

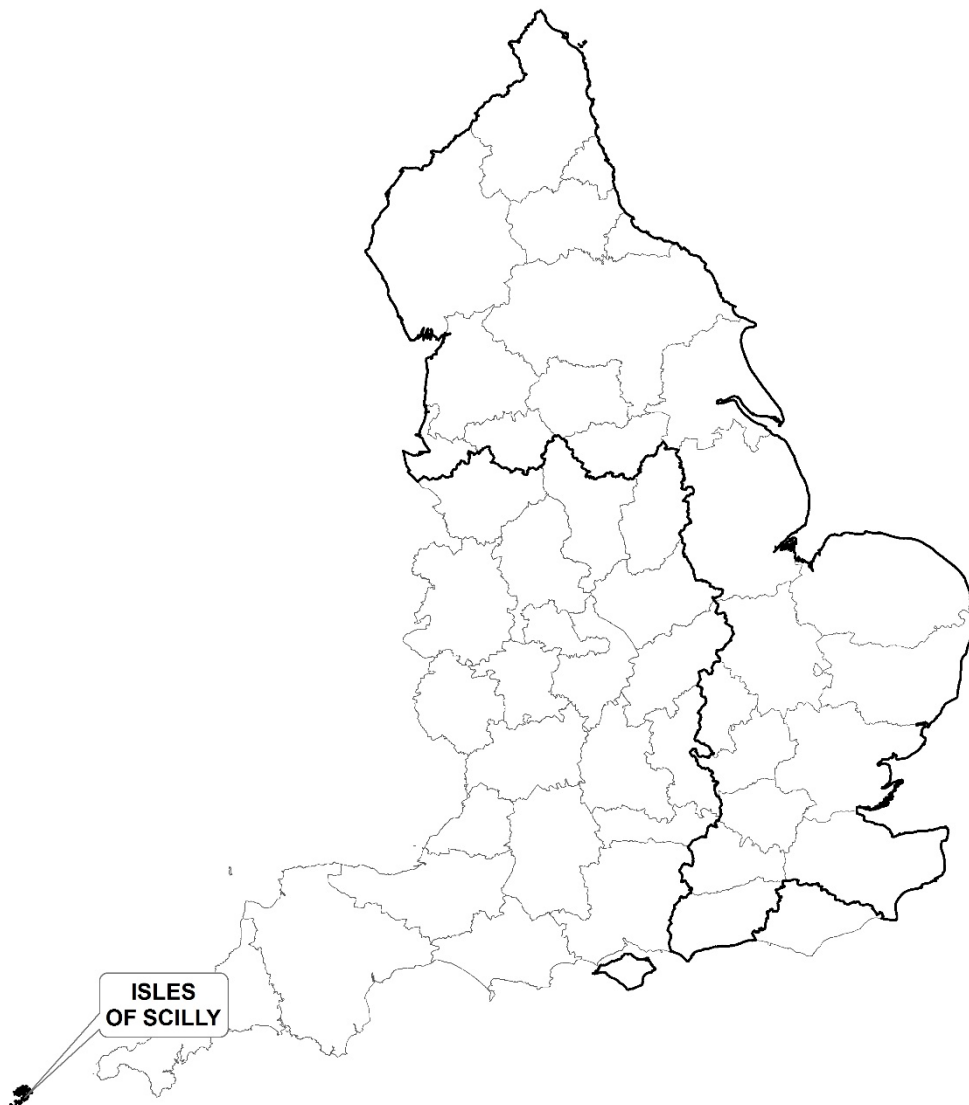


Animal &
Plant Health
Agency

Year-end descriptive epidemiology report: Bovine TB in the Low Risk Area of England County coverage: Isles of Scilly

Year-end report for: 2020

TB Low Risk Area - ISLES OF SCILLY



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Executive summary

Reporting area

The Isles of Scilly is part of the Low Risk Area (LRA) that was established in 2013. This area was later 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 (bTB) in the specified reporting area only.

Local 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 2020 there were 21 herds (RADAR data)/ 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). All cattle moving on from the mainland since 1 April 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.

New incidents of TB

There were no reactors, inconclusive reactors, or slaughterhouse (SLH) cases disclosed during the reporting period and in fact none have ever been recorded in our national database, which goes back to 1996. In other words, the incidence and prevalence of infected herds on the Isles of Scilly has been zero. There have also been no reported incidents 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 were no incidents of confirmed *M. bovis* infection in any species on the Isles of Scilly during 2020.

Suspected sources and risk pathways for TB infection

No TB incidents occurred and as such no Disease Report Forms were completed in 2020.

Disclosing tests

There have been no reactors disclosed by testing on the Isles of Scilly in 2020.

Reactor numbers

No reactors were disclosed on the Isles of Scilly in 2020.

Risks to the reporting area

The purchase and movement of cattle or other susceptible species from the mainland continue to pose the most likely disease risk to the islands.

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 a bovine TB free area. It is hoped that the current pre- and post-movement testing arrangements, along with very limited livestock movements, will ensure that this situation continues.

Introduction

This report describes the level of bovine tuberculosis in cattle herds in the Isles of Scilly in 2020. Bovine tuberculosis is caused by the bacterium *Mycobacterium bovis* (*M. bovis*) and will subsequently be referred to as TB. This report explores the spatial and temporal distribution of TB in cattle herds. It examines what is likely to be driving TB in this area, and the risks the disease in this area 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.

In 2014 the Government published its Strategy to achieve Officially Bovine Tuberculosis Free (OTF) status for England by 2038. A key action was to recognise the different levels of TB in different parts of the country and to vary the approach to control accordingly. To this end three management areas were established (see Appendix 1). The Isles of Scilly forms part of the Low Risk Area (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). Mandatory 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 area so that its counties can be declared OTF as soon as possible.

Changes due to COVID-19

During 2020, public health measures adopted by the government to contain the COVID-19 outbreak impacted the ability to carry out some TB testing due to social distancing and self-isolation guidelines, affecting both veterinarians and farmers. In particular, from 23 March 2020, routine or targeted TB skin tests were not mandatory for cattle under 180 days old where, in the official veterinarian's judgement, the young stock could not be tested safely in line with social distancing guidelines. The temporary amendment allowing calves under 180 days old to be excluded from TB testing did not apply to short interval tests in TB incident herds (required to restore a herd's OTF status) or pre- and post-movement testing.

Routine TB skin tests are required within a pre-defined window of time to maintain a herds OTF status. From 23 March 2020, for tests that were allocated until 30 June 2020, the Animal and Plant Health Agency (APHA) permitted an extension to the TB skin testing windows on a case-by-case basis, where testing had not been completed due to valid reasons associated with COVID-19. The testing window for short interval tests was also extended by up to 30 days, where tests were unable to be completed due to COVID-19.

Furthermore, on-farm epidemiological assessments carried out to establish the route of infection for a TB incident herd were carried out remotely, by telephone, for the majority of 2020.

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 2020 there were 21 herds (using RADAR data)/ 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 HRA. All cattle moving on from the mainland since 1 April 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 too.

The cattle herds on these islands are mostly very small. The herd size statistics show that only one herd contains > 50 cattle. 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 Mary's (the largest island) has many feral hedgehogs, but there are no deer, 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 (LFUs) 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 two animals between islands in 2020. These were both breeding bulls. Over the same period there were seven movements of seven animals from five different premises onto the Scillies from the HRA part of the mainland. Four of these source holdings were in Cornwall and one in Devon.

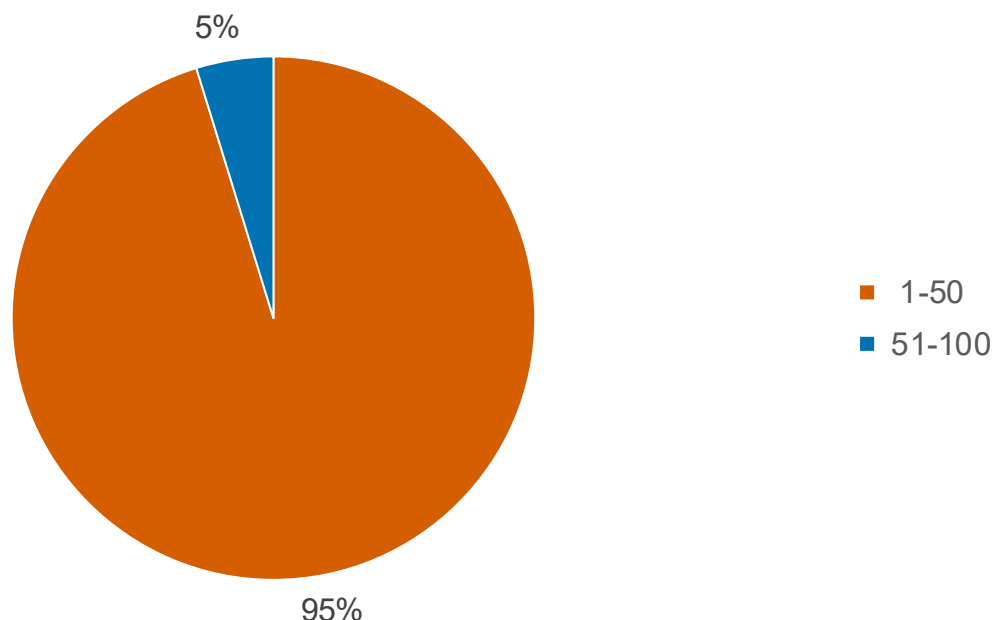


Figure 1: Proportion of cattle holdings in the Isles of Scilly, by herd size in 2020 (n=21).

Descriptive epidemiology of TB

Temporal TB trends

Unless otherwise specified, this report includes all new TB incidents detected during the reporting period. This includes 'officially tuberculosis free status withdrawn' (OTF-W) incidents and 'officially tuberculosis free status suspended' (OTF-S) incidents. OTF-W incidents are those involving one or more test reactors with typical lesions of TB identified at post-mortem, and/or one or more animals with *M. bovis*-positive culture results from tissue samples. OTF-S incidents are triggered by reactors to the Single Intradermal Comparative Cervical Tuberculin (SICCT) skin test, but without subsequent detection of lesions or positive culture results in any of those animals.

There were no TB incidents between 2014 and 2020.

Geographical distribution of TB incidents

Not applicable. However, Figure 2 below shows the geographical distribution of cattle herds across the five inhabited islands.

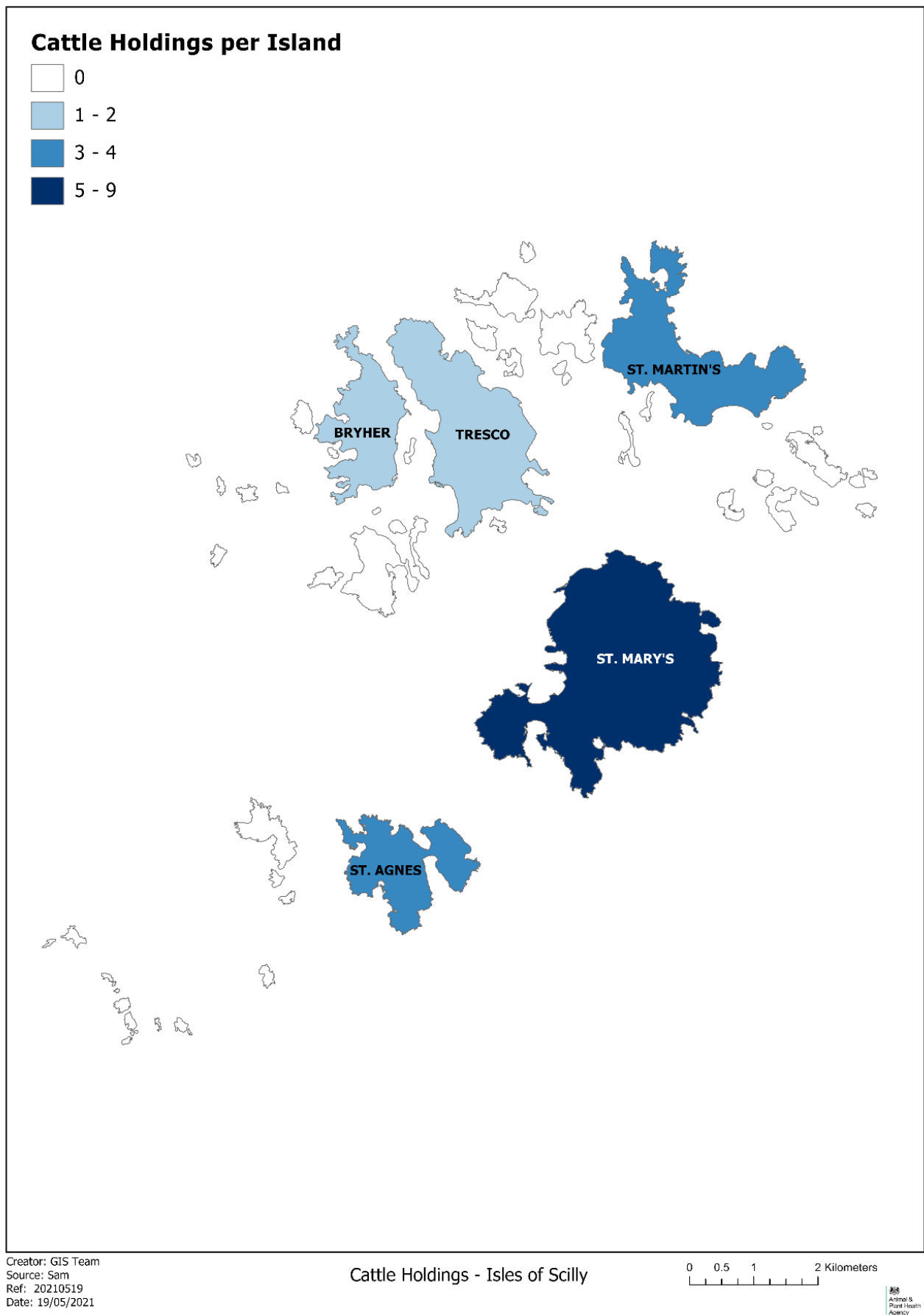


Figure 2: Location of cattle holdings in the Isles of Scilly.

Suspected sources and risk pathways for TB infection

There were no TB incidents on the Isles of Scilly during 2020.

Suspected sources, risk pathways and key drivers for TB infection

Not applicable.

TB in other species

There were no *M. bovis* isolations in other animal species from the Isles of Scilly during 2020.

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 cattle or other in-contact domestic species from the neighbouring HRA mainland. In 2020, there were four movements of two animals between islands. Over the same period there were seven movements of seven animals onto the islands from five different premises in the HRA part of the mainland (compared with 15 animals from seven HRA holdings in 2019). Four of these source holdings were in Cornwall and one in Devon. All cattle moved are subject to both pre- and post-movement testing. The majority appear to be replacement breeding stock or breeding bulls.

There are no required movement records for camelids. Sheep, goat, and pig movements have not been analysed for 2020, however, these species are not generally thought to be likely sources of infection for cattle.

Overall, the level of risk 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 direct to slaughter. In addition, there is a sea border of at least 28 miles.

Assessment of effectiveness of controls and forward look

Effectiveness of controls

To date, controls appear to be very effective in preventing TB occurrence on the Isles of Scilly.

Forward look

Over the next two years it is highly likely that there will be no 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

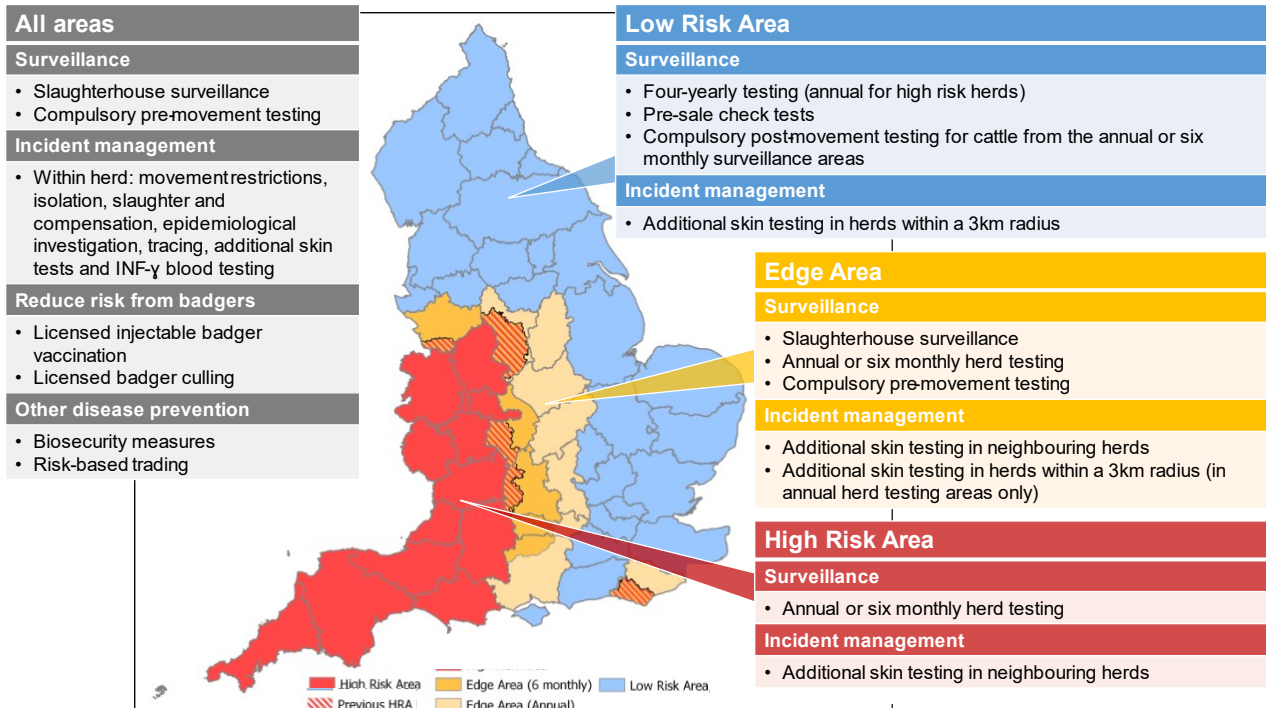


Figure A1: TB risk and surveillance areas of England effective since January 2018, as set out in the Government’s Strategy for Achieving Officially Tuberculosis-Free Status for England. The map is described in more detail in the Explanatory Supplement for England 2020 (<https://www.gov.uk/government/publications/bovine-tb-epidemiology-and-surveillance-in-great-britain-2020>).

Policy objectives for the LRA

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-bovine-tuberculosis-free-status-for-england>

<https://www.gov.uk/government/news/government-sets-out-next-phase-of-strategy-to-combat-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 this reporting area

Not applicable.

Appendix 2: Cattle industry in the reporting area

Table A2.1 Number of cattle premises by size band in each county at 1 January 2020.
(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	0	20	1	0	0	0	0	21	15	10

*The number of herds with an undetermined size.

Table A2.2 Number of animals by breed purpose in each county at 1 January 2020.

Breed purpose	Beef	Dairy	Dual purpose	Unknown	Total
Number of cattle	269 (85%)	18 (5%)	27 (8%)	0	314

Appendix 3: Summary of headline cattle TB statistics

Table A3.1 Herd-level summary statistics for TB in cattle in 2020.

Herd-level statistics	2018	2019	2020
(a) Total number of cattle herds live on Sam at the end of the reporting period	22	22	22
(b) Total number of cattle herds subject to annual TB testing (or more frequent) at the end of the reporting period (any reason)	1	0	0
(c) Total number of whole herd skin tests carried out at any time in the period	7	5	4
(d) Total number of OTF cattle herds having TB whole herd tests during the period for any reason	7	5	4
(e) Total number of OTF cattle herds at the end of the report period (i.e. herds not under any type of TB2 restrictions)	21	22	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	22	22
(g) Total number of new TB incidents detected in cattle herds during the report period	0	0	0
<ul style="list-style-type: none"> OTF status suspended (OTF-S) 	0	0	0
<ul style="list-style-type: none"> OTF status withdrawn (OTF-W) 	0	0	0
(h) Of the new OTF-W herd incidents, how many:	N/A	N/A	N/A
<ul style="list-style-type: none"> occurred in a holding affected by another OTF-W incident in the previous three years? 			
<ul style="list-style-type: none"> could be considered secondary to a primary incident based on current evidence? 			

Herd-level statistics	2018	2019	2020
<ul style="list-style-type: none"> • were triggered by skin test reactors or 2xIRs at routine herd tests? 			
<ul style="list-style-type: none"> • were triggered by skin test reactors or 2xIRs at other TB test types (forward and back-tracings, contiguous, check tests, post-movement, etc.)? 			
<ul style="list-style-type: none"> • were first detected through routine slaughterhouse TB surveillance? 			
(i) Number of new incidents revealed by enhanced TB surveillance (radial testing) conducted around those OTF-W herds	N/A	N/A	N/A
<ul style="list-style-type: none"> • OTF-S 			
<ul style="list-style-type: none"> • OTF-W 			
(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	0	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	0	0

Table A3.2 Animal-level summary statistics for TB in cattle in 2020.

Animal-level statistics (cattle)	2018	2019	2020
(a) Total number of cattle tested in the period (animal tests, blood, and skin)	154	54	55
(b) Reactors detected in tests during the year:			
• tuberculin skin test	0	0	0
• additional IFN- γ blood test reactors (skin-test negative or IR animals)	0	0	0
(c) Reactors detected during year per incidents disclosed during year	0	0	0
(d) Reactors per 1,000 animal tests	0	0	0
(e) Additional animals identified for slaughter for TB control reasons (DCs, including any first-time IRs)			
• DCs, including any first-time IRs	0	0	0
• Private slaughters	0	0	0
(f) SLH cases (tuberculous carcasses) reported by the Food Standards Agency (FSA) during routine meat inspection.	0	0	0
(g) SLH cases confirmed by culture of <i>M. bovis</i>	0	0	0

Note: (c) Reactors detected during year per incidents disclosed during year, reactors may be from incidents disclosed in earlier years, as any found through testing during the report year count here.

Note: (g) SLH cases confirmed by culture of *M. bovis*, not all cases reported are submitted for culture analysis. All cases reported are from any period prior to or during restrictions.



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