amended by the Animal Health and Welfare (Scotland) Act 2006.	

b) Newcastle disease and pigeon paramyxovirus type 1

Scope	European Commission	England	Wales	Scotland
Newcastle disease – outbreak control	92/66/EEC 93/152/EEC (criteria to be used against Newcastle disease in the context of routine vaccination programmes).	Diseases of Poultry (England) Order 2003	Diseases of Poultry (Wales) Order 2003	The Diseases of Poultry (Scotland) Order 2003
Newcastle disease – other powers (including compensation)	N/A	The Avian Influenza and Newcastle Disease (England and Wales) Order 2003 The Avian Influenza and Newcastle Disease (Biosecurity Guidance and Disease Control (Slaughter) Protocol) (England and Wales) Order 2003 The Avian Influenza and Newcastle Disease (Contingency Planning) (England) Order 2003	The Avian Influenza and Newcastle Disease (England and Wales) Order 2003 The Avian Influenza and Newcastle Disease (Biosecurity Guidance and Disease Control (Slaughter) Protocol) (England and Wales) Order 2003	N/A
		Animal Health Act 1981 as amended in 2002	Animal Health Act 1981 as amended by the Animal Health and Welfare (Scotland) Act 2006.	
Newcastle disease – control of meat	2002/99/EC	The Products of Animal Origin (Disease Control) (England) Regulations 2008 The Products of Animal Origin (Disease Control) (England) (Amendment) Order 2009	The Products of Animal Origin (Disease Control) (Wales) Regulations 2008 The Products of Animal Origin (Disease Control) (Wales) (Amendment) Regulations 2009	The Products of Animal Origin (Disease Control) (Scotland) Order 2008 The Products of Animal Origin (Disease Control) (Scotland) (Amendment) Order 2009

ⁱ Disclaimer: The tables contained within Annex 2 are included as a guide and should not be relied upon as an exhaustive list of legislation relating to NAD. Official copies of all legislation should be checked in the event of an outbreak to ensure the legislation is up to date and legal advice should be sought if necessary.