



Annex IV : Programme for the surveillance of Avian Influenza in poultry and wild birds submitted for obtaining EU cofinancing

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- 8) As mentioned during the Plenary Task Force of 28/2/2014, you are invited to submit your programmes in **English**.

Submission Date

Thursday, August 27, 2015 11:36:47

Submission Number

1440671809335-6429

ANNEX 4 : Standard requirements for the submission of surveillance programmes for avian influenza in poultry and wild birds

1. Identification of the programme

Member state: UNITED KINGDOM

Disease avian influenza in poultry and wild birds

This program is multi annual :

no

Request of Union co-financing
from beginning of:

2016

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1.1 Contact

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2. Description and implementation of the surveillance programme in poultry

2.1.1 Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme

(max. 32000 chars) :

Defra coordinates the departments and agencies responsible for implementing the programme in Great Britain. Defra and the Devolved Administrations in Wales, Scotland and Northern Ireland are responsible for making policy decisions respectively.

The National Reference Laboratory (NRL) for Avian Influenza & Newcastle Disease at APHA (formerly the Animal Health and Veterinary Laboratories Agency) Weybridge is responsible for all aspects of laboratory testing and reporting of laboratory results to Defra and the relevant Devolved Administrations for samples collected in Great Britain (GB), as well as for any samples referred by DARD/AFBI, Northern Ireland, and provision of technical advice and consultancy.

The Department of Epidemiological Science (DES) and the Data Systems Group at APHA Weybridge are responsible for routine monitoring of UK survey progress, epidemiological analysis of poultry data for

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survey design and for analysis of results (see below for further information). In GB, the field staff of APHA are responsible for the collection of blood samples from eligible poultry flocks within the designated timeframe and submitting these for laboratory testing at the NRL at APHA Weybridge. In Northern Ireland (NI), DARD Veterinary Service is responsible for collecting samples for submission to AFBI Stoney Road, with any positive findings sent to APHA Weybridge for further testing.

In GB and NI respectively there are dedicated teams of staff that are responsible for coordination of survey activities, including the close monitoring survey progress. The team in NI monitor and report survey statistics and other data to the project team in GB, based at APHA Weybridge, including monthly survey progress updates and the information relevant to survey activities in NI that are required for the annual survey plan and the interim and final financial and technical reports. These data are sent to APHA Weybridge for collation into the UK returns to the European Commission.

The coordination and monitoring of survey activities in the UK is based on the roles and responsibilities outlined above, with a core project team at APHA that provides a central focus for design, delivery, monitoring and reporting of the UK AI surveys. This core project team comprises the Project Leader (veterinarian), a veterinary epidemiologist and scientist, database managers, operational field delivery lead and policy team leads from Defra and the Devolved Administrations of Wales, Scotland and Northern Ireland. For the AI Poultry Survey this team is supported by named regional team leaders who are responsible for managing delivery and monitoring/reporting on progress in their region. For the AI wild bird surveillance activities, there are also named team leaders, with equivalent responsibilities, from the respective expert ornithological delivery partner organisations/agencies. Field delivery teams have access to a web-based system that enables coordination of survey activities. During the course of the survey, monitoring statistics that describe activities/progress in the UK are produced weekly and circulated by e-mail to project and/or delivery leads. Routine checkpoint meetings are also held by teleconference (monthly for poultry survey; quarterly for wild bird surveillance), with the core project team and delivery team leaders invited to attend. Each meeting is based on a standard agenda which covers the following topics: (i) Survey progress, activities and statistics; (ii) Issues encountered relating to delivery and implementation of the required surveillance approaches; (iii) Operational, technical and logistical matters relating to field, laboratory or policy teams; (iv) Any other business. The core project team at APHA are also responsible for collating and compiling the information relevant to survey activities in the whole of the UK, including the data that are required for the preparation and submission of the annual survey plan and the interim and final financial and technical reports to the European Commission.

2.1.2 *System in place for the registration of holdings*

(max. 32000 chars) :

In Great Britain (GB), poultry flock registration is compulsory for owners keeping 50 or more poultry on a premises; this includes premises that are stocked with more than 50 birds for only part of the year. Owners of smaller flocks in GB (of less than 50 birds) may register on a voluntary basis. During 2014 there

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were changes to the poultry holding registration system and the associated poultry demographic data held for GB. It should be noted that the compulsory requirement for owners keeping 50 or more poultry on a premises (including premises that are stocked with 50 or more birds for only part of the year) remained unchanged.

In Northern Ireland (NI) all poultry owners must register with the NI bird register. Data from the NI poultry register is therefore used to inform the poultry survey design in NI.

The AI survey sampling frame for poultry flocks in GB as detailed in this plan is based on poultry demographic data held in the new national poultry demographic database (SAM) for flocks of 50 or more birds in GB. The SAM database is dynamic and subject to periodic updates, meaning that the poultry demographic data that is available for use in the 2016 survey may be different to the demographic data used in this plan. Therefore, the design, sampling frame and implementation of the UK plan will be based on the most up-to-date demographic data available from the GB and NI poultry registers, as well as taking into account any changes in the epidemiology and/or scientific knowledge relating to avian influenza nationally or internationally (also see section 2.1.3.2). Whilst it is anticipated that any such changes will not have a major impact on the proposed survey approach or sampling frame, this will be kept under close review by APHA and the respective policy administrations.

2.1.3 *Design (risk based surveillance or surveillance based on representative sampling taking into account criteria in Annex I of Commission Decision 2010/367/EC)*

(max. 32000 chars) :

The UK poultry survey for avian influenza (AI) viruses of subtype H5 and H7 is a risk-based, targeted serological survey based on the provisions of and criteria and guidelines in Commission Decision 2010/367/EU. As such, the risk-based surveillance (RBS) approach represents an active surveillance framework that complements existing early detection (passive surveillance) systems for detection of avian notifiable disease in domestic poultry (1, 2). It is also relevant to note that scanning surveillance approaches may be less sensitive for detecting AI in ducks and geese (anseriformes) compared to other domestic poultry such as turkeys and chickens (galliformes).

The choice of RBS approach has been determined by assessment at Member State level of criteria and risk factors listed in Section 4.1 of Decision 2010/367/EU. This includes consideration of relevant risk pathways for infection of poultry flocks (incursion and secondary spread) in the UK, specifically:

- (i) Direct or indirect contact with wild birds, particularly migratory species of waterfowl;
- (ii) Direct or indirect contact with infected poultry;
- (iii) Between flock movements of poultry, poultry products, personnel and fomites.

Therefore, the RBS approach comprises sampling targeted towards those poultry holdings in the UK considered to be at greater risk of infection with AI with regard to the risk pathways outlined above, available data and with exclusion of specified poultry production types on the basis of perceived risk of

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infection with AI – see sections 2.1.3.2 and 2.2 below.

Serum samples are screened for the presence of antibodies to avian influenza viruses of subtypes H5 and H7. Following a positive serological result, movement restrictions are served on the premises and further field and laboratory investigations are carried out to establish whether active infection is present or not.

The objectives of the avian influenza RBS in domestic poultry are to:

- Detect LPAI of subtypes H5 and H7 in galliformes or anseriformes birds;
- Detect LPAI of subtypes H5 and H7 and highly pathogenic avian influenza (HPAI) in domestic waterfowl;
- To target this surveillance at higher risk poultry populations, relating to specified risk factors – see below.

References

(1) For example, Article 2 of Commission Decision 2005/734/EC of 19 October 2005 laying down biosecurity measures to reduce the risk of transmission of highly pathogenic avian influenza caused by Influenza virus A subtype H5N1 from birds living in the wild to poultry and other captive birds and providing for an early detection system in areas at particular risk: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:274:0105:0107:EN:PDF>

(2) Chapter II(2) of the Annex to Commission Decision 2006/437/EC of 4 August 2006 approving a Diagnostic Manual for avian influenza as provided for in Council Directive 2005/94/EC: http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_237/l_23720060831en00010027.pdf

2.1.3.1 *Short description of predominant poultry population and types of poultry production*

(max. 32000 chars) :

The UK poultry population is characterised by several different poultry species and production categories, as well as different types of flock management/husbandry system. In brief, poultry flocks in the UK can be categorised as backyard/hobby flocks or commercial flocks. The UK poultry population is also characterised by different poultry species, as follows:

- Domestic chickens - breeder, layer and broiler flocks.
- Turkeys - fattener (meat-type) and breeder flocks.
- Ducks - breeder, meat and layer flocks.
- Geese - breeder, meat and layer flocks.
- Feathered game classified as poultry - breeders and rearer flocks of pheasants, partridges and ducks reared for shooting.
- Other minor poultry species including: guinea fowl, quail, pigeons reared for meat, ostriches, emus,

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rheas, cassowaries and kiwis.

Typically in the UK, backyard/hobby flocks have access to accommodation and the outdoors and have only a few birds. Commercial poultry flocks may be exclusively reared indoors or may be managed as so-called free-range systems and are also large in size. For example, the vast majority of commercial chicken (broiler) and turkey meat production flocks and chicken/turkey breeder flocks are housed at all times. In contrast, approximately 50% of the commercial table egg layer flocks in the UK are free-range.

As described in section 2.1.2 above, in Great Britain, poultry flock registration is compulsory for owners keeping 50 or more poultry on a premises; this includes premises that are stocked with more than 50 birds for only part of the year. Owners of smaller flocks may register on a voluntary basis. In Northern Ireland (NI) all poultry owners must register with the NI bird register.

For the purposes of the design and approaches of the UK AI Poultry Survey, available national poultry population data sources for GB and Northern Ireland are assessed in conjunction with relevant risk factors and risk pathways, as described in section 2.1.3.2 below.

The UK commercial poultry industry is a large, highly coordinated and vertically integrated livestock and food production industry comprising several major sectors (Table 1).

Table 1: Summary Profile of the UK Poultry Industry & Demographics

Broiler(3)

Sector Consumer Product: Meat

No. of holdings¹: 1,707

No. of birds on holdings (millions)¹: 165

No. of birds placed annually (millions)²: 960

Layer(3)

Sector Consumer Product: Table eggs

No. of holdings¹: 4,900

No. of birds on holdings (millions)¹: 38

No. of birds placed annually (millions)²: 35

Turkey

Sector Consumer Product: Meat

No. of holdings¹: 1,250

No. of birds on holdings (millions)¹: 9.3

No. of birds placed annually (millions)²: 16

Duck

Sector Consumer Product: Meat & Table eggs

No. of holdings¹: 2,600 (Ducks & Geese)

No. of birds on holdings (millions)¹: 5.7

No. of birds placed annually (millions)²: 17

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Goose

Sector Consumer Product: Meat

No. of holdings¹: 2,600 (Ducks & Geese)

No. of birds on holdings (millions)¹: 0.1

No. of birds placed annually (millions)²: 0.25

Game

Sector Consumer Product: Sport & Meat

No. of holdings¹: 8,100

No. of birds on holdings (millions)¹: 50

No. of birds placed annually (millions)²: 30

Total

No. of holdings¹: 18,557

No. of birds on holdings (millions)¹: 268.1

No. of birds placed annually (millions)²: 1058.25

1 No. of holdings and No. of Birds on Holdings refers to poultry populations at specific points in time, derived from UK Agricultural Census (01 June 2012), British Poultry Council (2014), GB poultry population register (SAM - December 2014; legal obligation to register flocks >50 birds) and Northern Ireland poultry population (January 2013) figures.

2 No. of birds placed annually - from Defra Food statistics: <http://www.defra.gov.uk/statistics/foodfarm/food/>

3 Broiler and layer sectors refer to the whole chicken production chain – breeders, layer pullets in-rear, hens in-lay and broiler meat-type chickens.

2.1.3.2 Criteria and risk factors for risk based surveillance⁽¹⁾

(max. 32000 chars) :

UK Risk based surveillance (RBS) Survey design

Briefly, the design of the UK RBS approach for the AI poultry survey comprises five parts:

1. Analysis of existing guidelines and datasets: Analysis of criteria and risk factors listed in Section 4.1 of Commission Decision 2010/367/EU with reference to available national poultry population data sources, for GB and Northern Ireland and relevant risk factors and risk pathways.

2. Risk matrix: Development of a risk matrix relevant to a UK RBS plan for the AI poultry survey. Following part 1 analyses, four specific risk factors were identified for inclusion in the risk matrix, as follows:

(i) Location of poultry holdings, incorporating a risk-based analysis that describes high priority

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surveillance counties, or so-called Blue Counties - BC - that were derived by identifying:

- (a) Areas where commercial poultry are at greatest risk of an incursion of AI virus from wild birds;
 - (b) Areas in which specified wild bird species (n=24) of the orders Anseriforme (ducks, geese, swans) and Charadriiforme (gulls, terns, waders) are most abundant;
 - (c) County areas in which the first two factors coincide or overlap.
- (ii) Water body on the poultry premises – WB.
 - (iii) Mixed poultry species holding, where one of the poultry species is waterfowl – MSW.
 - (iv) Free-range (or equivalent management system) – FR.

In addition, information is also used from the poultry register to determine if the birds can be protected from wild bird droppings.

A map showing the high priority surveillance counties - or 'Blue Counties' - of Great Britain is attached and also available at: <http://archive.defra.gov.uk/foodfarm/farmanimal/diseases/atoz/ai/wildbirds/surveymap.htm>. In NI, all counties are 'Blue Counties'. Further description regarding the so-called Blue Counties in GB is provided below.

3. Estimate of the numbers of holdings required for survey selection and recruitment: The numbers of holdings for each poultry production category available for selection and recruitment by APHA field staff during the 2012-2014 AI poultry surveys were compared to the number of holdings sampled. An estimate of the numbers of poultry holdings required for the 2016 survey was derived, based on demographic data from the national poultry register, SAM.

4. Exclusion criteria: Justifications for the omission of certain poultry production types on the basis of perceived risk of infection with AI (in line with the provisions of Decision 2010/367/EU). The criteria and associated rationale were derived from expert opinion and are described more fully in section 2.2; paragraph 2(b) below.

5. Sampling frame: Integration of the combined outputs from parts 1-4 above to develop a proposed sampling frame for 2016 AI poultry survey in UK. Further details are also provided in section 2.2 and Tables 2.2.1 and 2.2.2 below.

The following types of poultry are included in the survey:

- o Domestic chickens - layer flocks, including free-range. Breeder flocks are subject to exclusion criteria (see section 2.2 below). Broilers are not included.
 - o Turkeys - fattener (meat type) flocks. Breeder flocks are subject to exclusion criteria (see section 2.2 below).
 - o Ducks - breeder, meat and layer flocks.
 - o Geese - breeder, meat and layer flocks.
 - o Feathered game classified as poultry - breeders flocks of pheasants and partridges and flocks of ducks reared for shooting.
- Backyard flocks are not included.

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Summary description of 'Blue Counties' in GB

The design of the RBS approach for the UK AI poultry survey describes so-called Blue Counties of Great Britain (GB), after Snow et al, (2007). Risk-based surveillance for H5N1 avian influenza virus in wild birds in Great Britain. *Veterinary Record*, 161, pp775-781: <http://veterinaryrecord.bmj.com/content/161/23/775.full.pdf>. Snow et al, (2007) defined the high priority surveillance counties - or 'Blue Counties' - of GB as follows:

"A single map showing priority areas for surveillance was constructed by calculating the product of the score of wild bird abundance and the score for poultry risk in each 10 km square. The scores were then categorised to give ranks from 1 to 6, with a rank of 6 indicating that there were either no poultry or no wild birds present in the 10 km square, and the ranks from 5 to 1 indicating risks in increasing order of priority for surveillance.

All the 10 km squares in the top rank, that is, approximately the top 20 per cent of the scored squares, are defined as priority squares for surveillance. Such squares combine a high abundance score for the 24 wild bird species of interest and high densities of higher-risk poultry holdings.

To create county level maps, incursion scores were calculated for each county as the average score for all 10km squares with any land within the county boundary i.e. if a square falls on the boundary between two counties it is counted twice.

In consultation with policy makers, epidemiologists and ornithologists, the high priority surveillance counties (Blue Counties) were then identified as the top one third of all counties in GB ranked according to average score for 10km squares (those with the highest average incursion risk scores). In addition, to ensure adequate geographical coverage the top scoring one third of counties in Scotland were also highlighted along with the Scottish Borders region. The Isle of Anglesey and Devon were selected because of the exceptionally high poultry and wild bird scores for these areas and for geographical coverage."

Using these criteria for selecting priority counties, 40% of the counties in GB have been selected as priority counties for targeted surveillance. To note that the design, sampling frame and implementation of the UK plan will be based on data that is periodically updated describing the poultry population and wild bird abundance in GB and NI, as well as taking into account any changes in the epidemiology and/or scientific knowledge relating to avian influenza nationally or internationally. Therefore, this may result in changes to the high risk areas in the UK, and necessitate alterations to the priority areas for sampling to optimise targeted sampling in risk areas. It is anticipated that any such changes should not have a major impact on the proposed survey approach, and where these changes are less than 20% of either demographic data and/or priority areas, the survey design in the UK will be amended either at the start of the survey year, or in-year. This will ensure resources are used in the most effective way to enable both survey delivery and risk-based targeting. This will be kept under close review by APHA and the respective policy administrations.

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- (1) Including maps showing target sampling sites identified as being particularly at risk for the introduction of avian influenza virus, taking into account criteria set out in point 4 of Annex I to Commission Decision 2010/367/EC.

2.2 Target populations (2)

(max. 32000 chars) :

As described in section 2.1.3.2 above, the following types of poultry are included in the survey:

o Domestic chickens - layer flocks, including free-range. Breeder flocks are subject to exclusion criteria (see below). Broilers are not included.

o Turkeys - fattener (meat type) flocks. Breeder flocks are subject to exclusion criteria (see below).

o Ducks - breeder, meat and layer flocks.

o Geese - breeder, meat and layer flocks.

o Feathered game classified as poultry - breeders flocks of pheasants and partridges and flocks of ducks reared for shooting.

Backyard and ratite flocks are not included.

Target populations of poultry flocks in England, Wales, Scotland and Northern Ireland are then assessed based on the RBS approach and design described above (section 2.1.3.2) and the following criteria, including flock exemptions and exclusions.

1. Selection of premises in England, Wales, Scotland and Northern Ireland

As described above, the risk matrix developed in part 2 of the Survey Design process includes the four specified risk factors - (i) to (iv) - as risk strata. Premises in each class of poultry will be (as far as is possible) selected for assessment and inclusion in the survey based on the existence of relevant risk factors. This process will be applied for each administrative area of the UK.

'Blue County' (BC) forms the primary risk stratum, and is a minimum risk factor requirement for determining selection of UK poultry holdings for all poultry production categories for assessment and recruitment to the survey. Three other risk strata are also defined which incorporate BC and at least one, two or three of the other risk factors described above, namely: WB, MSW and FR.

The total number of available poultry holdings will be estimated from the national poultry demographic databases (GB and NI) for each poultry production category for each of the risk strata. In addition, based on UK recruitment and eligibility data from previous national poultry surveys (APHA and DARDNI) it is possible to estimate the minimum number of holdings required for selection for each poultry production category.

Poultry holdings will then be assessed and recruited to optimise the number of available holdings 'of greatest risk'. This will start with those holdings that are confirmed during the survey recruitment process to fall within the risk stratum defined as 'poultry holdings located within a Blue County'. A

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number of additional flock size and risk factors (eg. being free-range or an equivalent management system; having a water body on the premises; being a mixed species holding, where one of the other species is waterfowl; where the birds cannot be protected from wild bird droppings) will then be assessed. Premises will then be determined as being eligible for recruitment and sampling, or ineligible, in which case sampling will not take place.

The planned number of poultry holdings to be sampled in each respective poultry category represents a maximum number of holdings. This maximum number of poultry holdings has been estimated based on:

- (i) The specified risk factors described previously;
- (ii) The estimated total numbers of available poultry flocks, as determined from retrospective analysis of GB and NI poultry population data.

This evaluation has also taken into account data available from analysing the outcomes of the RBS approach used previously in GB during 2012-2014. However, during the recruitment process a greater or lesser number of poultry premises in each poultry category may be confirmed as being actually present (ie. flocks that are in business), and that have the relevant risk factor(s). Hence, if fewer 'at risk' holdings are identified as being eligible during the course of the survey period, fewer premises than the planned maximum number for that poultry category (as outlined in Tables 2.2.1 and 2.2.2 below) will be sampled. Similarly, as described in section 2.1.3.2 above, changes to the risk-based survey design may be implemented based on changes in the epidemiology and/or scientific knowledge relating to avian influenza nationally or internationally.

Selection of premises is carried out by the Department of Epidemiological Sciences and the Data Systems Group at APHA Weybridge for England, Scotland and Wales, and by the Department for Agriculture and Rural Development (DARD) for Northern Ireland. Recruitment and sampling of premises are performed by APHA (in GB) and DARD (in NI) field staff.

2. Criteria for assessing premises - including exemptions and exclusions

(a) Assessment criteria. In addition to individual poultry premises being selected and then assessed as eligible for recruitment based on the methods described in sections 2.2 above, premises will also be assessed based on the total number of birds on the premises, for a given species, even when they are in separate flocks, specifically:

- Ducks and feathered gallinaceous game (pheasants, partridges and game ducks) - premises containing at least 50 birds;
- Geese - premises containing at least 50 birds;
- Turkeys - premises containing at least 500 birds;
- Chickens - premises containing at least 500 birds

(b) Exemption and Exclusion criteria. Premises and flocks above the "parent" level in the production hierarchy (ie. grandparent or above) for chickens and turkeys are excluded from the survey because these premises have high levels of biosecurity.

Chicken breeder and turkey breeder premises and flocks will also typically be excluded on the basis of three factors, specifically:

- (i) Biosecurity and flock management standards: The inherent nature of this poultry production category

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and the high financial value of individual birds and the economic value of breeder flocks as a whole means that higher biosecurity standards and conditions are operated on such premises.

(ii) Flock performance and monitoring: Production targets and associated indices/data are well defined and closely monitored for breeders. Therefore, any deviations from expected performance and/or presentations of unexplained clinical disease are likely to be detected promptly and appropriate action and investigations initiated in a timely manner.

(2) including MS specific exceptional circumstances as described in Annex I point 3 of Commission Decision 2010/367/EU)

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2.2.1 POULTRY HOLDINGS (a) (except ducks, geese and farmed game birds (waterfowl e.g. mallards) to be sampled

Serological investigation according to Annex I to Commission Decision 2010/367/EU

Targets for year

2016

Category : laying hens

delete this category

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis	
England	864	47	20	940	HI-test (H5)	X
England	864	47	20	940	HI-test (H7)	X
Scotland	65	4	20	80	HI-test (H5)	X
Scotland	65	4	20	80	HI-test (H7)	X
Wales	1	0	0	0	NA	X
Northern Ireland	155	9	20	180	HI-test (H5)	X
Northern Ireland	155	9	20	180	HI-test (H7)	X
Total				2 400		

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Add a new row

(a) *Holdings or herds or flocks or establishments as appropriate.*
 (b) *Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested*
 (c) *Total number of holdings of one category of poultry in concerned NUTS 2 region.*

Category : chicken breeders

delete this category

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis	
England	88	7	20	140	HI-test (H5)	X
England	88	7	20	140	HI-test (H7)	X
Scotland	3	0	0	0	NA	X
Wales	2	0	0	0	NA	X
Northern Ireland	45	3	20	60	HI-test (H5)	X
Northern Ireland	45	3	20	60	HI-test (H7)	X
Total				400		

Add a new row

(a) *Holdings or herds or flocks or establishments as appropriate.*
 (b) *Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested*
 (c) *Total number of holdings of one category of poultry in concerned NUTS 2 region.*

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Category : Turkey (fattening and breeders)

delete this category

NUITS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
England	335	58	20	1 160	HI-test (H5)
England	335	58	20	1 160	HI-test (H7)
Scotland	2	0	0	0	NA
Wales	2	0	0	0	NA
Northern Ireland	46	9	20	180	HI-test (H5)
Northern Ireland	46	9	20	180	HI-test (H7)
Total				2 680	

Add a new row

(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested

(c) Total number of holdings of one category of poultry in concerned NUTS 2 region.

Category : farmed game birds (gallinaeous)

delete this category

NUITS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
England	178	39	20	780	HI-test (H5)

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England	178	39	20	780	HI-test (H7)	X
Scotland	9	1	20	20	HI-test (H5)	X
Scotland	9	1	20	20	HI-test (H7)	X
Wales	4	0	0	0	NA	X
Northern Ireland	0	0	1	0	NA	X
Total				1 600		
Add a new row						

(a) *Holdings or herds or flocks or establishments as appropriate.*

(b) *Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested*

(c) *Total number of holdings of one category of poultry in concerned NUTS 2 region.*

Category : All (confirmatory testing)

delete this category

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
UK	0	0	0	10	Virus isolation test
UK	0	0	0	1 000	PCR test
UK	0	0	0	6 500	Sampling
Total				7 510	
Add a new row					

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(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested

(c) Total number of holdings of one category of poultry in concerned NUTS 2 region.

Add a category

Totals	Total number of tests
Total poultry 2016	14 590

2.2.2 DUCKS, GEESE AND FARMED GAME BIRDS (WATERFOWL e.g. MALLARD) HOLDINGS (a) to be sampled.

Serological investigation according to Annex I to Commission Decision 2010/367/EU

Targets for year 2016

Category : ducks (breeder, fattening and farmed game)

delete this category

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NUTS (2) (b)	Total number of duck and geese holdings	Total number of duck and geese holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
England	384	84	20	3 360	HI-test (H5)
England	384	84	20	1 680	HI-test (H7)
Scotland	12	3	20	120	HI-test (H5)
Scotland	12	3	20	60	HI-test (H7)
Wales	5	1	20	40	HI-test (H5)
Wales	5	1	20	20	HI-test (H7)
Northern Ireland	11	2	20	80	HI-test (H5)
Northern Ireland	11	2	20	40	HI-test (H7)
Total				5 400	
Add a new row					

(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (2) code can not be used, region as defined in the programme by the Member State is requested

Category : Geese (breeders and fattening)

delete this category

NUTS (2) (b)	Total number of duck and geese holdings	Total number of duck and geese holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
England	92	55	20	2 200	HI-test (H5)
England	92	55	20	1 100	HI-test (H7)
Scotland	1	0	0	0	NA
Wales	1	0	0	0	NA
Northern Ireland	6	4	20	160	HI-test (H5)

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Northern Ireland	6	4	20	80 HI-test (H7)	X
Total				3 540	
Add a new row					

(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (2) code can not be used, region as defined in the programme by the Member State is requested

Add a category

NUTS (2) (b)	Total number of tests		
Total ducks and geese and farmed game birds 2016	8 940		

TOTALS for Poultry (2.2.1) + Ducks and Geese (2.2.2) and farmed game birds for year :

Poultry + Ducks/Geese /farmed game birds	Total number of tests
Grand Total	23 530
Grand Total ELISA	0
Grand Total agar	0
Grand Total HI tests (H5)	9 500

2016

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Grand Total HI tests (H7)	6 520
Grand Total Virus Isolation test	10
Grand Total PCR test	1 000
Grand Total Other test	0
Grand Total Samplings	6 500

2.3 Sampling procedures, sampling periods and frequency of testing taking into account criteria set out in Annex I of Commission Decision 2010/367/EC

(max. 32000 chars) :

Maximum numbers of poultry premises to be recruited and sampled across the UK

Premises for recruitment will be selected based on applying the RBS design and approaches and the method described in sections 2.1.3.2 and 2.2 above. During the survey recruitment process, the eligibility of individual selected premises will be assessed and confirmed against the relevant risk factors by APHA and DARD field staff. Following this local assessment, final recruitment of the holding for sampling will be decided. The planned maximum number of premises for each of the poultry production category - as outlined in Tables 2.2.1 and 2.2.2 above - will be recruited for sampling, subject to there being sufficient available qualifying 'at risk' premises. Hence, if fewer available qualifying 'at risk' premises are identified as being eligible during the course of the survey period, fewer flocks than the planned maximum number for that poultry category will be sampled.

For chicken layer and turkey fatterer holdings, the UK will recruit a maximum of 60 eligible premises respectively. A maximum of 59 goose holdings will be recruited. For duck holdings (reared for sport shooting and ducks that are not being reared for sport shooting) the UK will recruit a maximum of 90 eligible premises. In addition, a maximum of 40 pheasant and partridge (gallinaceous game) eligible premises will be recruited - see Table 2.2.1 and Tables 2.2.2.

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As described previously, chicken and turkey breeder premises and flocks are subject to survey exemption and exclusion criteria, as described in section 2.2, para 2(b) above. Specifically, it should be noted that some chicken and/or turkey breeder premises may initially be selected for inclusion in the survey on the basis of being identified as having specified risk factors that form the risk matrix strata (as per section 2.1.3.2 above).

During the survey recruitment process, the eligibility of individual chicken and turkey breeder premises (up to a maximum of seven turkey breeder holdings and ten chicken breeder holdings) will be assessed and confirmed against the relevant risk factors. Following this local assessment, final recruitment of the chicken or turkey breeder holding for sampling will be decided. Therefore, subject to this assessment process none (or only a proportion) of the selected chicken and/or turkey breeder premises may be sampled. This may therefore result in less than the maximum of 17 chicken and/or turkey breeder flocks being sampled in the UK.

Sampling

Blood samples for serological testing are collected in accordance with Decision 2010/367/EU, whereby a minimum of ten birds on each premises will be sampled, except in the case of ducks, geese and mallards (game ducks) whereby a minimum of 20 birds on each premises will be sampled.

In addition:

- For galliforme poultry holdings if more than one flock/group is present, five birds will be sampled per separate flock/group.
- For duck, game duck and goose holdings if more than four flocks/groups are present, five birds will be sampled per separate flock/group. If two flocks/groups are present, samples will be collected from ten birds in each group. If three separate flocks/groups are present on the holding, samples will be collected from seven birds in each group.

Therefore, in Tables 2.2.1 and 2.2.2 above, for each poultry category, the 'Total number of samples per holding' represents an average number of samples that may be collected per holding. Hence, the 'Total number of tests' calculated in Tables 2.2.1 and 2.2.2 above may represent an underestimate, based on the within flock sampling frames outlined above for galliforme and anseriforme poultry holdings respectively.

The timing of sampling is informed by the seasonality of production, especially for turkeys, geese and feathered game and birds may be sampled as close to slaughter age as practicable, and where appropriate.

Samples may be collected on farms or at slaughterhouses. If the samples are to be collected in a slaughterhouse, then the birds are selected at random from the entire batch.

In addition:

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- For galliforme poultry holdings if more than one flock/group is present, five birds will be sampled per separate flock/group.
- For duck, game duck and goose holdings if more than four flocks/groups are present, five birds will be sampled per separate flock/group. If two flocks/groups are present, samples will be collected from ten birds in each group. If three separate flocks/groups are present on the holding, samples will be collected from seven birds in each group.

Therefore, in Tables 2.2.1 and 2.2.2 above, for each poultry category, the 'Total number of samples per holding' represents a minimum number of samples that may be collected per holding. Hence, the 'Total number of tests' calculated in Tables 2.2.1 and 2.2.2 above also represents an underestimate, also being the minimum totals, based on the within flock sampling frames outlined above for galliforme and anseriforme poultry holdings respectively.

The timing of sampling is informed by the seasonality of production, especially for turkeys, geese and feathered game and birds may be sampled as close to slaughter age as practicable, and where appropriate.

Samples may be collected on farms or at slaughterhouses. If the samples are to be collected in a slaughterhouse, then the birds are selected at random from the entire batch.

2.4. Laboratory testing : description of the laboratory tests used and follow up investigations taking into account criteria set out in the Diagnostic Manual for avian influenza (Common Decision 2006/437/EC)

Description of the used serological tests : (max 32000 chars)

Laboratory tests conducted for the AI surveillance programme in domestic poultry will be conducted at the National Reference Laboratory (NRL) for Avian Influenza, Animal and Plant Health Agency (APHA), Weybridge for samples collected from poultry flocks in Great Britain. Samples collected from poultry flocks in Northern Ireland will be tested by the Agri-Food and Biosciences Institute (AFBI). Serum samples are screened for the presence of antibodies to avian influenza viruses of subtypes H5 and H7 by haemagglutination inhibition (HI) tests. In addition, in waterfowl (anseriforme) species the screening H5 HI test will comprise two antigens, H5N3 and H5N8, as recommended by the EU Reference Laboratory, APHA Weybridge during April 2015 (ref SANTE/G2/MP/dj (2015) 1234231).

If a positive serological result is recorded by the screening HI tests, confirmatory HI serological testing (using a heterologous neuraminidase component) is performed. All testing is performed in accordance with extant, specified EU guidelines (Annex I to Commission Decision 2010/367/EU on the

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implementation of surveillance programmes for avian influenza in poultry and wild birds to be carried out in the Member States and amending Decision 2004/450/EC). If positive H5 or H7 confirmatory serological (HI) test results are recorded, further laboratory investigations are undertaken on samples submitted from follow-up field sampling of the flock. This is carried out to establish whether active AI virus infection is present, and is complemented by a veterinary visit and inspection to the premises.

The diagnostic tests utilised for follow-up samples comprise serological (HI) tests, molecular real time reverse transcription polymerase chain reaction (RT-PCR) methods, and attempted virus isolation in SPF embryonated fowls' eggs, as appropriate. If a virus is isolated serologically, molecular and virus characterisation methods used will be consistent with procedures laid down in the EU diagnostic manual/Commission guidelines.

In summary, the laboratory test portfolio utilised at APHA Weybridge comprises:

- Haemagglutination Inhibition (HI) tests for orthomyxoviruses - presence of antibodies to influenza A virus subtypes H5 and H7 in serum (poultry). As above, in waterfowl (anseriforme) species the screening H5 HI test will comprise two antigens, H5N3 and H5N8, as recommended by the EU Reference Laboratory, APHA Weybridge during April 2015 (ref SANTE/G2/MP/dj (2015) 1234231).
- Real time RT-PCR for Avian Influenza - screening test for matrix gene of all influenza A virus: for the detection of the matrix gene of any influenza A virus in clinical specimens and amplified samples.
- Real time RT-PCR for Avian Influenza - detects Eurasian H5 AI virus: for the detection of the H5 subtype of avian influenza (AI) virus in clinical specimens and amplified samples.
- Real time RT-PCR for Avian Influenza - detects Eurasian H7 AI virus (HA2 region amplification): for the detection of the H7 gene (HA2 region) of any H7 influenza A virus in clinical specimens and amplified samples.
- Virus isolation and detection in 9-11 day old SPF embryonated fowls' eggs.
- Determination and analysis of nucleotide sequence (and deduced amino acid sequence) of specific regions of the genome of AI viruses.

3. *Description and implementation of the surveillance programme in wild birds*

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3.1.1 Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme and relevant collaborating partners (e.g. epidemiologists, ornithologists, nature bird observation and hunter organisations).

(max. 32000 chars) :

Defra coordinates the departments responsible for implementing the programme and is responsible for making policy decisions. The National Reference Laboratory (NRL) for Avian Influenza & Newcastle Disease at APHA Weybridge is responsible for all aspects of laboratory testing and reporting of laboratory results to Defra and the relevant Devolved Administration for samples collected in Great Britain (GB), as well as for any samples referred by DARD/AFBI, Northern Ireland, and provision of technical advice and consultancy. The Department of Epidemiological Sciences and the Data Systems Group at APHA Weybridge are responsible for epidemiological analysis of wild bird survey and sampling data and monitoring survey progress. In Northern Ireland (NI), all samples are sent to AFBI Stoney Road, with any positive findings sent to APHA Weybridge for further testing. Final data are sent to APHA Weybridge for collation into the UK returns to the European Commission. Technical ornithological advice is provided by a panel of ornithological experts from government agencies and from non-governmental organisations. In GB, a number of designated organisations are responsible for collecting wild bird carcasses/samples within designated timeframes and submitting these for either sampling at APHA Veterinary Investigation Centres (in England and Wales) or SRUC Disease Surveillance Centres (in Scotland), or for laboratory testing at APHA Weybridge.

3.1.2 Description and delimitation of the geographical and administrative areas in which the programme is to be applied

max. 32000 chars) :

This is based on a risk assessment and may vary annually based on current expert scientific advice. In brief, the UK AI wild bird surveillance (AIWBS) programme is based on:

- Wild birds found dead during regular warden patrols of selected wetland areas/reserves across GB and Northern Ireland (n=250). In addition, based on

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analysis of the distribution of priority surveillance areas for the AI poultry survey, the warden patrol activity areas may also be modified based on any changes to these so-called Blue Counties described in section 2.1.3.2 above, and available epidemiological/scientific evidence.

- High mortality events in any wild bird species (so-called mass mortality incidents – see below) reported by warden patrols or by members of the public in any county/administrative area of GB or any part of Northern Ireland (NI), as appropriate.

3.1.3 Estimation of the local and/or migratory wildlife population

(max. 32000 chars):

Expert ornithological advice has been sought on details of the migrating wild bird population. Wetland Bird Survey (WEBS) data has been used as a baseline for any statistical analyses.

In brief, there are about 79 million breeding pairs of wild birds in Great Britain, of about 227 species. The bulk of the numbers result from a relatively small number of more abundant species: the 50 most abundant represent about 95% of the total; the 10 most abundant represent about 57% of the total; and the single most abundant species, the Wren, alone represents about 10% of the total.

The majority of breeding birds in GB are resident all-year-round, but about 8.7 million pairs are of 63 species of long-distance migrants, mostly wintering in Africa. Of these, about 25% of the pairs are of a single species, the Willow Warbler.

The breeding birds can also be broken down into the following broad categories:

- Passerines ("songbirds") - 81.4%
- Near-passerines (mostly pigeons/doves) - 9.5%
- Seabirds (gulls, terns, auks, skuas, petrels, etc) - 4.2%
- Gamebirds (grouse, partridges, pheasants) - 3.2%
- Waterbirds (ducks, geese, swans, grebes, waders) - 1.4%
- Raptors (diurnal birds of prey) - 0.2%

The winter numbers of most species are not well known. The exception is for many of the wintering waterbirds, which are well monitored. About 12.5 million waterbirds (this total includes gulls) winter in GB. Many of these arrive from areas to the north and east which are too cold in the winter to support the birds. The timing of arrival and departure of migrant birds varies between species, and also between years depending on weather conditions.

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3.2 Design, criteria, risk factors and target population(3)

(max. 32000 chars) :

The UK AIWBS programme is risk-based, targeted and operates all-year-round. It is a virological survey and is based on the 'Target Species' list of wild birds detailed in Decision 2010/367/EU, Annex II Part 2. In addition, in Great Britain expert ornithological and epidemiological advice and assessments have determined further five higher risk wild bird species that may also be targeted.

As described previously, the AIWBS programme involves screening samples taken from the following:

- Wild birds found dead during regular warden patrols of selected wetland areas/reserves in GB and Northern Ireland (n=250).
- High mortality events in any wild bird species (so-called mass mortality incidents – see below) reported by warden patrols or by members of the public in any county of GB or any area of Northern Ireland (NI), as appropriate.

In addition, provisions may be made for specific targeted or enhanced AIWBS activities or active surveillance in response to outbreaks of notifiable avian influenza in poultry, in particular H5 HPAI, or incidents of H5 HPAI in wild birds in GB. Such measures would be implemented based on current scientific, epidemiological and ornithological expert opinion and advice, as required.

N.B. The strategy for UK AIWBS is informed by the prevailing national and international disease situation and current scientific opinion. It is possible that any significant changes to either of these will lead to changes in survey design in-year.

Objectives of surveillance

To protect domestic poultry from H5N1 HPAI infection derived from wild birds by detecting a change in risk to domestic poultry due to H5N1 HPAI incidents in wild birds.

Surveillance design

1. Active patrolling of wetland reserves for wild birds found dead

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Approximately 250 sites have been chosen across the UK based on a variety of factors including the abundance of target species of water birds, proximity to poultry areas and the presence of a site warden. Sites are patrolled on a regular basis by wardens to detect dead wild birds belonging to the target species. Based on risk assessment the frequency of these patrols and number of sites may be increased or decreased. In addition, based on analysis of the distribution of priority surveillance areas for the AI poultry survey, the warden patrol activity areas may also be modified based on any changes to these so-called Blue Counties described in section 2.1.3.2 above, and available epidemiological/scientific evidence.

The frequency and number of patrols may be increased in an area following a detection of notifiable avian influenza, particularly H5 HPAI in wild birds or domestic poultry. Samples from wild birds found dead in GB are sent to APHA Weybridge for AI screening. In NI samples are submitted to AFBI, Stoney Road, Belfast with any positive findings sent to the NRL, APHA Weybridge for further testing.

2. Reporting of abnormal or mass mortality in wild birds

A reporting system allows members of the public or staff at a wetland/reserve site to report high mortality events in wild birds, so-called mass mortality incidents. Briefly, a mass mortality incident is defined as involving five or more wild birds of any species in any location (county/administrative area) of GB. Following a report being made by a member of the public or staff at a wetland/reserve site, standardised case selection criteria are applied. Depending on circumstances, samples will be collected. This may comprise in-field sampling by collection of oropharyngeal (buccal) and cloacal swabs from each bird found dead, or sample collection from the wild bird carcase at an APHA or SRUC regional laboratory. For the latter, collection of carcasses is performed by a designated collection organisation, or less frequently, alternative arrangements may be made involving government veterinary services.

In all cases, the carcase location is geo-referenced and, where appropriate, carcasses will be transported to an APHA Veterinary Investigation Centres (in England and Wales) or a SRUC Disease Surveillance Centre (in Scotland) where speciation is carried out. Wherever possible, tissue samples are collected for AI screening at post-mortem examination of the submitted wild bird carcase(s). These samples are sent to the NRL, APHA Weybridge for AI testing (see sections 3.3 & 3.4 below for further details). In NI samples are submitted to AFBI Stoney Road, Belfast with any positive findings sent to the NRL, APHA Weybridge for further testing.

Reports that are made by a member of the public that do not fulfil the 'mass mortality incident' criteria will not be investigated unless additional or extenuating circumstances are identified. Such cases may then be assessed by veterinary staff at the APHA Veterinary Investigation Centres (or SRUC Disease Surveillance Centres in Scotland). Investigations are then progressed on a case-by-case basis against standardised case selection criteria. Mortality levels and detection rates are likely to vary in wild birds. To allow for resource planning the number of submissions is monitored to ensure resource capability is not exceeded for the number of birds submitted in the UK. There may also be targeting of surveillance effort to specific regions

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based on risk assessment, eg. following detection of H5N1 HPAI or other notifiable avian influenza outbreaks.

- (3) *Areas at risk (wetlands in particular where links with high density poultry populations), previous positive findings as referred to in point 2 of Part 1 of Annex II to Commission Decision 2010/367/EC should be taken into account and if possible complemented by a map.*

3.2.1 WILD BIRDS focused on target species

Investigations according to the surveillance programme set out in conformity with Part 2 of Annex II to Decision 2010/367/EC

Targets for year

2016

NUTS (2) code/region (a)	Total number of birds to be sampled	Estimated total number of samples to be taken for passive surveillance	Type of test	Number of tests	
UK	650	650	PCR test	1 450	X
UK	0	0	Virus isolation test	40	X
UK	0	0	AIV sequencing	10	X
UK	0	0	IVPI	2	X
Total					
Add a new row					

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(a) Refers to the place of collection of birds/samples. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member State is requested. Please fill-in these values directly in the field.

	Total number of tests
Total number of tests	1 502
Total Virus isolation tests	40
Total PCR tests	1 450
Total Other tests	12

3.3 Sampling procedures and sampling periods

max 32000 chars :

The AIWBS programme involves two main strands of passive (scanning) surveillance activity that operate all-year-round and result in the collection of samples from wild birds found dead for laboratory testing to determine AI status (see section 3.4), namely:

- Warden patrols of selected wetland areas/reserves in GB and Northern Ireland (n=250).
- Reporting and investigation of unusually high mortality events in any wild bird species (so-called mass mortality incidents – as above) reported by warden patrols or by members of the public in any county of GB or any area of Northern Ireland (NI), as appropriate.

These activities are also dependent on numerous other factors such as public awareness, the current AI status of the country/area, media coverage and those affecting wild bird health (eg. the prevailing climatic conditions, time of year, available food sources, other diseases/health status etc.).

For birds submitted to APHA Veterinary Investigation Centres (VICs) and SRUC Disease Surveillance Centres, a veterinary post-mortem examination will typically be performed with collection of appropriate samples for AI testing, based on the state of carcase decomposition/quality. All work associated with the post-mortem examination, sampling and identification of those wild birds submitted to APHA-VICs/SRUC is carried out in accordance with standardised instructions and standard operating procedures (SOPs) within recognised quality frameworks.

The laboratory sampling specifically for AIV (and subsequent AIV testing at APHA Weybridge) is conducted based on one of two methods:

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Method 1: 'Tissues' method: opening the carcase as part of routine diagnostic post-mortem examination and harvesting seven tissues (whenever practically possible) as two separate tissues pools for AIV testing (Pool 1: brain, liver, spleen, trachea, lung, kidney; Pool 2: bulked intestine).

Method 2: 'Two swab' method: oropharyngeal and cloacal swabs collected (whenever practically possible) for AIV testing from each individual bird without opening the carcase.

Wild bird carcasses, specifically collected for AIV surveillance, will first have been reported to a dedicated Helpline. These may be wild birds found dead and submitted as a result of Warden Patrol activities, or following reports made by members of the public. In each case a specific, standardised algorithm is applied to the reported incident, which provides for decision-making by the Helpline to accept or reject the report. The algorithm provides specific targeted surveillance criteria (wild bird species, location of incident, number of birds affected etc.), which are based on current scientific and epidemiological evidence. All reported incidents are logged by the Helpline and are individually allocated a unique Helpline reference number. If the Helpline accepts the reported incident the wild bird carcase(s) are collected by dedicated collection agencies and delivered to an APHA/SRUC laboratory, accompanied by a specific submission form (form WSF1). In addition, the Warden Patrol organisation may collect swabs (oropharyngeal and cloacal) from the 'found dead' wild bird, and submit these (with a completed WSF-1 form) direct to APHA Weybridge.

Following receipt at an APHA/SRUC laboratory, wild bird carcase submissions are allocated an individual APHA-RL/SRUC unique case reference and sampled in accordance with standing, standardised instructions. Samples are subsequently despatched to the NRL at APHA Weybridge for testing for the presence of AIVs by real time RT-PCR tests (RRT-PCR); in the first instance by matrix (M) gene real time RT-PCR as a screening test – see section 3.4 below.

3.4 Laboratory testing : description of the laboratory tests used taking into account criteria set out in the Diagnostic Manual for avian influenza (Commission Decision 2006/437/EC)

max 32000 chars :

Laboratory tests conducted for the AI surveillance programme in wild birds will be conducted at the National Reference Laboratory (NRL) for Avian Influenza, Animal and Plant Health Agency (APHA), Weybridge for samples collected from wild birds in Great Britain. Samples collected from wild birds in Northern Ireland are tested by AFBI. The diagnostic tests utilised comprise real time reverse transcription polymerase chain reaction (RT-PCR) methods, and attempted virus isolation in SPF embryonated fowls' eggs. If a virus is isolated serological, molecular and virus characterisation methods used will be consistent with procedures laid down in the EU diagnostic manual/Commission guidelines.

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In summary, the laboratory test portfolio utilised at APHA Weybridge comprises:

- Real time RT-PCR for Avian Influenza - screening test for matrix gene of all influenza A virus: for the detection of the matrix gene of any influenza A virus in clinical specimens and amplified samples.
- Real time RT-PCR for Avian Influenza - detects Eurasian H5 AI virus: for the detection of the H5 subtype of avian influenza (AI) virus in clinical specimens and amplified samples.
- Real time RT-PCR for Avian Influenza - detects N1 component of AI virus: for the detection of the N1 subtype of avian influenza (AI) virus in clinical specimens and amplified samples.
- Virus isolation and detection in SPF embryonated fowls' eggs.
- Determination and analysis of nucleotide sequence (and deduced amino acid sequence) of specific regions of the genome of AI viruses.

4. *Description of the epidemiological situation of the disease in poultry during the last five years*

max 32000 chars :

In the last five years (2010 to 2014) there has been one outbreak of notifiable avian influenza (NAI) in poultry in the UK – an outbreak of H5N8 HP AI in breeder ducks on one premises in Yorkshire (north east England) detected during November 2014. In addition, an outbreak of H7N7 LPAI was detected during February 2015 on a broiler breeder premises in Hampshire (south of England): <https://www.gov.uk/government/publications/reports-relating-to-recent-cases-of-avian-influenza-bird-flu>.

Over the same period (2010-2014) during the course of the annual AI survey in poultry flocks in the UK there have been detections of antibodies to AI viruses of subtypes H5 and H7 from a small number of flocks sampled (range: 0-8 flocks). This comprises an average of approximately five flocks per annum, or ~1% of all flocks sampled each year. Each year all holdings/flocks with an H5 or H7 serological reactor (by HI test) were followed up, including a veterinary visit, further field investigations, sampling and testing. None of the further tests showed positive results for H5 or H7 AI virus indicating the absence of active infection on these premises.

More specifically, there were no H5 or H7 antibody detections during the 2014 poultry survey. During the 2013 poultry survey, antibodies to avian influenza virus subtype H5 were detected from a total of four duck premises, with no antibodies for H7 detected from any sampled flocks, During the 2012

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poultry survey, antibodies to avian influenza virus subtype H5 were detected from a total of 8 premises, with antibodies for H7 also detected from one of these premises. During the 2011 poultry survey, antibodies to avian influenza viruses of subtypes H5 and H7 were detected from a total of five premises. More specifically, three duck premises were identified as showing a serological response against H5, and one duck and one goose flock were identified as having a serological response to H7. During the 2010 poultry survey three duck premises and one game duck site were identified as showing a serological response against H5.

Update 27/8/15 - Please see attached document "Avian Influenza Poultry Surveillance in UK 2010 - 2014"

5. *Description of the epidemiological situation of the disease in wild birds during the last five years*

(max. 32000 chars):

A programme of AIWBS has been active in the UK since October 2005. In the last five years (2010 to 2014) Eurasian lineage H5N1 HPNAI has not been detected from wild birds in the UK. The last detection in wild birds of Eurasian lineage H5N1 HPNAI to occur in the UK was in January/February 2008 in southern England. During the course of this incident (2008) virus was detected from a total of ten Mute swans (Cygnus olor) and one Canada goose (Branta canadensis) within the 3km Wild Bird Control Area. No evidence of spread to the local poultry population was detected.

As expected, evidence of influenza A virus infection and isolation of different LPAI viruses of varying subtypes has been identified from a variety of wild birds, predominately waterfowl (Anatidae spp), as part of the AI wild bird surveillance programme.

Update 27/8/15 - Please see attached document "Avian Influenza Wild Bird Surveillance in UK 2010 - 2014"

6. *Measures in place as regards the notification of the disease*

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(max. 32000 chars) :

It is a legal obligation for anyone suspecting the presence of an avian notifiable disease in poultry or other captive birds in the UK to contact Government Veterinary Authorities. Anyone suspecting a notifiable disease must report this, by law, to a local APHA Regional Office in GB or to DARD/AFBI in Northern Ireland. The national legal basis and scheme for outbreak compensation is dealt with under the 'Emergency Measures' process, and is therefore outwith the scope of this submission.

7. Costs

7.1 Detailed analysis of the costs

7.1.1 Poultry including ducks, geese and farmed game birds

(max. 32000 chars) :

Information regarding the detailed information and breakdown of the estimated costs for the AI Poultry survey in the UK is detailed in Table 7.2.1 below. The laboratory testing methods are based on the information provided in section 2.4 above. The ECB currency conversion rate from GBP (£) to euros (€) of 0.72670 (30 April 2015) was used for calculating the indicative costs outlined in Table 7.2.1 below.

7.1.2 Wild birds

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(max. 32000 chars) :

Information regarding the detailed information and breakdown of the estimated costs for the AI Wild Bird survey in the UK is detailed in Table 7.2.2 below. The laboratory testing methods are based on the information provided in section 3.4 above. The ECB currency conversion rate from GBP (£) to euros (€) of 0.72670 (30 April 2015) was used for calculating the indicative costs outlined in Table 7.2.1 below.

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Samples	6 500	4.65	30225
Other measures			
APHA epidemiological expertise, data management and consultancy	1	125,567.62	125 567,62
			X
			Add a new row
Total poultry, duck, geese, farmed game birds Testing + Sampling + Other measures			330 344,22 €

(*) as per cofinancing decision for 2014 programmes

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7.2.2 Wild bird surveillance

Detail analysis of the cost of the programme - wild birds

Targets for year **2016**

Laboratory testing				
Methods of laboratory analysis	Number of tests	Unitary test cost (per method) in € (*)	Total cost (€)	
Virus isolation test	40	37.88	1515.2	
PCR test	1450	19.74	28623	
Other cost	12	342.3	4107.6	
Delivery of wild animals				
No of wild birds	Eligible cost in € (*)	Total cost (€)		
650	127.01	82556,5		
Other measures				
Number	Unitary cost in €	Total cost (€)		

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APHA epidemiological expertise, data management and consultancy.	1	102,518,22	102518,22	X
			Add a new row	
Total wild birds Testing + Delivery + Other measures			219,320,52 €	

(*) as per cofinancing decision for 2014 programmes

TOTALS for Poultry, duck, geese, farmed game birds (7.2.1) + WILD BIRDS (7.2.2) for year :

2016

Grand Total Poultry, Ducks/Geese/Farmed game birds + WILD BIRDS	Total Cost
	549 664,74

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C. Financial information

1. Identification of the implementing entities - financial circuits/flows

Identify and describe the entities which will be in charge of implementing the eligible measures planned in this programme which costs will constitute the reimbursement/payment claim to the EU. Describe the financial flows/circuits followed.

Each of the following paragraphs (from a to e) shall be filled out if EU cofinancing is requested for the related measure.

a) Implementing entities - **sampling**: who perform the official sampling? Who pays? (e.g. authorised private vets perform the sampling and are paid by the regional veterinary services (state budget); sampling equipment is provided by the private laboratory testing the samples which includes the price in the invoice which is paid by the local state veterinary services (state budget))

(max. 32000 chars):

In GB, the field staff of APHA are responsible for the collection of blood samples from eligible poultry flocks within the designated timeframe and submitting these for laboratory testing at the NRL at APHA Weybridge. All equipment and staff time to complete this work is paid for by Government.

In Northern Ireland (NI), DARD Veterinary Service is responsible for collecting samples for submission to AFBI Stoney Road, with any positive findings sent to APHA Weybridge for further testing. All equipment and staff time to complete this work is paid for by Government.

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- b) Implementing entities - **testing**: who performs the testing of the official samples? Who pays? (e.g. regional public laboratories perform the testing of official samples and costs related to this testing are entirely paid by the state budget)

(max. 32000 chars) :

The National Reference Laboratory (NRL) for Avian Influenza & Newcastle Disease at APHA (formerly the Animal Health and Veterinary Laboratories Agency) Weybridge is responsible for all aspects of laboratory testing and reporting of laboratory results to Defra and the relevant Devolved Administrations for samples collected in Great Britain (GB), as well as for any samples referred by DARD/AFBI, Northern Ireland, and provision of technical advice and consultancy. All equipment and staff time to complete this work is paid for by Government.

All samples collected in Northern Ireland (NI) are tested by AFBI, Stoney Road, who are also responsible for reporting of the laboratory results of samples/ flocks tested in Northern Ireland to DARD. All equipment and staff time to complete this work is paid for by Government.

- c) Implementing entities - **compensation**: who performs the compensation? Who pays? (e.g. compensation is paid by the central level of the state veterinary services, or compensation is paid by an insurance fund fed by compulsory farmers contribution)

(max. 32000 chars) :

The national legal basis and scheme for outbreak compensation is dealt with under the EU 'Emergency Measures' process, and is managed by the competent veterinary authority in the UK, in consultation with the European Commission.

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d) Implementing entities - **vaccination** : who provides the vaccine and who performs the vaccination? Who pays the vaccine? Who pays the vaccinator?
(e.g. farmers buy their vaccine to the private vets, send the paid invoices to the local state veterinary services which reimburse the farmers of the full amount and the vaccinator is paid by the regional state veterinary services)

(max. 32000 chars) :

Vaccination for avian influenza (AI) is not permitted in the UK and does not form part of the AI surveillance activities described in this plan.

e) Implementing entities - **other essential measures**: who implement this measure? Who provide the equipment/service? Who pays?

(max. 32000 chars) :

The avian influenza (AI) surveillance activities in the UK that are described in this plan for poultry holdings and in wild birds are performed and funded by the national competent veterinary authorities who contract to the associated departments/agencies responsible for implementing the programme in the UK. More specifically, in GB the APHA are funded under contract to perform these AI surveillance activities by and on behalf of the national competent veterinary authorities (Defra, Welsh Government, Scottish Government). In Northern Ireland the AFBI are funded under contract to perform these AI surveillance activities by and on behalf of DARD. Defra coordinates the departments and agencies responsible for implementing the programme in Great Britain, and DARD coordinates the departments and agencies responsible for implementing the programme in Northern Ireland. Defra and the Devolved Administrations in Wales, Scotland and Northern Ireland are responsible for making policy decisions respectively and providing the funding and contracts to APHA and AFBI to deliver the work. All equipment and staff time to complete this work is paid for by Government.

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2 Co-financing rate (see provisions of applicable Work Programme)

The maximum co-financing rate is in general fixed at 50%. However based on provisions of Article 5.2 and 5.3 of the Regulation (EU) No 652/2014, we request that the co-financing rate for the reimbursement of the eligible costs would be increased:

Up to 75% for the measures detailed below

Up to 100% for the measures detailed below

3. Source of funding of eligible measures

All eligible measures for which cofinancing is requested and reimbursement will be claimed are financed by public funds.

yes

no

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Attachments

IMPORTANT :

- 1) The more files you attach, the longer it takes to upload them .
- 2) This attachment files should have one of the format listed here : **jpg, jpeg, tiff, tif, xls, xlsx, doc, docx, ppt, pptx, bmp, pna, pdf.**
- 3) The total file size of the attached files should not exceed 2.500Kb (+- 2.5 Mb). You will receive a message while attaching when you try to load too much.
- 4) IT CAN TAKE **SEVERAL MINUTES TO UPLOAD ALL THE ATTACHED FILES.** Don't interrupt the uploading by closing the pdf and wait until you have received a Submission Number!
- 5) Only use letters from a-z and numbers from 1-10 in the attachment names, otherwise the submission of the data will not work.

List of all attachments

	Attachment name	File will be saved as (only a-z and 0-9 and -_) :	File size
	6429_4064.doc	6429_4064.doc	50 kb
	6429_4065.pdf	6429_4065.pdf	832 kb
	6429_4066.doc	6429_4066.doc	34 kb
	Total size of attachments :		916 kb