SUMMARY PROFILE FOR AVIAN INFLUENZA

1 Description
Avian Influenza (AI) is a highly infectious viral disease that can probably infect most species of birds. Some strains of the virus can affect people. It is one of the most important poultry diseases. The severity depends upon the strain of virus and the type of bird infected. Some strains known as “highly pathogenic Avian Influenza” (HPAI) viruses can cause severe disease in poultry, with a high death rate (up to 100%). This form last occurred in the UK in Norfolk in 1991/92. The disease can develop so rapidly that birds may die without showing any previous signs of disease. Other strains known as “low pathogenic avian influenza” (LPAI) viruses result in milder, less significant disease. However, certain LPAI viruses can mutate into highly pathogenic strains. Some waterfowl can be infected with either HPAI or LPAI viruses without showing obvious signs of disease. They can therefore harbour infection and their movements can spread it. Transmission is by contact with secretions of infected birds, particularly faeces, and can occur by contact with contaminated objects or clothes.

2 Rationale for Government Intervention
2.1 Protection of Human Health
Some strains of AI viruses can be transmitted to humans and other mammals. This usually happens only after a high level of exposure to infected live birds or their excretions. These strains usually cause only mild disease in people, but a strain current in south-east Asia has caused severe disease and some deaths. Human to human transmission of avian strains is rare but there is potential for infectious severe strains to emerge through mutation of existing avian strains or human strains mixing genes with avian strains, which is known as reassortment. This could lead to a world-wide epidemic.

2.2 Society
Losses to the poultry and allied industries in an outbreak can be severe. Following high profile HPAI outbreaks in the Far East, there is concern that new strains of a human influenza virus may emerge from AI viruses. These fears might affect tourism if there were an outbreak of HPAI in the UK. The impact of a widespread human influenza epidemic on society would be substantial.

2.3 Trade
If an outbreak of HPAI occurred, exports of live birds, eggs and poultry products would initially be prohibited.

2.4 Welfare
The effects of pathogenic strains could cause significant suffering in a large number of birds.

3 Legislative Overview
The disease is notifiable. EU rules on trade in birds and poultry products aim to prevent the import and spread of infection. An EU Directive implemented in domestic legislation lays down the measures which must be taken to eradicate outbreaks of HPAI.

4 Geographic Distribution
LPAI viruses are found in wild birds world-wide and disease occurs in poultry in many areas. North America, South Africa, Pakistan and parts of Europe have reported outbreaks of HPAI in poultry in recent years, and more recently disease has occurred in Southeast Asia, China, Russia and Kazakhstan, followed by Turkey and Romania. The impact of outbreaks can vary: recent losses in the Far East have been severe, but some other outbreaks did not spread widely.

5 Risk of introduction / spread
There is a continuous low risk of AI being introduced by migrating birds or on contaminated objects or clothing. Import controls on birds and poultry products ensure the risk from legal imports is negligible. The risk from illegal imports is difficult to assess.

6 Human health implications
Although humans can be infected from birds, the current HPAI H5N1 strain does not readily infect people and there is very limited (if any) person-to-person spread. The main significance for human health is that birds could be the source of new strains of influenza virus. Existing bird strains could mutate to form a new strain which could readily infect people. Alternatively, if mammals are infected with both human and avian strains at the same time, mixing of genetic material from the two viruses might produce new strains which could spread readily between people. The general public is likely to have no immunity to these new strains, and a serious world-wide epidemic could occur. Pigs and humans are believed to have the potential to play an important role in this process, acting as “mixing vessels” for influenza viruses; the role of other species is being investigated. The risk is probably highest in the Far East and Southeast Asia, where contact with live birds is greater and where most human cases of avian influenza have occurred. The risk from infected poultry meat is low when hygienic cooking practices are maintained.

7 GB Disease control strategy
In the case of HPAI, national control measures require all birds on infected premises to be slaughtered, as well as all dangerous contacts that are identified by tracing investigations. Movement restrictions will be applied to the premises and to movements of birds, eggs, manure, and used litter in a wider area surrounding them. This will minimise the risk of disease spread. Surveillance of flocks around the infected premises will be carried out. Current vaccines are not suitable for emergency control.

8 Current Surveillance
Surveys in the UK for LPAI in poultry and wild birds in 2003/4 and 2004/5 found no evidence of exposure to the virus. A further survey is in progress.

9 Costs
No current disease cost as the disease is absent. Surveillance costs not available.

10 Stakeholder Impact
Farmers, others who have contact with poultry, and laboratories must notify the DVM if they suspect disease, and must restrict the movements of poultry or poultry products off the premises until an official investigation has been carried out. Poultry producers should maintain a high level of biosecurity on farms and hatcheries. A major outbreak could reduce the supply of meat and eggs produced within the country.

11 Compensation
Compensation is payable for compulsorily slaughtered birds which are not diseased.

For further information contact vetsurveillance@defra.gsi.gov.uk
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VETERINARY AND EPIDEMIOLOGICAL INFORMATION

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<td>The OIE (Office International Epizooties) website [<a href="http://www.oie.int/eng/maladies/en_classification.htm">http://www.oie.int/eng/maladies/en_classification.htm</a>]</td>
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LEGISLATIVE AND ADMINISTRATIVE INFORMATION

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<td>Council Directive 90/539 EEC (as amended) (import of poultry and eggs)</td>
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