



Department  
for Environment,  
Food & Rural Affairs

# UK update – Vector-Borne Disease Priorities

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# VBD's in UK in 2025

## Top 3 concerns

- Bluetongue
- Tick Borne Encephalitis
- West Nile virus

## Other endemic or seasonal diseases:

- Schmallenberg
- Lyme disease (Borrelia)
- Louping Ill
- Usutu virus
- Anaplasmosis
- Rare cases of Tularaemia
- Rare cases of canine babesiosis
- Sheep scab

# UK Top 3 Priority Vector Borne Diseases

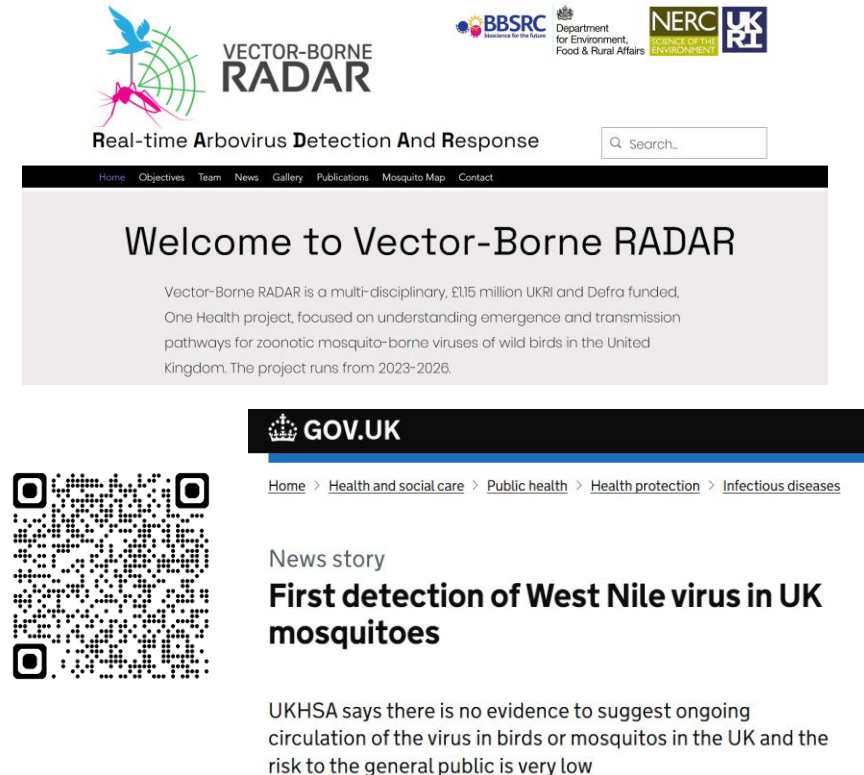
## #1 West Nile Virus:

Passive dead wild bird surveillance tests around 800 birds a year from key species.

Monitoring of breeding sites for bridge vector species (*Culex*, *Aedes*); testing to exclude and passive surveillance of horses; investigation of encephalitis cases in humans and blood testing of donors with travel history.

Research funded by Defra, detected WNV in mosquitos in *Aedes vexans* collected in 2023

The Human Animal Infections and Risk Surveillance (HAIRS) group has a risk assessment which is updated regularly and mosquito control plans for local authorities. [HAIRS risk assessment: West Nile virus - GOV.UK](#)



The image shows two screenshots. The top screenshot is the homepage of the Vector-Borne RADAR website. It features a logo with a blue bird and a pink mosquito, and the text 'VECTOR-BORNE RADAR' and 'Real-time Arbovirus Detection And Response'. There are logos for BBSRC, Department for Environment, Food & Rural Affairs, NERC, and UKRI. A search bar is present. The main heading is 'Welcome to Vector-Borne RADAR'. Below it, a paragraph states: 'Vector-Borne RADAR is a multi-disciplinary, £115 million UKRI and Defra funded, One Health project, focused on understanding emergence and transmission pathways for zoonotic mosquito-borne viruses of wild birds in the United Kingdom. The project runs from 2023-2026.' The bottom screenshot is a GOV.UK news story page. The breadcrumb trail is 'Home > Health and social care > Public health > Health protection > Infectious diseases'. The title is 'First detection of West Nile virus in UK mosquitoes'. The text says: 'UKHSA says there is no evidence to suggest ongoing circulation of the virus in birds or mosquitos in the UK and the risk to the general public is very low'.



# UK Top 3 Priority Diseases

## #2 Bluetongue

Bluetongue-3 is present now (262 cases since September 2024). 1 case of BTV-12. BTV-8 and other strains seen in other countries are also a concern.

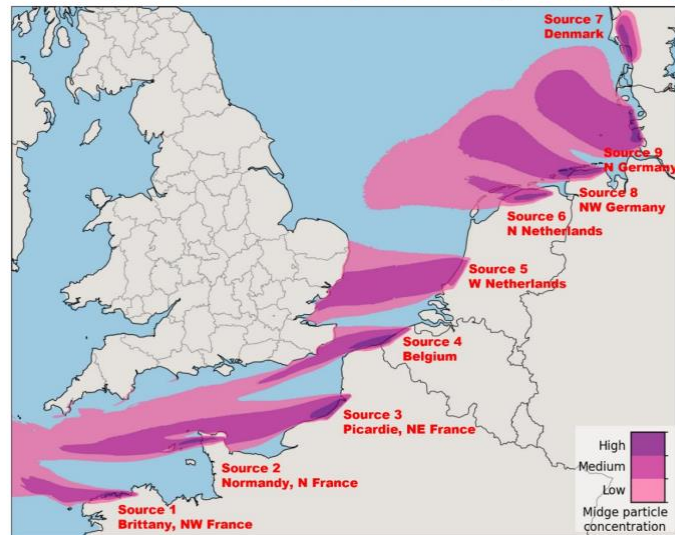
Meteorological modelling for incursion of midges is undertaken twice a day in the season, midge activity and temperature thresholds for EIP inform the risk level.

Restriction zones based on expert epidemiological advice, pre movement testing and post movement testing, voluntary vaccination applied. Interactive map QR code

[Bluetongue: GB disease control strategy - GOV.UK](#)

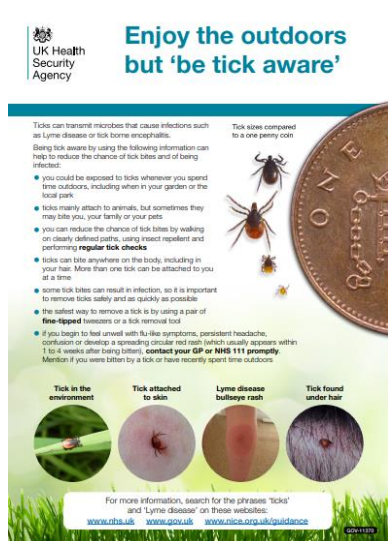
[Bluetongue: news, information and guidance for livestock keepers - GOV.UK](#)

Example output – NOT representative of the NAME output used in this report



# UK Top 3 Priority Diseases

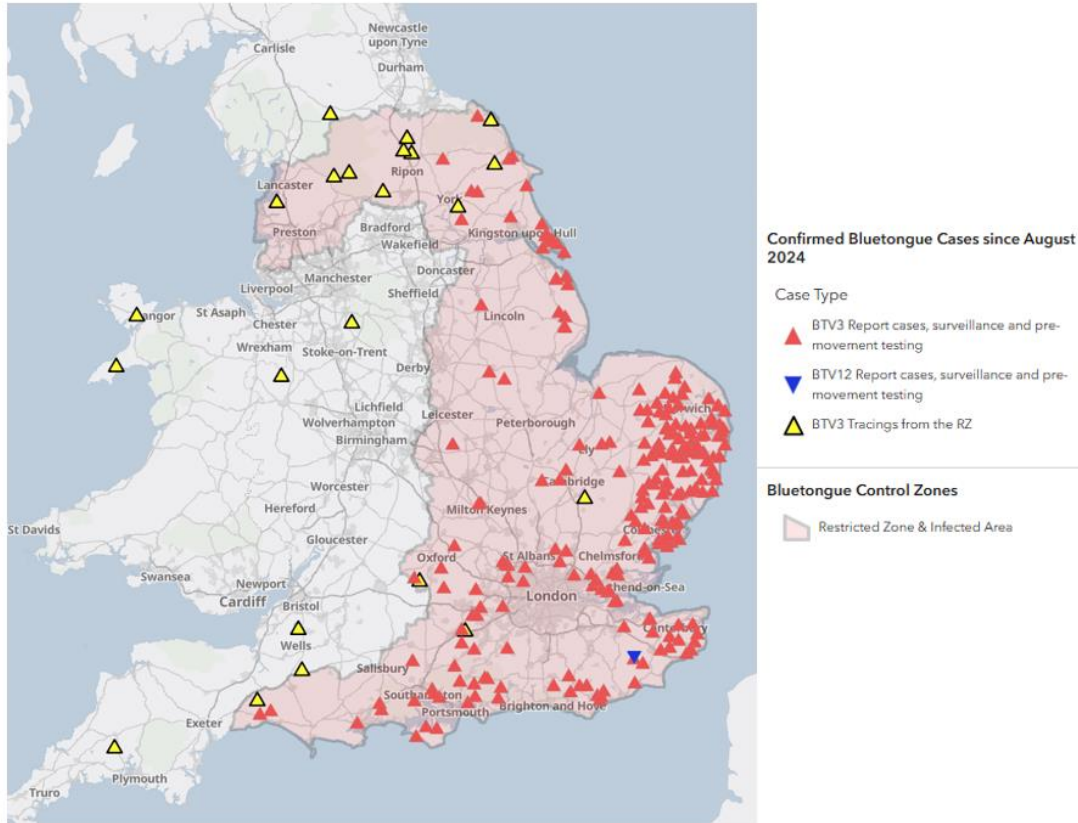
## #3 Tick Borne Diseases



- TBE is an immediate Public Health threat with sporadic human cases occurring following bites of *Ixodes ricinus* ticks. Suitable environmental conditions and very large numbers of potential wild reservoir species in the country small mammals, sheep, deer and cattle). We also see *Anaplasma* spp., *Rickettsia* spp., *Babesia* spp., *Theileria* spp., *Borrelia* spp. and reports of red sheep ticks (*Haemaphysalis*) in S. England.
- No tick control programmes, instead actions are mostly around warning people to avoid tick bites, raw milk warnings, regular testing of animals for louping ill, redwater fever, tick pyaemia and Lyme disease in humans (3000-5000 cases in the UK every year)
- We do provide advice to people at risk and there is a Human Animal Infections and Risk Surveillance (HAIRS) risk assessment undertaken and reviewed regularly.
- 4 cases of probable or confirmed tick-borne encephalitis acquired in England since 2019. Hampshire (2 cases), North Yorkshire and Scotland but the virus has also been detected in ticks and cattle.

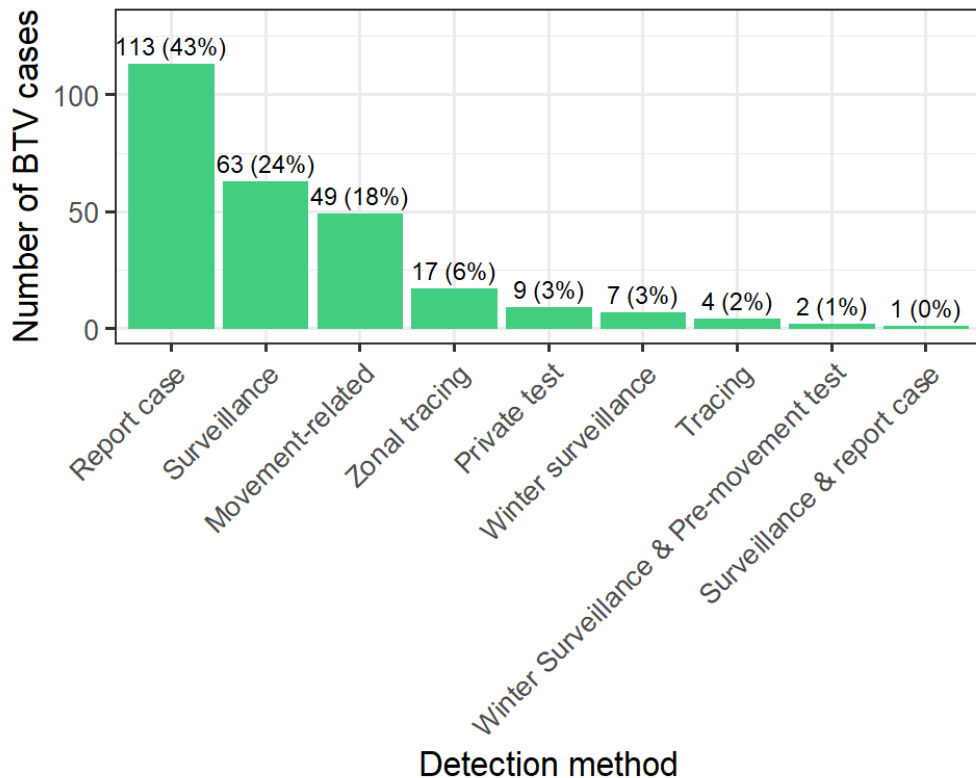


# BTV disease situation, as of 17/06/2025



- Since the 26/08/2024, there have been 263 cases of BTV detected:
  - 262 BTV-3 cases
  - 1 BTV-12 case
- 262 confirmed premises had BTV-3 detected:
  - 260 in England and
  - 2 in Wales (tracings from England).
- One BTV-3 premises had also one animal confirmed infected with BTV-12.
- 904 positive animals detected:
  - 903 animals positive to BTV-3 (814 cattle and 89 sheep) and
  - 1 animal positive to BTV-12 (bovine).

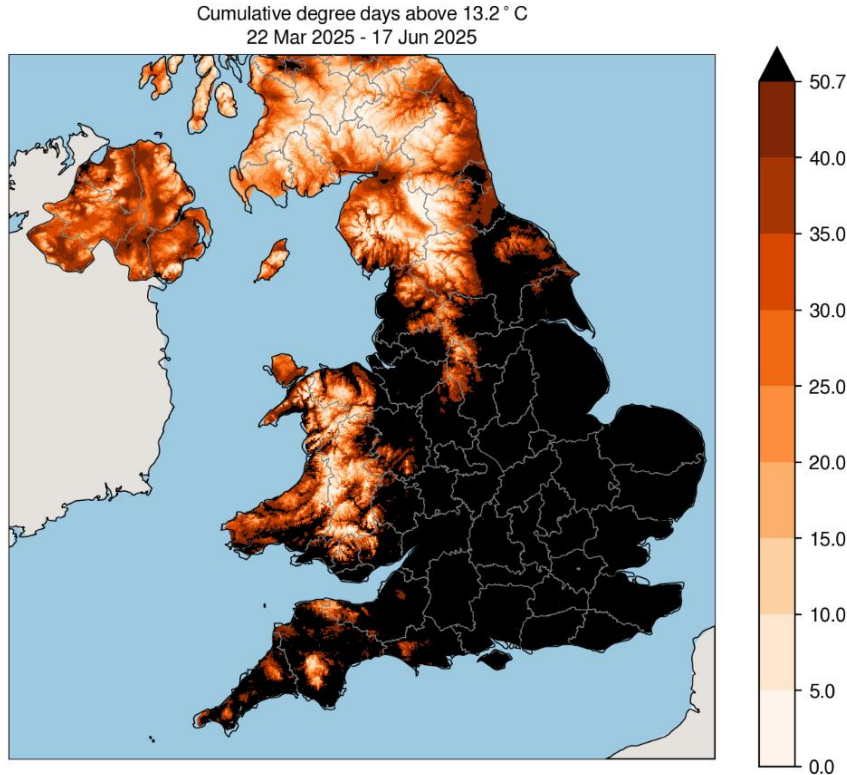
# BTV detection method, as of 17/06/2025



- Nearly half the 265 cases were detected via report cases, followed by surveillance visits.
- The BTV-12 positive animal was detected in a farm in Kent (where other BTV-3 positive animals were also detected), was found as part of the annual BTV Winter Surveillance exercise.



# BTV spread



- The seasonal vector low period ended on 22/03/2025 which means midges are now active and feeding.
- As of the 17th June, the cumulative temperature threshold of 50.7 degree days (above 13.2 °C) for the virus to complete the Extrinsic Incubation Period has been reached in across most lower altitude areas of England and Wales, and in a small number of areas in Scotland and Northern Ireland.
- Areas where the cumulative temperature threshold have been reached by the 17th June are shown in black in the map on the left.



# BTV incursion

Period of assessment	Date of assessment	Overall risk of airborne BTV incursion	Uncertainty around risk of airborne BTV incursion	Risk of airborne EHDV incursion	Uncertainty around risk of airborne EHDV incursion
30th April to 13th May 2025	14/05/2025	Very Low	Moderate	Negligible	Low
14th to 27th May 2025	28/05/2025	Very Low	Moderate	Negligible	Low
28th May to 10th June 2025	11/06/2025	Very Low	Moderate	Negligible	Low

- The overall risk of airborne incursion of infectious BTV-infected midges to GB from any source on the Continent was estimated as “Negligible” up to the 29th April. This means that the risk was low enough to not merit consideration.
- The overall risk of airborne incursion of infectious BTV-infected midges to GB from any source on the Continent has been estimated as “Very Low” for each fortnightly assessment since this point, meaning that it is very unlikely to have occurred but not impossible.
- The overall risk of airborne incursion of infectious EHDV-infected midges to GB from any source on the Continent has never been higher than “Negligible”. This means that the risk was low enough to not merit consideration.
- Updates are published on a fortnightly basis at <https://www.gov.uk/government/publications/risk-assessment-airborne-introduction-of-bluetongue-virus>

# BTV clinical impact study

- 68 BTV positive farms interviewed in three tranches:
  - 7 farms in December 2024
  - 23 farms in Jan/Feb 2025
  - 38 farms in Feb/March 2025
- Mix of sheep and cattle farms, from smallholders to commercial farms.



# Clinical Impacts – summary of study findings

- **Overall severity is low**, though some farms experienced **severe signs or mortality**.
- **Most animals recover**, and only a **small proportion** of animals per farm are affected.
- **Common signs:**
  - **Cattle:** Lethargy, nasal discharge, crusting.
  - **Sheep:** Lethargy, lameness, reluctance to move.
- **Duration:** Typically, under a week, though some signs (e.g., weight loss) last longer.
- **Fertility Impacts**
  - **Cattle:** empty cows, abortions, stillbirths, deformities, neonatal deaths reported on a few farms.
  - **Sheep:** Fewer cases, but similar types of reproductive issues observed.

# BTV modelling

- Previous work modelling the spread of BTV has assumed that this would spread in a similar way to BTV-8 in Great Britain in 2007.
- Work is underway to refit the model to the outbreak last year, which would give us a better idea of the spread of BTV-3.

# BTV Policy – ending of movement controls in England –

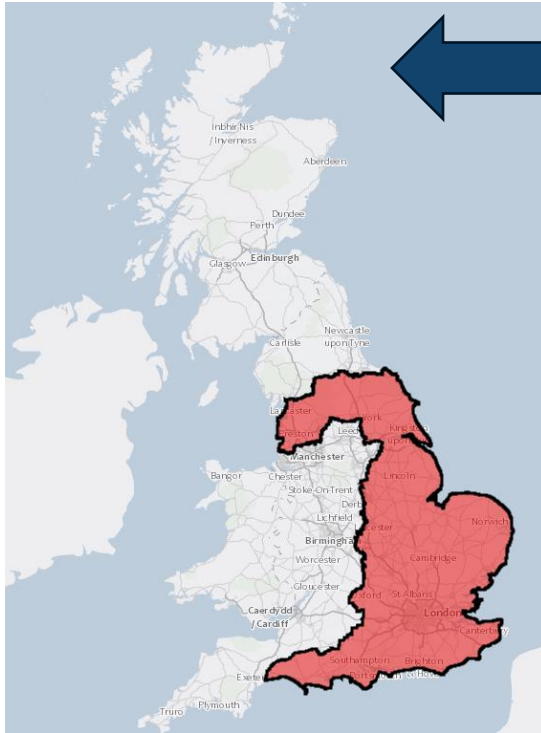
- **On 1 July 2025 the restricted zone for bluetongue will be extended to cover all of England. This means that from this date animals will be able to move anywhere within England without a specific bluetongue licence or test.**
- Our policy approach now is to encourage vaccination - vaccination remains the most effective long-term option for disease control. Keepers are encouraged to discuss BTV-3 vaccination with their vet to determine if it is right for their animals.
- Vaccination must be reported to Defra within 48 hours.
- Further information and all relevant links can be found here:

[Bluetongue: news, information and guidance for livestockkeepers - GOV.UK](#)

# Why is this change being made?

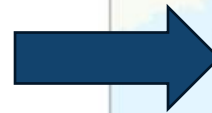
- The area of England where disease has been found is now too large for movement restrictions to remain an effective and proportionate way of controlling the disease.
- Many areas of England are now affected by BTV and safe and effective Bluetongue serotype 3 (BTV-3) vaccines are available.
- Farmers are strongly encouraged to discuss vaccination with their private vet as it is the most effective way to protect livestock from bluetongue.
- Similar approach taken throughout the EU. Enables renewed focus of resources on higher priority disease risks such as Foot and Mouth Disease and African Swine Fever.

# Current Zone & New Zone from 1st July



Current Zone,  
last extended  
on 18th May

All-England  
extension from  
1st July





# UK's needs regarding VBD surveillance and control

- We currently fund a large research consortium on vector borne disease, mostly focussed on mosquito and tick disease, in addition, the Pirbright Institute is funded for work on midge borne infections (BTV, EHD, AHS)
- VBD modelling based on environmental data
- Better understanding of the seasonality and vector free periods and how this affects over-wintering of some of the VBDs
- Vector control measures which don't impact the environment
- We have started to work better in a "One Health" approach with public health, food safety and environmental health colleagues, but we could do better.
- Awareness in the National Health Service (NHS) of VBDs is poor, so data from General Practitioner (GP) practices is difficult to get hold of.



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