

# Highly Pathogenic Avian Influenza (H5N1) in Suffolk, UK

3 December 2007



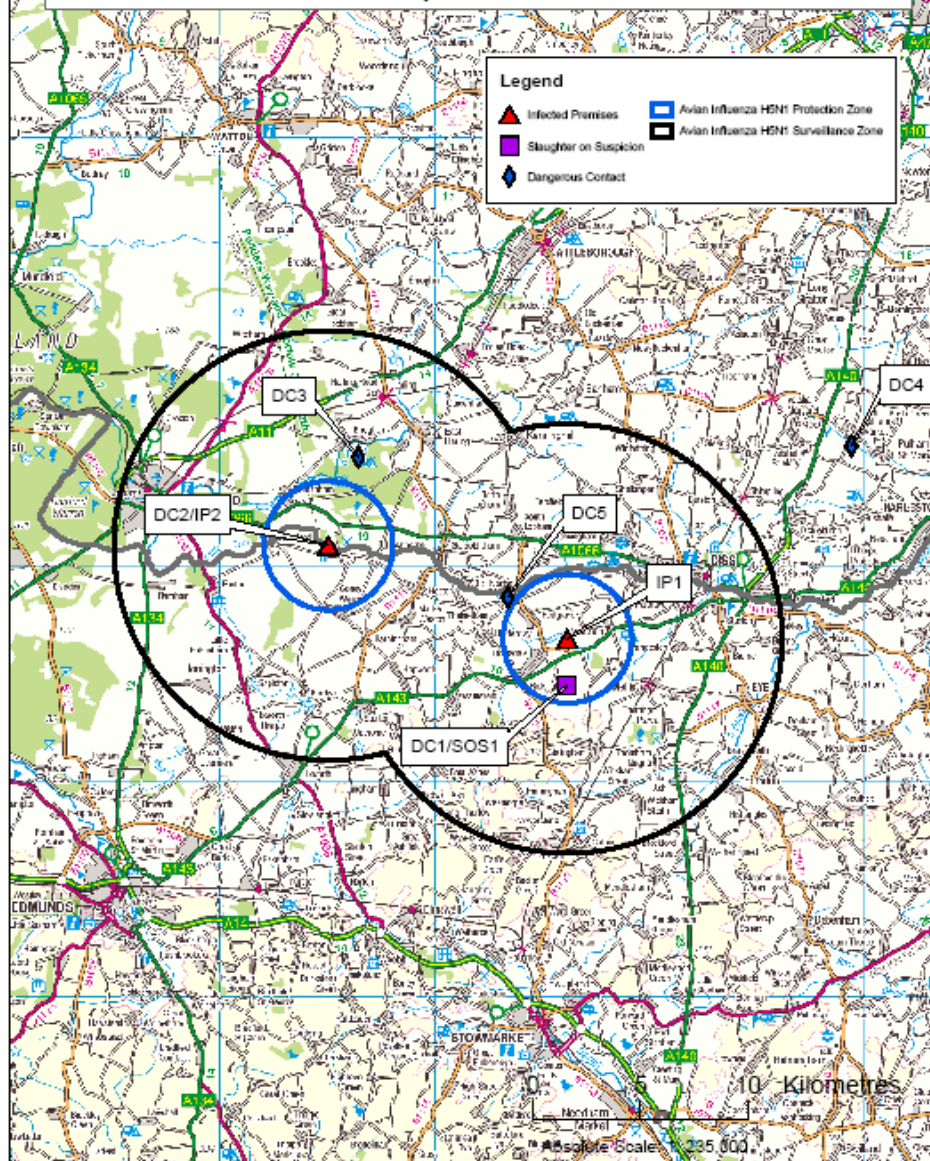
# Preliminary Epidemiology Report

[www.defra.gov.uk/animalh/diseases/notifiable/  
disease/ai/pdf/ai-prelim-epireport071129.pdf](http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/ai-prelim-epireport071129.pdf)

# Chronology

- 11 Nov disease suspected
- 12 Nov +ve H5.
  - PZ, SZ, RZ established
- 13 Nov HPAI H5N1 confirmed (IP1)
- 19 Nov IP 2 confirmed as a result of samples taken from a contact holding at slaughter; zones extended
- 8,10 Dec PZ due to lift
- 19 Dec SZ (& RZ) due to lift

**DAY011 - Avian Influenza H5N1 Protection and Surveillance Zones with outbreak premises. 23 Nov 2007.**



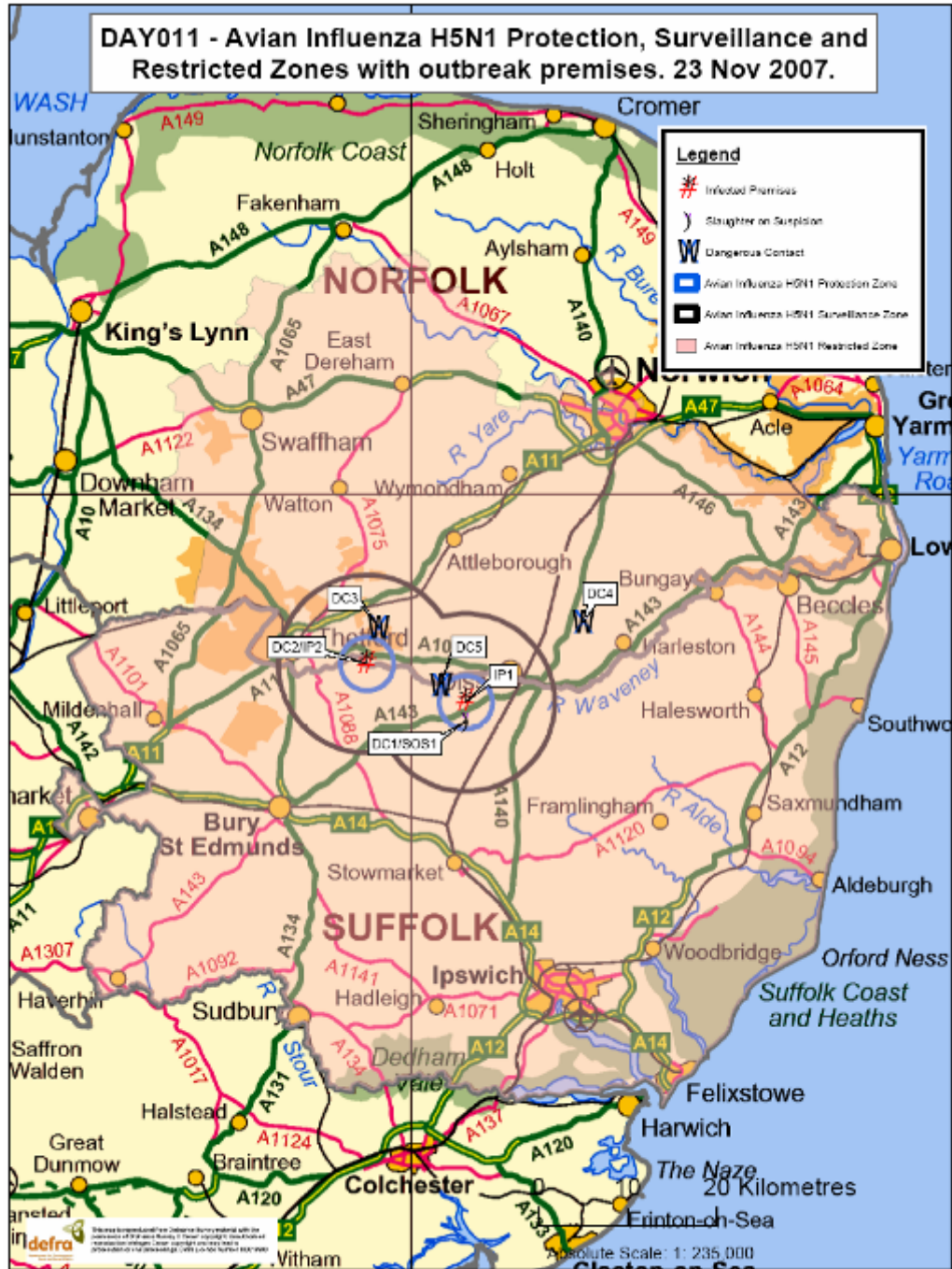
CREATOR: RADAR Team, Defra

SOURCES: NDI and EXD65 forms

DATE CREATED: 2007-11-23



**DAY011 - Avian Influenza H5N1 Protection, Surveillance and Restricted Zones with outbreak premises. 23 Nov 2007.**



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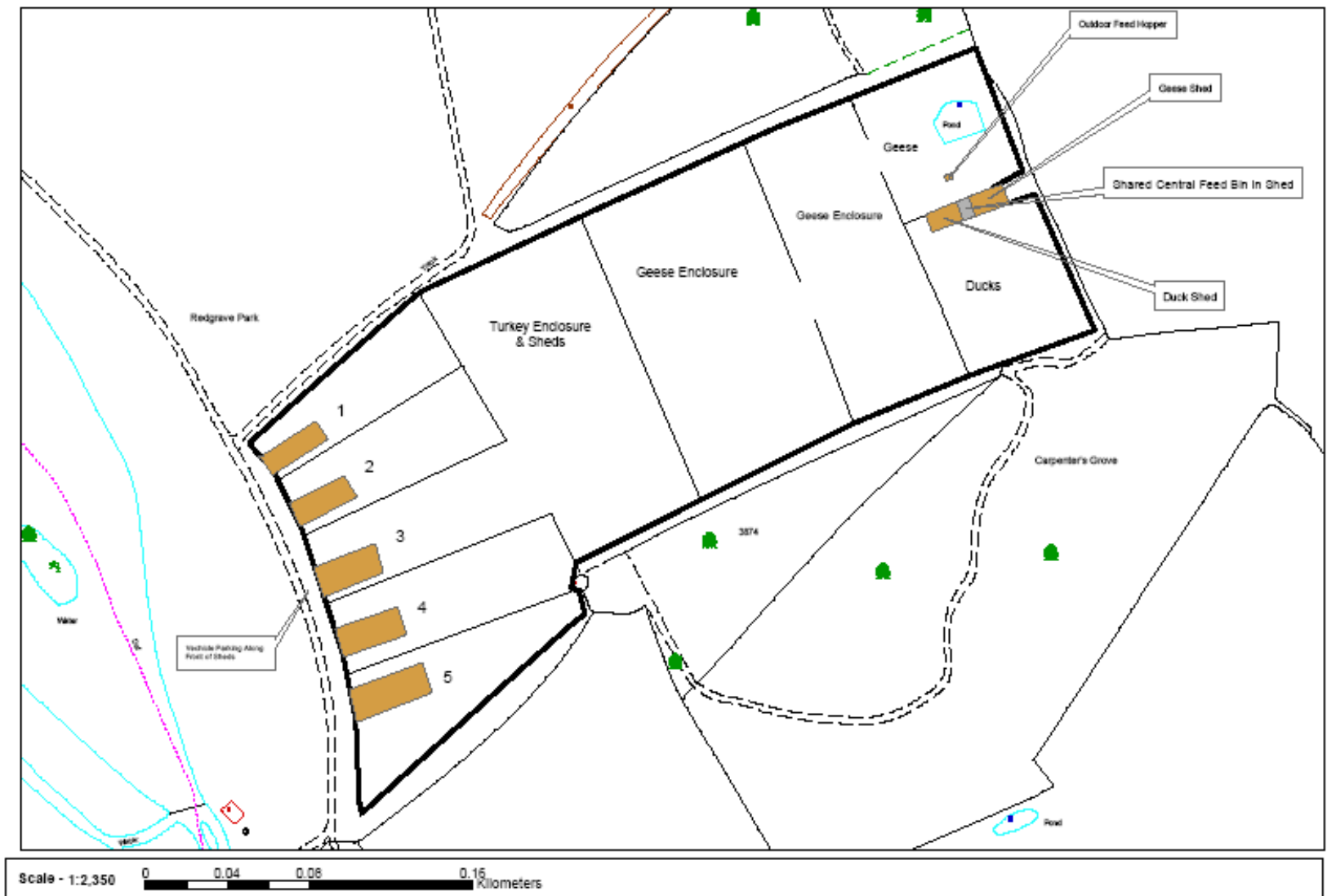
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# Birds Culled

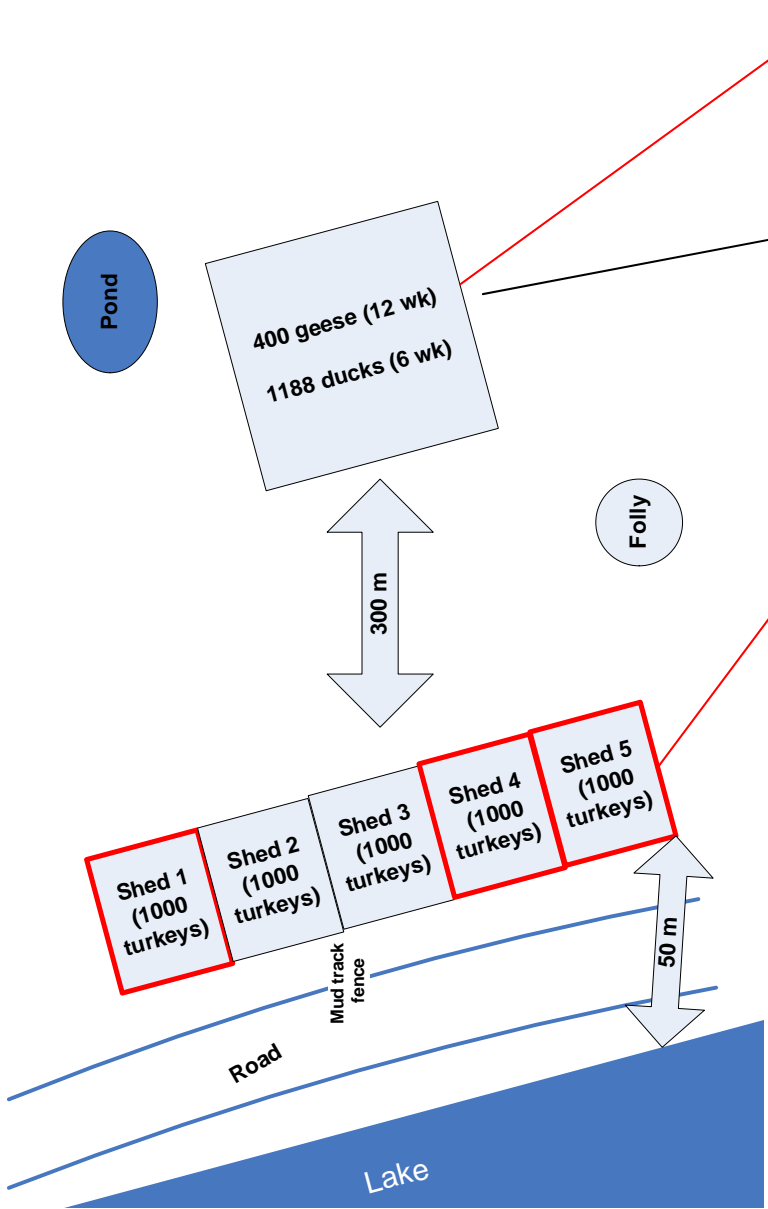
Outbreak Ref	Turkeys	Geese	Ducks	Total	Date Culling Complete	Date Preliminary C&D
IP1	4,673	410	1,176	6,259	15-Nov	17-Nov
SOS1	2,593			2,593	15-Nov	18-Nov
IP2	9,229			9,229	17-Nov	19-Nov
DC3	2,385			2,385	17-Nov	19-Nov
DC4	4,127			4,127	17-Nov	19-Nov
DC5	11,056	4,165	47,434	62,655	25-Nov	29-Nov

34,063	4,575	48,610	87,248
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**Disposition of the turkeys, ducks and geese on IP1**

# IP1 – Epidemiological investigation: Sample testing



**Ducks**  
 - 1 out of 146 samples PCR(+) for H5

**Geese**  
 - PCR negative  
 - 152 samples - serology negative

**Turkeys**  
**Shed 5**  
 - 55 out of 66 samples PCR (+) for H5  
 - Serology negative

**Shed 4**  
 - 25 out of 60 samples PCR (+) for H5  
 - Serology negative

**Shed 1**  
 - 1 out of 62 samples PCR (+) for H5  
 - Serology negative

**Shed 2 and Shed 3**  
 - PCR (-) for H5  
 - Serology negative

# IP2

- 9 000 free range turkeys
- 9 groups of 1000
- 60 birds sampled in each group at culling (540 in total)
- 3 oropharyngeal swabs from one house PCR +ve
- Virus identical to IP1

# Protection Zones

- All flocks inspected – total 103
- Ducks, geese, other waterfowl sampled 95%/5% (plus 300 fowl)
- Blood, cloacal & oropharyngeal swabs
- 854 bloods, 2192 swabs
- Serology & virology all negative

# Surveillance Zone

- Census of all holdings with more than 50 poultry – total 241
- Geese, ducks, other waterfowl sampled at 95%/5% unless in close contact with fowl or turkeys
- Flock of 30 000 outdoor geese owned by same company sampled at 95%/2%
- 1366 bloods, 3706 swabs
- Serology & virology all negative

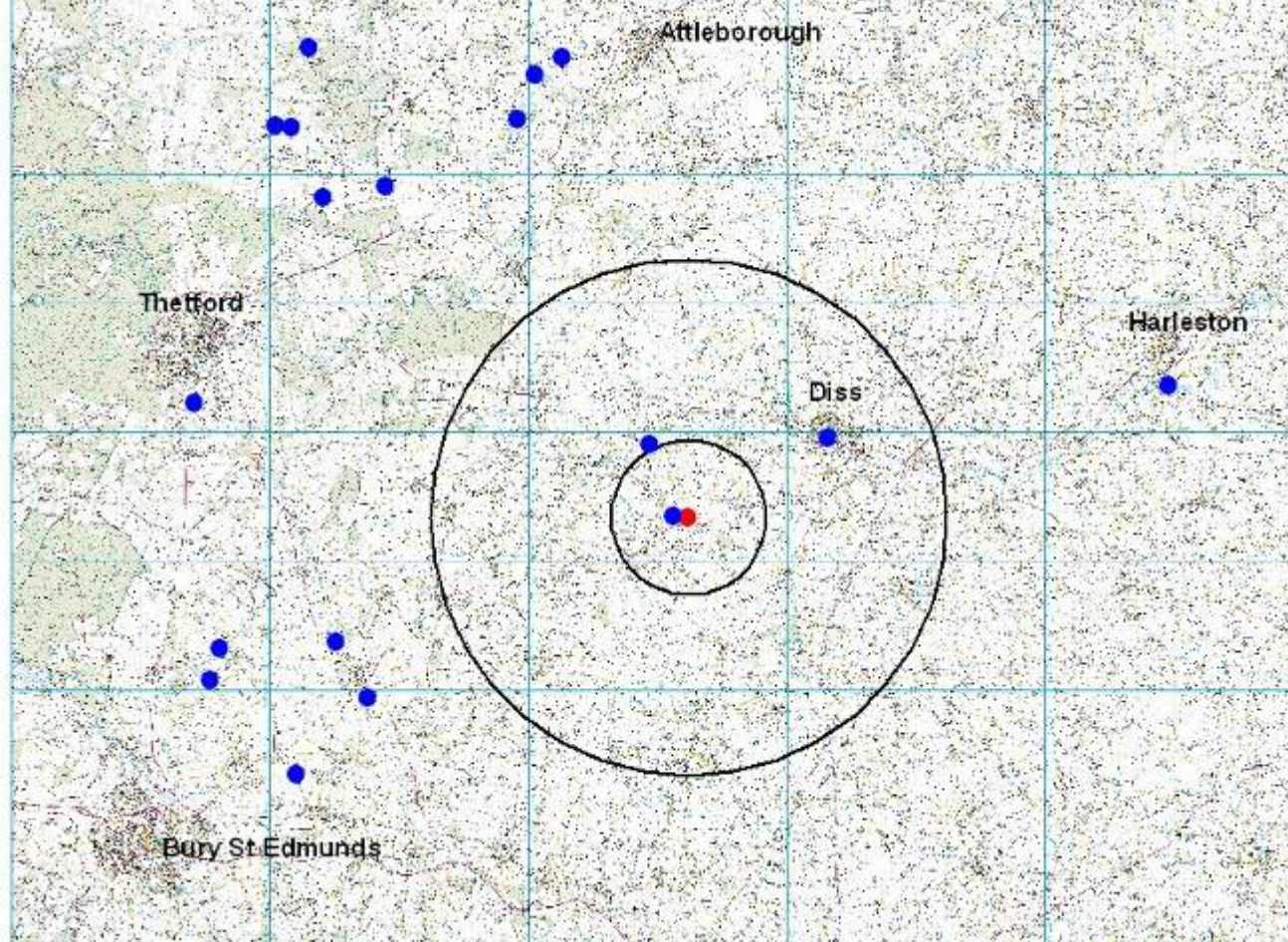


## Laboratory – genetic analysis

- Designated as H5N1  
(A/turkey/England/2614/07)
- Genetically distinct from H5N1 isolate in UK in Feb 2007
- 99,8% similar to A/mute swan/Czech Republic/1787/07
- 99.2 – 99.4% similar to isolate from Germany (2007)

# Epidemiology - Source

- No imports likely to present a risk; birds on IPs sourced from UK
- Whole company investigated, including slaughterhouse and cutting plant on DC5
- Waterfowl present on nearby lake
  - 208 samples taken 15 Nov negative
- No evidence of H5N1 in wild birds in UK
  - Selective sampling of dead birds reported by public
  - Weekly patrols of 400 bird reserves by wardens
  - Sampling of live birds at wetland sites



Key: red dot = IP1, blue dots = sites visited, circles are the 3km Protection Zone and the 10km Surveillance Zone

Location of waterbodies visited on 15 November to look for dead or sick birds

# Epidemiology - Spread

- Investigation of personnel movements concluded that 5 holdings were at risk – culled as dangerous contacts (one became IP2)
- Surveillance within zones completed with negative results

# Summary

- Index case plus one secondary
- Single source of infection, could be wild birds but no evidence of H5N1 in UK wild birds so far
- Identified early – infection not widespread
- Flocks at risk due to poor biosecurity culled
- Surveillance in zones all negative

