

# ***UK Bluetongue Control Strategy***

Published by the Department for Environment, Food and Rural Affairs on  
1<sup>st</sup> December 2008

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## Table of Content

<b>1. DISEASE CONTROL STRATEGIES .....</b>	<b>6</b>
1.1 STRATEGIC OBJECTIVE .....	6
1.1.1 Assumptions .....	6
1.2 REFERENCE LABORATORIES AND EXPERT GROUP .....	6
1.2.1 National Reference Laboratory for bluetongue virology .....	6
1.2.2 National laboratory for bluetongue vector ( <i>Culicoides</i> sp.) entomology .....	7
1.2.3 Expert Advisory Group .....	8
1.3 HEIGHTENED RISK OF BTV INFECTION TO THE UK FROM ANOTHER COUNTRY	8
1.3.1 Trade/Imports .....	8
1.3.2 Industry importing responsibility .....	9
1.3.3 Raising stakeholder awareness .....	9
1.3.4 Active surveillance .....	9
1.3.5 Clinical surveillance .....	9
1.3.6 Vector Control .....	10
1.3.7 Meteorological Surveillance .....	10
1.4 BLUETONGUE RESTRICTION ZONE(S) IN ANOTHER EU MEMBER STATE DEMARCATED SUCH THAT THEY EXTEND TO UK .....	10
1.5 SUSPICION OF BLUETONGUE INFECTION .....	11
1.5.1 Investigation of suspect premises .....	11
1.6 PRE-CONFIRMATION STAGE .....	12
1.6.1 Diagnostic Investigation .....	12
1.6.2 Action on premises where BTV is isolated .....	13
1.6.3 Slaughter of animals in which BTV has been isolated .....	13
1.6.4 Tracings investigations .....	13
1.6.5 Actions in area surrounding the premises where BTV isolated ....	14
1.6.6 Epidemiological assessment .....	14
1.6.7 Vector mitigation measures .....	15
1.6.8 Outcome of investigation .....	15
1.7 DISEASE NOT CONFIRMED .....	15
1.8 CONFIRMATION OF DISEASE .....	16

This document  
is out-of-date and  
has been archived.

1.8.1	<i>Criteria for Confirming Disease</i> .....	16
<b>2.</b>	<b>STRATEGY WHEN DISEASE CONFIRMED</b> .....	<b>17</b>
2.1	OVERALL STRATEGY.....	17
2.2	SLAUGHTER OF AFFECTED ANIMALS.....	18
2.3	NOTIFICATION OBLIGATIONS.....	18
2.4	DECLARATION OF ZONES.....	19
2.4.1	<i>Zones</i> .....	19
2.4.2	<i>Declaration of Zones</i> .....	19
2.4.3	<i>Extent Of Zones</i> .....	20
2.4.4	<i>'Cross-border' zones</i> .....	20
2.5	MEASURES WITHIN THE ZONES.....	20
2.5.1	<i>Registration of premises</i> .....	20
2.5.2	<i>Movement restrictions</i> .....	21
2.5.3	<i>Movement Derogations</i> .....	21
2.5.4	<i>Movement Tables</i> .....	21
2.6	SURVEILLANCE.....	24
2.6.1	<i>Infected Premises</i> .....	24
2.6.2	<i>Suspect Cases</i> .....	24
2.6.3	<i>Epidemic surveillance (in Protection and Surveillance Zone)</i> .....	25
2.6.4	<i>Nature Reserves</i> .....	26
2.7	VACCINATION.....	27
2.7.1	<i>Control Strategy</i> .....	27
2.7.2	<i>Key Principles</i> .....	27
2.7.3	<i>Vaccination plan</i> .....	27
2.8	ACTIVITY OUTSIDE THE RESTRICTED ZONES.....	28
2.9	GENERAL ISSUES.....	28
2.9.1	<i>Compensation</i> .....	28
2.9.2	<i>Non Compliance</i> .....	28
2.9.3	<i>Carcass disposal</i> .....	28
2.9.4	<i>Cleaning and disinfection</i> .....	28
2.10	INFORMATION MANAGEMENT.....	29
2.11	STAKEHOLDER AWARENESS AND COMMUNICATION.....	29
<b>3.</b>	<b>LONG-TERM ACTION FOLLOWING CONFIRMATION OF DISEASE</b> .....	<b>30</b>

This document  
is out-of-date and  
has been archived.

3.1	LONG-TERM STRATEGY FOR ERADICATION.....	30
3.2	SURVEILLANCE IN IMMEDIATE SUBSEQUENT YEARS .....	30
3.2.1	<i>Surveillance</i> .....	30
3.2.2	<i>Vector monitoring</i> .....	30
3.3	ATTAINING BLUETONGUE-FREE COUNTRY OR ZONE STATUS.....	30
3.3.1	<i>EU Developments</i> .....	31
3.4	REMOVAL OF THE RESTRICTIONS AND THE RESTRICTED ZONE .....	31
3.4.1	<i>Restricted Zone</i> .....	31
4.	<b>MULTIPLE SEROTYPES</b> .....	<b>31</b>
5.	<b>GLOSSARY OF ABBREVIATIONS</b> .....	<b>33</b>

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# **1. Disease Control Strategies**

## **1.1 Strategic Objective**

An agreed Government and Stakeholder strategy to limit the impact of an incursion of bluetongue (BTV) in the United Kingdom<sup>1</sup> by:

- Defining the extent of infected populations of ruminants through surveillance.
- Containing the spread of BTV through measures such as movement controls and vaccination within the Restricted Zone.
- Balancing control measures to minimise the economic impact on the farming industry.

Each country of the UK has different factors to consider e.g. geographic proximity, and will respond to their situation accordingly within the framework.

This control strategy is for all serotypes and applies to any given individual case that may occur in the UK.

### **1.1.1 Assumptions**

Assumptions are based on technical documents/reviews on the science of Bluetongue, e.g. 'Technical Review – Bluetongue: The virus, Hosts and Vectors' on the Defra website  
[http://www.defra.gov.uk/animalh/diseases/notifiable/pdf/bluetongue\\_technical.pdf](http://www.defra.gov.uk/animalh/diseases/notifiable/pdf/bluetongue_technical.pdf).

The OIE International Animal Health Code specified infective period<sup>2</sup> of 60 days will be used for contingency planning while being mindful of the shorter periods of high risk of viraemia.

## **1.2 Reference laboratories and expert group**

### **1.2.1 National Reference Laboratory for bluetongue virology**

The National Reference Laboratory for bluetongue virology is:

Institute for Animal Health  
Pirbright Laboratory  
Arbovirology Unit  
Ash Road  
Pirbright  
Woking  
Surrey GU24 0NF

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<sup>1</sup> Northern Ireland have different factors and priorities to consider i.e. geographical separation/proximity to GB and Republic of Ireland. Depending on the situation they reserve the right to adopt a strategy specific to their circumstances.

<sup>2</sup> OIE International Animal Health Code, Chapter 2.2.13 Bluetongue, Article 2.2.13.1. (in part) "For the purposes of the Terrestrial Code, the infective period for bluetongue virus (BTV) shall be 60 days."

This laboratory has also been designated by the European Commission as the Community Reference Laboratory for bluetongue (Directive 2000/75/EC, Annex II), and by OIE as a World Reference Laboratory for bluetongue.

In this role, the Institute for Animal Health, Pirbright Laboratory (IAH Pirbright) shall be responsible for:

- Maintaining a capability of performing the tests required to confirm a diagnosis of BTV and typing of the BTV involved<sup>3</sup>
- Maintaining a supply and quality of diagnostic reagents for BTV
- Undertaking testing of vaccines for BTV if required by a commercial partner.
- Assessing the vector competency of the *Culicoides sp.* from areas where BTV is present
- Organising of comparative testing with other laboratories within the European Union at regular intervals to assess the sensitivity and specificity of the diagnostic procedures being used.
- Preserving isolates of BTV isolated from cases in the UK, EU and worldwide.
- Undertaking molecular epidemiological investigations to determine the origin of virus incursions
- Provide advice on the disease and suitable people for Expert Groups that may be established by the CVO, to advise on BTV planning and control.

#### 1.2.2 National laboratory for bluetongue vector (*Culicoides sp.*)

entomology

The national laboratory for bluetongue vector (*Culicoides sp.*) entomology shall be:

Institute of Animal Health  
Pirbright Laboratory  
Arbovirology Unit  
Ash Road  
Pirbright  
Woking  
Surrey GU24 0NF

The *Culicoides* vector entomology reference laboratory shall be responsible for:

- Providing staff to collect vectors and, if required, to train others in vector collection
- Identification of insects collected to determine *Culicoides sp.* acting as vectors
- Advice on the ecology and control of the vectors.

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<sup>3</sup> Testing of samples from premises in Northern Ireland may be undertaken by Agri-Food & Biosciences Institute (AFBI). This option is being considered.

### 1.2.3 Expert Advisory Group

An Expert Advisory Group for BTV will be established with experts in

- Veterinary epidemiology
- *Culicoides* entomology
- BTV virology and diagnosis
- Veterinary surveillance
- Operational delivery
- Geographical Information Systems (GIS) technology
- Meteorology

The roles and responsibilities of the Expert Group for BTV are to provide advice to the CVO on:

- Interpretation of data from investigations into cases and BTV and/or vector surveillance
- Epidemiology of the disease in the outbreak
- Measures to control BTV infection, the disease and the vectors
- Design of surveillance programmes for BTV and vectors
- Projections of future spread, distribution and persistence of the virus.
- Providing input to cost benefit analysis

## 1.3 Heightened Risk of BTV infection to the UK from another country

Depending on the international bluetongue situation, the UK may find itself at a 'Heightened Risk' of infection from another country e.g. as demonstrated by the 2006 incursion of BTV into northern Europe, where the proximity of outbreaks in Belgium in particular put the UK at risk of meteorological incursion by infected vectors.

Priority in this situation will be to keep disease out of the UK, therefore, depending on risk assessment at the time the following measures may be considered during heightened risk periods to the UK (or an identified 'risk' area in the UK)

### 1.3.1 Trade/Imports

- Controls on imports under 1266/2007 Regulation of susceptible animals from Restricted Zones in other countries.
- Post import testing<sup>4</sup> will be carried out on:
  - all susceptible livestock (and zoo animals at risk) from free areas of BTV;

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<sup>4</sup> Based on veterinary risk assessments, post import testing in Northern Ireland may take a different form in practice with different controls and testing periods.



- affected EU Member States and from BTV free EU Member States (or targeted testing where risk assessment supports this) and;
- BTV Restricted Zones to a UK Restricted Zone.

The tests will be within 10 days of arrival or in line with a specific timescale where the policy requires this. Imported animals to remain on first premises of destination until negative results received (with advice to isolate from other susceptible animals where possible).

### **1.3.2 Industry importing responsibility**

In addition to documentary and identity checks, imports of susceptible animals may be tested for Bluetongue on a risk basis. This risk assessment will take in to consideration the locations of different serotypes in other Member States and changes to risk as disease situation changes in other countries. We continue to urge industry to consider the risks and check the health and vaccination status of animals when sourcing any animals, from within the UK or abroad.

### **1.3.3 Raising stakeholder awareness**

Using industry and Government communications channels, information on risk periods will be disseminated to farmers and vets. In addition to existing stakeholder awareness programmes i.e. encouraging vigilance in looking for disease, appropriate training or advice for vets and farmers may be provided where necessary i.e. clinical signs of disease.

### **1.3.4 Active surveillance**

Where deemed appropriate, such a regime would be defined following risk assessment, resources available and cost benefit analysis. Where required it would target large herds (mainly cattle) following a period of heightened risk. In addition other targeted surveillance may be undertaken, e.g. bulk milk testing. Please see section 2.6 for a generic surveillance approach and section 1.6.5.1 for vector surveillance.

### **1.3.5 Clinical surveillance**

Early signs of disease may be mild and difficult to differentiate from other diseases so clinical surveillance may be of limited value. Therefore, no increased clinical surveillance recommended, apart from raising stakeholder awareness of signs of disease (1.3.2).

However, BTV may be an acute disease, presenting as sudden death in sheep without displaying classical symptoms. Different BTV serotypes may cause different clinical signs in livestock.

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### 1.3.6 Vector Control

No vector control methods would be recommended, based on the current disease science.

### 1.3.7 Meteorological Surveillance

- The Met Office monitors meteorological data on a daily basis and assesses the potential for windborne spread of BTV infected vectors to the UK and from Great Britain to Northern Ireland. The information is provided to Defra and The Institute for Animal Health (Pirbright). The assessment takes into account the following factors:
  - The meteorological conditions
  - The presence of infected vectors
  - Likelihood of vectors being airborne (in affected countries and UK)
- Combining these elements, the Met Office Atmospheric Dispersion Model can produce a plume trajectory, and a series of alerts can be issued
  - Black = low risk
  - Red = heightened risk
- The heightened risk periods and areas can be published on the Defra website with the caveat that the model is only an estimation of potential incursions from infected vectors using the relevant information available and is not a definitive picture.
- Within areas identified in a Red risk period, additional practical measures or precautions with regard to their animals, by animal keepers are not required (but guidance will be available on potential vector mitigation measures). However, we would advise a heightened state of vigilance from 7-10 days post 'incursion' date, in looking for any signs of disease amongst susceptible animals.

### 1.4 **Bluetongue restriction zone(s) in another EU member state demarcated such that they extend to UK**

During the 2006 BTV8 outbreak, parts of SE England were effectively within 150km zones from Infected Premises on the Belgian coast. In the European Commission Standing Committee on Food Chain and Animal Health (SCoFCAH), the UK successfully requested exclusion from the zones because of geographical reasons, passive surveillance work being undertaken i.e. post-import testing, and pro-active stakeholder awareness raising. The UK would probably seek to avoid demarcation including its territory if the scenario occurred in the future but is dependent on EU agreement.

All of the measures at 1.3 would be considered in such a scenario.

## 1.5 Suspicion of Bluetongue Infection

EC Directive 2000/75/EC determines that BTV is confirmed when the CVO, based on laboratory results, declares that BTV is circulating in a specific area, or in the case of an epidemic, on the basis of clinical and/or epidemiological results. It is therefore possible that a single infected animal may not be sufficient to demonstrate circulation.

The first case of BTV may not produce classical overt clinical signs in sheep. It is quite possible, even likely, that sub-clinical BTV infection will occur and circulate for some time, particularly in cattle, before it is recognised. Thus, it will be necessary to establish both that:

- BTV is present
  - BTV is being transmitted between vertebrate hosts and vectors.
- Different BTV serotypes may cause different clinical signs to livestock. Irrespective of the origin or the means of introduction of the initial infection, the initial response to suspicion of infection will be similar as it is unlikely the origin of infection will be immediately obvious (unless it is an imported animal).

However 4 distinct scenarios are likely to occur at the start of a new outbreak.

- Investigation on premises where disease first suspected
- Pre-confirmation of disease i.e. virus has been isolated from a suspect case, but it has not been possible to demonstrate circulation to other animals, therefore, disease will not necessarily be confirmed in the UK.
- Disease not confirmed as no evidence of onward circulation of virus. (and virus positive animal slaughtered), or
- Disease confirmed.

### 1.5.1 Investigation of suspect premises

See also 2.5.2 on suspect cases during a large outbreak

#### 1.5.1.1 *Veterinary Inquiry*

In response to a suspect case a veterinary inquiry would be conducted by an official veterinarian, taking the following into account:

- Clinical examination
- History
- Examination of records, e.g. movement, medicine use
- Numbers of animals by species and class.
- Numbers of animals by species clinically affected, died of infection, slaughtered for diagnosis or welfare, and clinically normal.
- Movements of BTV-susceptible animals onto and off the suspect premises in the 60 days prior to the first identified infected case (unless epidemiological assessment prescribes a longer or shorter period)
- Identification of likely vector breeding sites.

- Vaccination status for known circulating serotypes.

#### **1.5.1.2 Diagnostic investigation**

If disease cannot be ruled out on clinical grounds, samples from suspect animal(s) should be submitted for laboratory testing.

#### **1.5.1.3 Restrictions**

The suspect premises will be placed under restrictions at the time of the veterinary inquiry. Movement of ruminant animals onto or off the premises shall be prohibited pending the outcome of the investigations. In the event of welfare issues occurring which require movement of animals, certain licensed movements may be permitted under veterinary supervision.

#### **1.5.1.4 Outcome of investigation on first suspect premises**

There are two possible outcomes:

- BTV is not confirmed - restrictions will be revoked.
- BTV is isolated in animal(s) tested – proceed to Pre-confirmation Stage

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If virus has been isolated from a suspect case, but it has not yet been demonstrated that virus is circulating in vectors and other susceptible species, disease will not necessarily be confirmed.

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We will wish to determine whether virus is circulating through epidemiological investigations. Prioritisation of these investigations will be based on epidemiological assessment, and 2 main factors will be considered:

- Assess possible spread in the local area, so prioritise investigations on the largest cattle farms up to 3km from the suspect premises.
- Assess potential long distance spread. Prioritise investigations on tracing premises furthest from suspect premises, and in particular those involving cattle movements (as most likely hosts).

#### **1.6.1 Diagnostic Investigation**

If bluetongue virus is isolated The Institute for Animal Health (Pirbright) will identify the serotype of the virus and undertake standard molecular epidemiological techniques to determine the origin of the virus. This involves sequencing of the virus and phylogenetic analysis. Viral neutralisation tests will also be set up in parallel in order to confirm the serotype of the viral isolate.

### 1.6.2 Action on premises where BTV is isolated

- Clinical examination of affected animals and/or by post mortem examination for confirmation of the disease, with further laboratory tests if necessary.
- Submit such samples of susceptible animals for laboratory examination as are necessary to carry out epidemiological assessment at 1.6.6.
- Review the clinical history and movement/medicine use records of the herd/flock (i.e. to investigate possible iatrogenic contamination from infected, equipment, medicines or biological products).
- Re-testing of negative animals will not be required unless specifically requested.
- Treatment of clinical cases - owners will be advised to contact their private veterinarian for advice.
- Insect collections may be made on the premises and submitted to The Institute for Animal Health (Pirbright) for identification (see 1.6.5.1).

### 1.6.3 Slaughter of animals in which BTV has been isolated

- Slaughter of animals in which BTV is isolated might, in some circumstances, be considered as a control measure at this stage, e.g. a single infected imported animal where no further disease is detected.
- The decision whether to slaughter would be taken by the relevant CVO (or Ministers in Scotland), and will take account of the epidemiological circumstances and the veterinary risk assessment of the infected case and will take note of the views of experts and stakeholder partners. Each case will be judged on the situation at the time (slaughter may be considered in the case of incursion of a new strain in the UK).
- Severely affected animals may need to be slaughtered for animal welfare reasons. The keeper should get advice from a private veterinary surgeon in such cases.

### 1.6.4 Tracings investigations

If the CVO considers appropriate a tracings exercise may take place as follows on BTV-susceptible animals:

- onto and off the suspect premises in the 60 days prior to the first identified infected case (unless epidemiological assessment prescribes a longer or shorter period).
- from the same origin as the animal in which BTV has been isolated.

On each premises to which such animals are traced the following actions will normally be taken:

- Clinical examination of traced animals
- Submit samples for laboratory examination from traced animals only.
- Review the clinical history and movement/medicine use records of the herd/flock.
- Subsequent retesting could be undertaken on the traced animals and any other animals on the premises. .
- Movement restrictions on susceptible animals

### 1.6.5 Actions in area surrounding the premises where BTV isolated

To identify extent of local circulation of disease the following factors may be considered:

- Targeted surveillance of susceptible species. Where required, priority given to cattle farms up to 3km from premises where BTV is isolated.
- Collection and identification of vectors to establish distribution and abundance in local area and, if appropriate on premises housing susceptible species within down-wind areas as identified by plume modelling by Met Office.
- If necessary The Institute for Animal Health (Pirbright)/Met Office may put in place a local weather station.
- A Temporary control zone maybe declared by the Competent Authority of a size that is considered necessary to prevent the spread of disease. The controls in the TCZ are such that animals cannot be moved on to or off premises except under licence.

#### 1.6.5.1 Vector investigation

It is unlikely that a single vector type could be identified, as previous UK surveys show multiple vectors at most surveyed sites. However, early information assessing general vector populations and spread (as required by EU) might be useful if an outbreak widened. If it is considered necessary the following actions may be appropriate to take:

- Establishing the *Culicoides* species present and the abundance of each species will assist to determine which vector species are involved in transmitting BTV.
- Insect collections may be made on the suspect premises or in the local area of the affected animals and be submitted to The Institute for Animal Health (Pirbright) for identification.
- Collection should be undertaken by The Institute for Animal Health (Pirbright), or AFBI in Northern Ireland, or individuals trained in using light traps. 1 light trap per premise for 2 nights is recommended.
- BTV isolation may be attempted (but not essential) from the collected *Culicoides* spp., although this may be unrewarding if the vector involved has low (1-2%) competency. Best success will be achieved with vectors from farms where disease is known to be present.

#### 1.6.6 Epidemiological assessment

An epidemiological assessment of the data obtained by the measures described above shall be done (on a case by case basis) by the National Emergency Epidemiology Group (NEEG), particularly addressing

- The possible origin of BTV infection
- The period during which BTV may have been present on the premises
- Other premises possibly infected with BTV from the same source

- Movement of possibly BTV infected animals from the suspect premises
- Presence and distribution of vectors (including modelling of recent local meteorological conditions, to estimate possible vector spread in the area) if considered necessary.

### 1.6.7 Vector mitigation measures

Evidence from the 2006 BTV8 outbreak suggests that husbandry modification, e.g. housing of susceptible species and vector control, insecticide use or removing breeding sites have a limited effect on disease control.

The *Culicoides* species native to Northern Europe and the UK (unlike those in Southern Europe) are known to move indoors, and there are no authorised insecticides for use against *Culicoides*. However, some risk mitigation measures may be taken to decrease the risk of vectors biting susceptible animals<sup>5</sup>.

### 1.6.8 Outcome of investigation

There are two possible outcomes:

- Circulation of BTV is not confirmed – proceed to “Disease not Confirmed” (1.7).
- Circulation of BTV is confirmed – proceed to “Confirmation of Disease” (1.8).

### 1.7 Disease not confirmed

If BTV has been isolated from an individual animal, **and** there is no evidence of onwards circulation of disease, disease will not be confirmed. Depending on circumstances, an epidemiological report may be sent to the Commission supporting the conclusion that disease is not circulating.

However the EU, OIE and trading partners etc. will likely seek reassurance of the UK's disease free status. To achieve this some of the measures referred to in Section 1.3. may be implemented.

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<sup>5</sup> Further information can be found on vector mitigation in England on the Defra website at <http://www.defra.gov.uk/animalh/diseases/notifiable/bluetongue/pdf/guidance-vector.pdf>

## **1.8 Confirmation of disease**

### **1.8.1 Criteria for Confirming Disease**

Circulation of disease will not necessarily be confirmed with the first identified case, further epidemiological investigations may be required to prove circulation in local animal and vector populations.

To confirm the circulation of disease, the decision would be taken by the CVO, taking into account, amongst other things:

- Number of infected animals
- Geographical distribution of disease
- Movement history of infected animal(s)
- Veterinary history of infected animal(s)
- Sero-prevalence in herds/flocks
- Vector data / meteorological conditions
- Other epidemiological information

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## 2. Strategy when Disease Confirmed

### 2.1 Overall Strategy

Once circulation of disease is confirmed, the following measures will be implemented to minimise the impact of BTV in the UK:

- Identification of BTV infected premises.
- Maintain controls (as at suspicion stage) on infected premises.
- Declaration of a Restricted Zone (made up of a Protection Zone and Surveillance Zone)
- Movement controls to prevent the spread of BTV by infected animals.
- Surveillance in the Protection Zone to monitor any change in distribution of BTV and vectors (where considered necessary).
- A communication programme to inform owners/keepers of susceptible animals, veterinarians and other stakeholders of the disease situation and measures being implemented and to provide advice on clinical signs of disease and vector mitigation measures.

The measures described in 6. will continue while epidemiological information is being gathered. In the meantime:

- If there appears to be limited local spread and no evidence of widespread circulation of disease, efforts will continue to focus on containing disease with a view to eradicating disease if possible.
- If there is evidence that any local spread cannot be contained and/or disease has spread widely across significant long distances, consideration will be given to moving to Phase Two.

A two-phase approach will be applied throughout, taking into account epidemiological information and cost benefit analysis:

- **Phase One** - Rigorous controls (e.g. smaller zone with more movement restrictions) with the aim of containing disease and eradicating it if possible. Vaccination is likely to form a key part of control if available. (The shape of phase one controls may be very different with/without vaccine).
- **Phase Two** – Adaptation of controls once the impact of rigorous controls becomes disproportionate (e.g. larger zone/s with no movement restrictions) to the likelihood or benefits of control/eradication (i.e. evidence no longer supports the Phase One approach);

The decision when moving from Phase One to Two will take account of the following factors:

- Epidemiological information
- Season/Time of year
- Cost benefit analysis

- Vaccination – the availability and uptake of vaccine will have an impact of assessing likelihood of success of controlling the disease in Phase One.

If the control strategy moves to Phase Two, the controls are addressed at “living with disease” rather than eradication. This would include:

- an exit strategy from inappropriately restrictive controls
- implementing the legal minimum requirements to allow us to live with disease
- minimising economic impact on the farming industry

In applying control measures in this way, flexibility is maintained to act according to the circumstances of a particular outbreak as it is not possible to be too prescriptive in advance.

## **2.2 Slaughter of affected animals**

Slaughter of susceptible animal(s) infected with bluetongue might, in some circumstances, be considered as a control measure, for example, in the context of single infected imported animal where no further disease is detected (as a precautionary measure to try to stop disease establishing).

The decision would be taken by the relevant CVO (or Ministers in Scotland), based on the epidemiological circumstances, a veterinary risk assessment of the confirmed case, and the views of the livestock industry. It would not be expected to form part of our control strategy beyond the earliest stages of an outbreak (although each case would be judged on the situation at the time).

Severely affected animals may need to be slaughtered for animal welfare reasons. The keeper should get advice and treatment from a private veterinary surgeon for such animals.

## **2.3 Notification obligations**

Bluetongue is an Office International des Epizooties (OIE) Serious Notifiable A disease that has the potential for rapid spread with significant production loss for the sheep industry and is of major importance to the international trade in livestock (including sheep, goats, cattle and deer).

On confirmation and declaration by the CVO that BTV is circulating in a part of the UK, the CVO will notify, within 24 hours of confirming disease, the European Commission and the OIE Central Bureau.

## 2.4 Declaration of Zones

### 2.4.1 Zones

The following zones are provided for in Bluetongue legislation:

- A Control Zone of 20km is provided for in the directive. Animals are not permitted to move to or from premises within the zone.
- The Restricted Zone may consist of:
  - Protection Zone of at least 100km (but with flexibility to adjust according to epidemiological circumstances) declared around the infected premises on confirmation of the Bluetongue virus as part of the Restricted Zone.
  - Surveillance Zone of at least 50 km declared around the Protection Zone on confirmation of the Bluetongue virus as part of the Restricted Zone.
    - Animals, semen , ovum or embryos are not permitted to move out of the Restricted Zone. However movements within the zone are permitted.

### 2.4.2 Declaration of zones

On confirmation Ministers shall declare the establishment of a Restricted Zone in line with legislation (as above). The default is a Restricted zone of at least 150km radius around the infected premises. Depending on disease circumstances the Restricted Zone may be made up of the following zones<sup>6</sup>.

- A Protection Zone to contain disease. The default size is 100km, if disease circumstances justify, the PZ may be larger or smaller (as small as 20km radius) around the infected premises. The size of the PZ must be supported by sound evidence specific to the outbreak
- A Surveillance Zone of making up the remainder of the Restricted Zone
- The above zones combined shall be referred to as the Restricted Zone
- Areas outside the Restricted Zone i.e. free from disease restrictions, will be referred to as Free Areas

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<sup>6</sup> Legislation provides an option of declaring a 20km control zone around the infected premises, however the movement restrictions may be considered disproportionate (please see movement table) and we do not foresee using this unless there is a case for tighter movement controls. It is likely that we would declare a PZ and SZ as above.

### 2.4.3 Extent Of Zones

The extent of the Restricted Zone will take account of natural boundaries to the dispersal of vectors, and geographical (e.g. the sea or a high mountain range), administrative, ecological and epizootiological factors.

Due to the size of the zones, substantial proportions of the UK may be within the restricted zone and subject to movement restrictions irrespective of where BTV is confirmed. The nature of the UK sheep and cattle industry means that the zones will have a serious economic impact on movement of animals, in particular at certain times of the year with regard to movement of breeding or fattening stock.

There may be occasions when it is proportionate to extend the boundaries of a zone to minimise the impact of the restrictions on industry; e.g. to provide access to a slaughter house. This may mean the Restricted Zone could cover the whole country as part of the strategy to keep the impact of movement restrictions proportionate to the disease situation.

The boundaries of the Restricted Zone may be increased in size in response to disease spread in order to maintain the minimum boundaries of the Protection Zone and Surveillance Zone.

The boundaries may also be amended by SCoFCAH decisions after consideration of results of investigations and surveillance submitted by the UK responsible authority.

### 2.4.4 'Cross-border' zones

Although the UK reserves the flexibility to declare zones as appropriate in response to outbreaks in another country (or not as the case may be), a different approach will be taken to outbreaks close to land borders between devolved territories in the UK which are sufficiently close (i.e. within 150km) to warrant control zones across the border.

It is expected that zones will be declared on both sides of the border, to meet the default minimum area required in the Directive<sup>7</sup>. However the process and criteria still apply in terms of adjusting zones to the specific circumstances of the outbreak.

## 2.5 Measures within the Zones

### 2.5.1 Registration of premises

There are existing statutory requirements for all premises with susceptible animals to be registered with their local Animal Health Divisional office (or

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<sup>7</sup> Zones in the UK may be demarcated to take account of the geographical situation of Devolved territories e.g. NI..

Divisional Veterinary Office in Northern Ireland). Any unregistered premises that have susceptible animals (temporarily or permanently) will have to be identified and recorded. These registers will be used for investigation and surveillance activities within the Restricted Zones.

### **2.5.2 Movement restrictions**

Some movement of susceptible animals will be restricted, as the movement of a BTV-infected animal could result in a new focus of infection.

Bluetongue legislation requires controls on movement of susceptible animals

- within, to and from the a Control Zone, if there is one.
- out of a Protection Zone,
- out of a Surveillance Zone (these controls may be subject to amendment by SCoFCAH Decision).

Some movements may be permitted under the authority of a licence issued by an inspector. The movement conditions under the Commission Regulation 1266/2007 are implemented by way of a licensing regime and aimed at minimising the risk of disease spread.

Under certain circumstances, embryos derived from clinically normal donors and semen from normal donors may be permitted to be removed from the Infected Area under licence in accordance with the Commission Regulation 1266/2007.

### **2.5.3 Movement Derogations**

Commission Regulation 1266/2007 sets out the derogations from the movement restrictions in the Directive. The effect of these derogations is that some provision is made for categories of movements.

Zone-based (rather than premises-based) restrictions are appropriate, and movement derogations apply “to infected premises” in the same way as any other premises in the rest of the Protection zone or Control Zone if one exists.

### **2.5.4 Movements Table**

The table below sets out the movements which are allowed (as per the Commission Regulation 1266/2007, Annex III). The conditions in the movement table will be used as a default, however exact conditions would depend on disease circumstances.

A Veterinary Risk Assessment may be undertaken on the licensing regime which is appropriate to the specific circumstances of each outbreak.

Where permissible and conditions allow this, General Licences will be published on the website.

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	<b>To CZ</b>	<b>To PZ</b>	<b>TO SZ</b>	<b>To Free Area</b>
<b>From CZ</b>	No moves allowed	No moves allowed	No moves allowed	No moves allowed
<b>From PZ</b>	No moves allowed	All moves allowed (no conditions)	Exit ban exemptions:  Moves to slaughter only under licence conditions (Licenced under conditions specified in the Commission Regulation 1266/2007).  Moves to another premises only under licence conditions (Licenced under conditions specified in the Commission Regulation 1266/2007).	Exit ban exemptions:  Moves to slaughter only under licence conditions (Licenced under conditions specified in the Commission Regulation 1266/2007).  Moves to another premises only under licence conditions (Licenced under conditions specified in the Commission Regulation 1266/2007).
<b>From SZ</b>	No moves allowed	All moves allowed (no conditions)	All moves allowed (no conditions)	Exit ban exemptions:  Moves to slaughter only under licence conditions (Licenced under conditions specified in the Commission Regulation 1266/2007).  Moves to another premises only under licence conditions (Licenced under conditions specified in the Commission Regulation 1266/2007).
<b>From FA</b>	No moves allowed	All moves allowed (no conditions)	All moves allowed (no conditions)	Unrestricted (unless involves transit through restricted zone, in which case Licence and treatment with insecticide required)

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## **2.6 Surveillance**

Regulation 1266/2007 sets out surveillance requirements for free areas, zones and the vector free period. Surveillance carried out under the Regulations will be set out in a plan produced by the Competent Authority, but must meet the requirements of 1266/2007.

### **2.6.1 Infected Premises**

The control measures detailed in paragraphs 1.6.2 shall be continued on all premises in which BTV is confirmed.

The infected premises may be contacted regularly, and details of any further cases and/or deaths or change in the flock /herd obtained. From these details any need to revisit the premises can be reassessed.

Re-testing of negative animals will not be required unless specifically requested, as informed by an epidemiological assessment.

### **2.6.2 Suspect Cases**

Depending on the scale of the outbreak, and the resources available, it may not be possible to visit all suspect cases immediately. In this situation the suspect cases will be prioritised on epidemiological assessment at that time. Suspect cases visited should follow the procedure set out in 1.5.1 and if necessary 1.6, but criteria for confirmation of disease may differ. Suspect cases will be prioritised, taking into account the suspicion of other diseases, e.g. Foot-and-mouth disease.

#### **2.6.2.1 *Prioritising tracings and suspect cases***

If resources are limited or the scale of the outbreak suggests it is not a proportionate use of resources, priority within the Protection Zone will be both to:

- investigate tracings from infected premises; and
- investigate new report cases.

At these premises the following should be undertaken

- Full inventory of premises i.e. susceptible animals on the premises.
- Clinical investigation of the premises. Only sick/suspect animals should be tested and sampled.
- Epidemiological survey (including tracings to/from the premises, and identification of vectors and their habitats if required)



### **2.6.2.2 Import Testing**

In addition to documentary and identity checks, imports of susceptible animal may be tested for Bluetongue on a risk basis. This risk assessment will take in to consideration the locations of different serotypes in other Member States and changes to risk as disease situation changes in other countries. This also applies to zoo animals which may present a risk. The tests to be used in each case may vary but are capable of detecting any serotype of concern. This policy is kept under review and may be adjusted in the light of changing risks and resource constraints.

### **2.6.2.3 Surveillance in the vicinity of infected premises**

If it is considered necessary by the CVO, other premises should be visited. If required, priority should be given to investigating large cattle farms, working from the Infected Premises outwards though this may be refined in light of meteorological findings e.g. plume that indicates wind-borne spread.

At these premises the following should be undertaken

- Full inventory of premises i.e. susceptible animals on the premises.
- Serological surveillance of bovine animals as required by epidemiological assessment (+ clinical investigation if required)
- Re-visits to these premises would only be necessary on veterinary risk assessment or if disease was reported.

### **2.6.3 Epidemic surveillance (in Protection and Surveillance Zone)**

#### **2.6.3.1 Surveillance**

Surveillance for bluetongue will be required in line with Commission Regulation 2007/1266 annex I. A programme of surveillance for susceptible animals would be developed at the time of an outbreak depending on the epidemiological assessment. Surveillance may take place in various forms, e.g. serology and agent detection, passive surveillance, active surveillance and could include bulk milk testing. Surveillance should take into account vaccination status of the animals in the zone, e.g. ELISA alone would be insufficient to distinguish between vaccinated and infected animals.

#### **2.6.3.2 Vector monitoring**

Where considered appropriate, vector sampling will also be undertaken in the Protection Zone and Surveillance Zone at sites selected for serological monitoring to establish whether competent vectors are present, their abundance and their prevalence. This data will assist in

planning resource deployment, modelling and predicting spread of the outbreak.

Isolation of BTV from vectors is not suitable technique for disease monitoring or surveillance.

#### **2.6.4 Nature Reserves**

Serological surveillance of free-ranging wild ruminants and vector sampling may be undertaken on nature reserves or other locations if deemed necessary. Control measures may be implemented if deemed necessary.

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## 2.7 Vaccination

### 2.7.1 Control Strategy

The availability of vaccine and the UK Vaccination Plan will have an impact on the control strategy. The factors highlighted in 2.1 should be considered in the light of the availability of vaccine and the vaccination approach.

### 2.7.2 Key Principles

- Any BTV vaccine would need to have a marketing authorisation from the Veterinary Medicines Directorate for use in the United Kingdom. Vaccine may be authorised at EU level.
- The CVO may permit the use of an unauthorised vaccine in an emergency.
- Use of a live-vaccine would probably not be considered for use in the UK. This would depend on scientific development.
- Vaccination can only take place in the Protection Zone (under the current EU law at the time of writing).
- The Bluetongue legislation in the UK allows for voluntary or compulsory vaccination depending on the circumstances of the disease.

### 2.7.3 Vaccination plan

In order to use vaccine for any given serotype, vaccination must only be carried out under a programme published by the competent authority.

Plans will be developed regarding the delivery of a vaccination programme including regulation of vaccination procedures and certification of vaccinated animals, audit trail etc. Such plans may be developed on a contingency basis and the following factors will need to be considered:

- The supply/availability of vaccine
- The disease epidemiology
- Technical vaccine specification
- Certification and identification
- Timing

Vaccination is prohibited within the Surveillance Zone and Commission approval is required for vaccination in any area (including Free Area)

The vaccination plan for 2008 for BTV8 can be found at this link :

<http://www.defra.gov.uk/animalh/diseases/notifiable/bluetongue/pdf/vaccinationplan.pdf>

## **2.8 Activity outside the Restricted Zones**

Appropriate surveillance will be undertaken elsewhere in the United Kingdom outside of the Restricted Zone as outlined in the Commission Regulation 1266/2007, Annex I.

Suitable publicity will be provided to stakeholders emphasising the requirement that any person who suspects BTV in an animal must immediately notify their local Animal Health offices (or the Divisional Veterinary Officer in NI), who will undertake a veterinary inquiry and initiate the procedures detailed in section 1.5.1.1.

## **2.9 General issues**

### **2.9.1 Compensation**

Compensation is payable in accordance with the *Animal Health Act 1981* (or the *Disease of Animal (NI) Order 1981*) for animals destroyed for the purpose of disease control, including animals destroyed for diagnosis.

Compensation would not be payable in the following circumstances:

- Imported infected animals slaughtered on a discretionary basis (under Import Regulations) as a disease risk, and the remaining herd monitored.
- Seriously affected animals destroyed for welfare reasons by decision of the owner, with or without advice of a veterinary surgeon.

### **2.9.2 Non Compliance**

Provisions are also made in legislation to require compliance with notices served by an inspector at the expense of the person to whom the notice is served.

### **2.9.3 Carcass disposal**

Carcasses and contaminated materials must be disposed of, in accordance with statutory requirements.

There is no BTV disease risk associated with carcasses.

### **2.9.4 Cleaning and disinfection**

Normal cleansing should be performed. There is no BTV disease risk associated with contamination of housing, equipment or fomites.

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## **2.10 Information Management**

The NEEG will lead on an information management system to collect, collate and disseminate information relating to an outbreak of BTV and the associated surveillance activities.

## **2.11 Stakeholder awareness and communication**

Information must be provided to all livestock owners, veterinary surgeons and other stakeholders, particularly within the Restricted Zone . This information must explain the signs of BTV and action to take if the disease is suspected.

Information about movement restrictions and licensing procedures must be made widely available.

Additional information setting out clearly the responsibilities and restrictions applicable to infected premises and those within the designated area must be provided to these owners. Information must be provided on

- Recording of animals, illness, deaths and births and any authorised introduction
- Measures to limit exposure of susceptible animals to vectors
- Vector control methods
- Safe use of insecticides and any with-holding periods after treatment before animals or products can be used for human consumption
- Results and interpretation of tests.

Owners must be advised of the results of any BTV tests performed on their animals and what the results mean.

The general public will be kept informed about the disease, the outbreak and control measures being implemented. The public will be re-assured that Bluetongue does not affect humans and has no public health implications. The public also needs to be informed that BTV is not spread in carcasses or fomites. Food Standard Agency and Department of Health have lines prepared in the event of an outbreak.

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### **3. Long-term action following confirmation of disease**

#### **3.1 Long-term strategy for eradication**

The long-term objectives of controls, e.g. exit strategy from zoning and/or eradication, should be considered for the long term in light of the points highlighted in section 2.1 and the serotype present. What follows are specifics over and above the strategy considerations as set out in 2.1.

#### **3.2 Surveillance in Immediate Subsequent Years**

##### **3.2.1 Surveillance**

This will be required in the years following an outbreak in areas where BTV had been circulating the previous year with the objective to determine the following in line with the Commission Regulation 1266/2007, see section 2.6:

- has BTV persisted over winter,
- has it been reintroduced,
- confirmation that BTV is no longer present.

If BTV is circulating, an appropriate response programme in line with section 2, will have to be implemented.

The surveillance programme will be designed according to the circumstances of the outbreak.

##### **3.2.2 Vector monitoring**

Vector sampling using light traps may also be undertaken to determine their geographical and seasonal distribution and prevalence in risk areas, or to determine a vector free period.

#### **3.3 Attaining Bluetongue-free Country or Zone status**

The OIE International Animal Health Code, Chapter 2.2.13.2. can be found on the OIE website, at this link

[http://www.oie.int/eng/normes/Mcode/en\\_chapitre\\_2.2.13.htm](http://www.oie.int/eng/normes/Mcode/en_chapitre_2.2.13.htm)

Any Member State wishing to obtain disease free status would also need to seek agreement at EU SCoFCAH Committee.

### 3.3.1 EU Developments

The development of EU rules may require surveillance to support the declaration of new zones. The surveillance necessary will depend on disease circumstances at the time and the development of policy.

## 3.4 Removal of the restrictions and the Restricted Zone

### 3.4.1 Restricted Zone

The Restricted Zone will remain in place and these measures will continue to be implemented until amended or repealed by an Order of the Secretary of State or devolved government with the approval of the SCoFCAH.

Surveillance as described in paragraph 3.1 may be required to demonstrate that BTV transmission is no longer occurring

## 4. Multiple Serotypes

All of this control strategy will apply to any given serotype of the Bluetongue virus. In circumstances where more than 1 serotype is present, all measures outlined in this control strategy may apply in parallel.

However, the table below identifies further considerations for some of the measures outlined in this control strategy when faced with multiple serotypes and in particular, opportunities to consolidate/combine controls.

Section	Considerations
2	Some or all control measures may need to be adjusted or merged, depending on the disease situation. We would need to consider whether we would consolidate the controls and adopt a single approach for the multiple serotypes or treat each individual case separately.
2.1	The overall strategy will need to be considered in light of each serotype.
2.3	Notification of confirmation to the European Commission and the OIE Central Bureau process could be combined where reporting multiple serotypes.
2.4	Default policy is that zones would be declared as described in this strategy. However, this would need further deliberation as the declaration of the zones would depend on the following factors: <ul style="list-style-type: none"><li>• Distribution of the serotypes</li><li>• Epidemiology</li></ul>

	<ul style="list-style-type: none"> <li>Distance between the outbreaks</li> </ul> <p>As a result you would also have to consider:</p> <ul style="list-style-type: none"> <li>Whether the zones should overlap</li> <li>The zones should be combined</li> </ul>
2.5	Keeping in mind 2.4, the declaration of zones; the measures in the zone would apply for all serotypes.
2.6	The surveillance plan, in light of the multiple serotypes, would be combined. Prioritisation of surveillance would be carried out in light of each individual serotype.
2.7	The vaccination strategy may apply separately, or be combined, providing vaccine is available for the different types and combinations.

To coordinate controls and zones for multiple serotypes, the following points will need to be considered:

- Geographical location of the infected premises
- Extent of the disease spread and overlap
- Epidemiology
- Vaccine availability.

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## 5. Glossary of abbreviations

BTV	Bluetongue Virus
BTV8	Bluetongue Virus serotype 8
cELISA	Competitive enzyme-linked immunosorbent assay
CVO	Chief Veterinary Officer
DA	Devolved Administration
DVM	Divisional Veterinary Manager
EC	European Commission
FA	Free Area
IAH	Institute for Animal Health, Pirbright
IP	Infected Premise
NEEG	National Emergency Epidemiology Group
NI	Northern Ireland
OIE	Office International des Epizooties
PCR	Polymerase chain reaction
PZ	Protection Zone
RZ	Restricted Zone
SCoFCAH	Standing Committee on Food Chain and Animal Health
SZ	Surveillance Zone

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