

Agency Year-end descriptive epidemiology report: Bovine TB in the Low Risk Area of England

County coverage: Isles of Scilly

Year-end report for: 2019



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#### **Executive summary**

#### **Reporting area**

The Isles of Scilly are part of the Low Risk Area (LRA) that was established in 2013. The following year, the bovine tuberculosis (TB) surveillance strategy for this area was incorporated into the Government's strategy to achieve Officially Tuberculosis Free (OTF) status for England by 2038. Overall the LRA has a very low and stable incidence of infected herds. This end of year report describes bovine TB in the Isles of Scilly.

#### Local cattle industry

The Isles of Scilly are a small archipelago of islands situated 28 miles south west of the Cornish peninsula. In 2019 there were 21 herds (RADAR data) or 22 herds (Sam data) registered, with 314 cattle between them. There is a small amount of trade between the islands (designated Low Risk Area) and the mainland, which is part of the High Risk Area (HRA).

#### New incidents of TB

There have been no reactors, inconclusive reactors or slaughterhouse cases disclosed during the reporting period and in fact none have been recorded in our national database, which goes back to 1996. In other words, the incidence and prevalence of infected herds in the Isles of Scilly has been zero. There have also been no reported cases of *M. bovis* infection in other species.

#### Potential or confirmed TB hotspot areas

There are no active or potential hotspot areas on the Isles of Scilly.

#### **Unusual TB incidents**

There have been no cases of confirmed *M. bovis* infection in any species on the Isles of Scilly during 2019.

#### Suspected sources and risk pathways for TB infection

No TB incidents have occurred and as such no Disease Report Forms have been completed.

#### **Disclosing tests**

Most of the herds are tested every four years and 'temporal smoothing' has been applied to maximise the chances of disease detection (i.e. one quarter of the herds are tested each year). This year, 54 cattle were skin tested in five herd tests.

#### **Reactor numbers**

No reactors have been disclosed on the Isles of Scilly in 2019.

#### **Risks to the reporting area**

The purchase and movement of cattle or other susceptible species remain as the most likely disease risk to the islands. All cattle moving on from the mainland since 1<sup>st</sup> June 2016 have been eligible for post-movement TB testing and, as most travel from the HRA, they will have been subjected to pre-movement testing as well.

#### Risks posed by the reporting area

The Isles of Scilly themselves, pose no risk of disease spread to the mainland.

#### **Forward look**

The Isles of Scilly remain as an area of Official TB Freedom. It is hoped that the very limited livestock movements, along with responsible sourcing of animals from the mainland and the current pre- and post-movement testing arrangements for the few cattle imported into the Isles, will ensure that this situation continues.

#### Introduction

This report describes the level of bovine tuberculosis in cattle herds in the Isles of Scilly in 2019. Bovine TB is caused by the bacterium *Mycobacterium bovis* (*M. bovis*), and will subsequently be referred to as TB. This report explores the frequency and geographical distribution of TB in cattle herds. It examines what is likely to be driving TB in the Isles of Scilly, and the risks the disease in this county may pose to neighbouring cattle. Although other sources may refer to TB 'breakdown(s)', this report will use the term 'incident(s)' throughout. This report is intended for individuals involved in the control of TB, both in the local area and nationally. This includes, but is not limited to: farmers, veterinarians, policy makers and the scientific community. Further information on TB epidemiology can be found in the Explanatory Supplement to the 2019 bovine TB epidemiology report for England (https://www.gov.uk/government/publications/bovine-tb-epidemiology-and-surveillance-in-great-britain-2019).

In 2014, the Government published its Strategy to achieve Officially TB Free (OTF) status for England by 2038. A key action was to recognise the different amount of TB in different parts of the country and to vary the approach to control accordingly. To this end, three management areas were established (Appendix 1). The Isles of Scilly forms part of the LRA. Overall, the LRA has a very low and stable incidence of infected herds. The current strategy seeks to rapidly control infection when it arises through high sensitivity testing of affected herds and temporarily enhanced local surveillance (radial and hotspot testing). Compulsory pre- and post-movement testing of cattle entering the LRA from higher risk areas of the UK is also performed to reduce the risk of TB introduction. The aim is to preserve the favourable disease status of this county so that it can be declared OTF as soon as possible.

#### **Cattle industry**

The Isles of Scilly are a small archipelago of islands situated 28 miles south west of the Cornish peninsula. Five of the islands are populated and they have their own independent council. In 2019 there were 21 herds (using RADAR data) or 22 herds (using Sam data) registered, with 314 cattle between them. There is a small amount of trade between the islands (designated Low Risk Area) and the mainland, which is part of the High Risk Area (HRA). All cattle moving on from the mainland since 1<sup>st</sup> June 2016 have been eligible for post-movement TB testing and, as most travel from the HRA, they will have also been subjected to pre-movement testing.

The cattle herds on these islands are mostly very small. The herd size statistics show that only one herd contains > 50 cattle (Table 1). This is a medium-sized beef herd of just under 100 cattle on the island of Tresco. This minimises the likelihood of acquiring TB infection as size is a known major risk factor. However, the largest mitigating factors are likely to be the previously clear TB history of all cattle herds, the relatively few movements on and the lack of known wildlife reservoirs of *M. bovis* infection on the islands. Rats are ubiquitous on the islands and St Marys (the largest island) has a large number of feral hedgehogs, but there

are no foxes, badgers or other mustelids present. Rabbits, mice and shrews are found on all the islands, but squirrels are absent.

There are no markets, abattoirs or Licensed Finishing Units on the islands. Fat animals are transported by sea to abattoirs on the mainland.

The five inhabited islands provide five distinct epidemiological groups for disease purposes. There were four movements of three bovine animals (cattle) between islands in 2019. Over the same period there were 15 movements of 15 animals from seven different premises onto the Scillies from the HRA part of the mainland. Six of these holdings were in Cornwall and one in Devon.

Table 1: Number of cattle holdings in the Isles of Scilly, by herd size in 2019. (RADAR data)

Herd Size	1-50	51-100	Undetermined	Total
Number of Holdings	20	1	0	21

#### **Descriptive epidemiology of TB**

#### **Temporal TB trends**

There have been no TB incidents from 2014 - 2019 inclusive.

#### **Geographical distribution of TB incidents**

Not applicable. However, Figures 1a and 1b below show the geographical distribution of cattle and cattle herds across the five inhabited islands.



Figure 1a: Total number of cattle on each island.



Figure 1b: Total number of cattle holdings on each island.

#### Other characteristics of TB incidents

There have been no TB incidents on the Isles of Scilly during 2019.

### Suspected sources, risk pathways and key drivers for TB infection

Not applicable.

#### TB in other species

There have been no *M. bovis* isolations in other animal species from the Isles of Scilly during 2019.

#### **Detection of incidents**

Not applicable.

## Skin test reactors and interferon gamma test positive animals removed

Not applicable.

#### Summary of risks to the Isles of Scilly

The major risk to cattle herds on the Isles of Scilly are movements of undetected TB-infected cattle or other in-contact domestic species from the neighbouring HRA mainland. In 2019, there were four movements of three animals between islands. Over the same period there were 15 movements of 15 animals from seven different premises onto the islands from the HRA part of the mainland. Six of these source holdings were in Cornwall and one in Devon. All cattle moved have been both pre- and post-movement tested with negative results. The majority appear to be replacement breeding stock.

There are no required movement records for camelids. Sheep, goat and pig movements have not been analysed for 2019, however, these species are not generally thought to be likely sources of infection for cattle.

Overall, the risk of introducing TB in the Isles of Scilly is low given the small number of cattle moving on and the mitigating factors of both pre- and post- movement testing.

# Summary of risks from the Isles of Scilly to surrounding areas

The risk that the Isles of Scilly poses to the neighbouring HRA county of Cornwall is negligible given that there have been no recorded TB incidents for at least 20 years and the volume of cattle moving off the islands is very low and almost exclusively directly to slaughter. In addition, there is a sea border of at least 28 miles.

# Assessment of effectiveness of controls and forward look

Over the next two years it is highly unlikely that there will be any TB incidents on the Isles of Scilly. This is based on the previous history of at least 20 years of TB freedom, very few cattle movements and an absence of a wildlife reservoir.

The Isles of Scilly have already achieved the potential for OTF status.

#### **Appendices**

#### Appendix 1: overview of risk and surveillance areas of England and Low Risk Area objectives and controls



Figure A1: TB risk and surveillance areas of England effective since January 2018, as set out in the Government's Strategy for Achieving Officially Tuberculosis-Free Status for England. Map based on information published on <u>www.tbhub.co.uk</u>.

#### Policy objectives for the Low Risk Area

Progressive attainment of OTF status for individual counties (or groups of counties) within the current LRA, with the declaration of OTF status for all LRA counties by 2025. For more information about the government's strategy for achieving Officially Bovine Tuberculosis Free status for England, published in 2014 and independently reviewed in 2018, see:

https://www.gov.uk/government/publications/a-strategy-for-achieving-officially-bovinetuberculosis-free-status-for-england

https://www.gov.uk/government/news/government-sets-out-next-phase-of-strategy-tocombat-bovine-tuberculosis

#### Key control measures in the Low Risk Area

Surveillance:

- default four-yearly routine surveillance (skin) testing of cattle herds, with annual testing for a small proportion of high risk herds
- voluntary pre-sale skin check tests
- compulsory pre and post-movement testing for cattle entering farms in the LRA (to live) from the annual or six monthly surveillance areas of England and Wales
- additional targeted surveillance (radial testing) of cattle herds located within a 3km radius of new incident herds with OTF status withdrawn (OTF-W) following the detection of lesion-positive test reactors and/or culture-positive animals
- slaughterhouse (SLH) surveillance (through PM meat inspection) of all cattle slaughtered for human consumption

Management of incidents:

 herd movement restrictions, isolation and rapid slaughter of TB test reactors and any direct contacts with statutory compensation payments to farmers, epidemiological investigation, tracing tests (at severe interpretation), and short interval skin testing supplemented in all herds affected by OTF-W incidents with mandatory interferon gamma (IFN-γ) blood testing

TB controls in the wildlife reservoir (badgers):

- licensed injectable badger vaccination
- licensed badger culling in exceptional circumstances, where *M. bovis* infection has been confirmed in badgers and it has a clear epidemiologically link with a local cluster of TB in cattle (e.g. East Cumbria TB hotspot)

Other measures:

- biosecurity measures
- promotion of responsible sourcing of cattle (e.g. through the use of the ibTB online (www.ibtb.co.uk) mapping application)

#### Summary of enhanced TB control measures in the Isles of Scilly

There have been no additional surveillance measures applied on the Isles of Scilly during 2019.

#### Appendix 2: cattle industry in the Isles of Scilly

Table A2.1: Number of cattle premises by size band in each county at 1 January 2019. (RADAR data)

Size of Herds	Un*	1- 50	51- 100	101- 200	201- 350	351- 500	501 +	Total Number of Herds	Mean Herd Size	Median Herd Size
Number of Herds in Isles of Scilly	0	20	1	0	0	0	0	21	15	10

\*The number of herds with an undetermined size.

Table 72.2. Number of animals by breed purpose in cach county at 1 bandary 2010
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Breed Purpose	Beef	Dairy	Dual purpose	Unknown	Total
Number of Cattle in Isles of Scilly	269 <mark>(</mark> 85%)	18 (5%)	27 (8%)	0	314

#### **Appendix 3: summary of headline cattle TB statistics**

Herd-level statistics	Isles of Scilly
(a) Total number of cattle herds live on Sam at the end of the reporting period	22
(b) Total number of cattle herds subject to annual TB testing (or more frequent) at the end of the reporting period (any reason)	0
(c) Total number of whole herd skin tests carried out at any time in the period	5
(d) Total number of OTF cattle herds having TB whole herd tests during the period for any reason	5
(e) Total number of OTF cattle herds at the end of the report period (i.e. herds not under any type of TB2 restrictions)	22
(f) Total number of cattle herds that were not under restrictions due to an ongoing TB incident at the end of the report period	22
(g) Total number of new TB incidents detected in cattle herds during the report period	0
OTF status suspended (OTF-S)	0
OTF status withdrawn (OTF-W)	0
(h) Of the OTF-W herd incidents:	
<ul> <li>occurred in a holding affected by another OTF-W incident in the previous three years?</li> </ul>	0
<ul> <li>could be considered secondary to a primary incident based on current evidence?</li> </ul>	0
• were triggered by skin test reactors or 2xIRs at routine herd tests?	0
• were triggered by skin test reactors or 2xIRs at other TB test types (forward and back-tracings, contiguous, check tests, post-movement, etc.)?	0

Table A3.1: Herd-level summary statistics for TB in cattle in 2019.

Herd-level statistics	Isles of Scilly
<ul> <li>were first detected through routine slaughterhouse TB surveillance?</li> </ul>	0
(i) Number of new incidents revealed by enhanced TB surveillance (radial testing) conducted around those OTF-W herds	
• OTF-S	0
• OTF-W	0
(j) Number of OTF-W herds still open at the end of the period (including any ongoing OTF-W incidents that began in a previous reporting period)	0
(k) New confirmed (positive <i>M. bovis</i> culture) incidents in non-bovine species detected during the report period (indicate host species involved)	0

Table A3.2: Animal-level summary statistics for TB in cattle in 2019.

Animal-level statistics (cattle)	Isles of Scilly
(a) Total number of cattle tested in the period (animal tests, blood and skin)	54
(b) Reactors detected in tests during the year:	0
tuberculin skin test	0
<ul> <li>additional IFN-γ blood test reactors (skin-test negative or IR animals)</li> </ul>	0
(c) Reactors detected during year per incidents disclosed during year	0
(d) Reactors per 1000 animal tests	0
(e) Additional animals identified for slaughter for TB control reasons (DCs, including any first-time IRs)	0
(f) SLH cases (tuberculous carcases) reported by the Food Standards Agency (FSA) during routine meat inspection	0
(g) SLH cases confirmed by culture of <i>M. bovis</i>	0



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