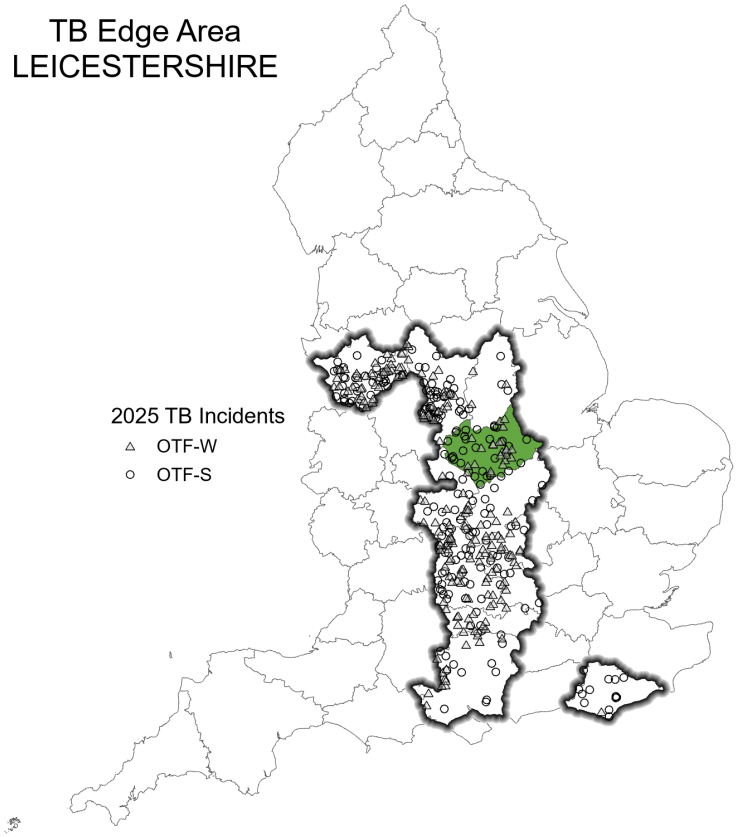
Animal &
Plant Health
Agency

Focus Edge Area County Epidemiology Report of Bovine TB in 2025: Leicestershire



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Introduction

This Focus County report describes the frequency and geographical distribution of TB in 2025 in cattle herds in Leicestershire, which is part of the Edge Area of England.

This report is intended for those involved in the control of TB, both locally and nationally. This includes, but it is not limited to:

- cattle farmers
- private veterinarians
- government
- policy makers
- the scientific community

Leicestershire was chosen as a Focus County of the Edge Area in 2025 due to a combination of emerging epidemiological concerns and gaps in current surveillance detail. Reported incidents have increased steadily over recent years, rising from 35 in 2023 to 43 in 2024 and 50 in 2025, indicating an upward trend that warrants closer examination. The presence of multiple whole genome sequence (WGS) clades of Mycobacterium bovis (M. bovis) detected in cattle in the county also warranted further analysis. In addition, the county operates with a mixed TB surveillance testing regime, with 6-monthly testing limited to the one Hotspot area in the north-east of the county (Hotspot 23, HS23), while herds in the remainder of the county are subject to annual testing, this variation may contribute to inconsistencies in detection and understanding of disease spread. Finally, previous annual TB epidemiological reporting for Leicestershire highlighted the need for a more comprehensive and in-depth analysis at this stage.

These factors are explored in detail in this report by identifying and investigating long term trends in different epidemiological indicators of TB, highlighting any geographical areas of concern and making recommendations on TB control strategies.

Details of the data handling methodology used in this report, a glossary of terms, and the TB control measures for Great Britain can be found in the explanatory supplement for the annual reports 2025.

Classification of TB incidents

Unless otherwise specified, this report includes all new TB incidents detected during the reporting period (1 January to 31 December 2025). This includes both ‘Officially Tuberculosis-Free Status Withdrawn’ (OTF-W) and ‘Officially Tuberculosis-Free Status Suspended’ (OTF-S) incidents.

OTF-W incidents are those involving the detection in the affected herd of at least:

- one reactor (positive animal) to the Single Intradermal Comparative Cervical Tuberculin (SICCT) test, or a positive animal to the supplementary interferon gamma (IFN-γ) blood test, with typical lesions of TB identified at post-mortem (PM) meat inspection, or
- one animal (such as a skin test reactor, IFN-γ test-positive animal, or slaughterhouse case) with M. bovis-positive polymerase chain reaction (PCR) test or bacteriological culture results in tissue samples collected from carcases during the PM inspection

OTF-S incidents are triggered by reactors to the skin test (or IFN-γ test-positive animals), but without subsequent detection of TB lesions or positive PCR test (or culture) results in any of those animals.

Incidents on Approved Finishing Units (AFUs) have been excluded from the figures and statistical parameters presented in this report due to the limited epidemiological impact of any TB detections in such units. This exclusion may generate small discrepancies with incident numbers found in previous annual reports.

Cattle industry

There were 889 cattle herds registered (in Sam) in Leicestershire at the end of the year (31 December) as summarised in Appendix 1 and 2.

Sam includes herd type and herd size, with size based on a herd's most recent test or when the herd was first registered. In this report herd size is generated for a point in time (31 December) from the number of on and off movements of cattle in the Cattle Tracing system (CTS) data accessible via the RADAR data warehouse.

Further details on the data sources used in these reports can be found in the explanatory supplement for the annual reports 2025.

Appendix 2 provides a summary of headline cattle TB statistics in Leicestershire.

There was one livestock market for cattle in Leicestershire at Melton Mowbray in 2025 approved by APHA to hold slaughter gatherings of cattle from OTF herds that are eligible for, but have not been subjected to, pre-movement TB testing (known as 'TB pre-movement testing-exempt' markets).

In Leicestershire there were 9 AFUs active during 2025, a reduction of 3 from 2024. No new incidents were reported in those AFUs, but one ongoing incident from a previous year in an AFU was resolved in 2025, and 3 incidents were ongoing in Leicestershire AFUs at the end of the year.

In 2025 there were 702 beef herds, 140 dairy herds, and 31 other herds active on the 31 December (Appendix 1, Table 2).

Over the past decade in Leicestershire, the number of beef herds in the smallest size categories (1 to 50, 51 to 100, 101 to 201 animals) has steadily declined. Despite

this reduction, smaller herds of 1 to 50 animals continue to represent the most common type of beef enterprise in the county. Larger beef herds (>201 animals) have consistently been less frequent, yet their numbers have remained relatively stable over the same period (Figure 1).

In contrast, dairy enterprises in Leicestershire are typically larger than beef enterprises, with herds of more than 201 to 350 animals most frequent. The number of dairy herds has also remained consistent over the last 10 years (Figure 1).

The number of herds in the ‘Other’ production type category have remained few in number and consistent over time (Appendix 1, Table 2). This category includes a range of herd types not limited to mixed herds, dealers, specialist breeders and non-standard holdings.

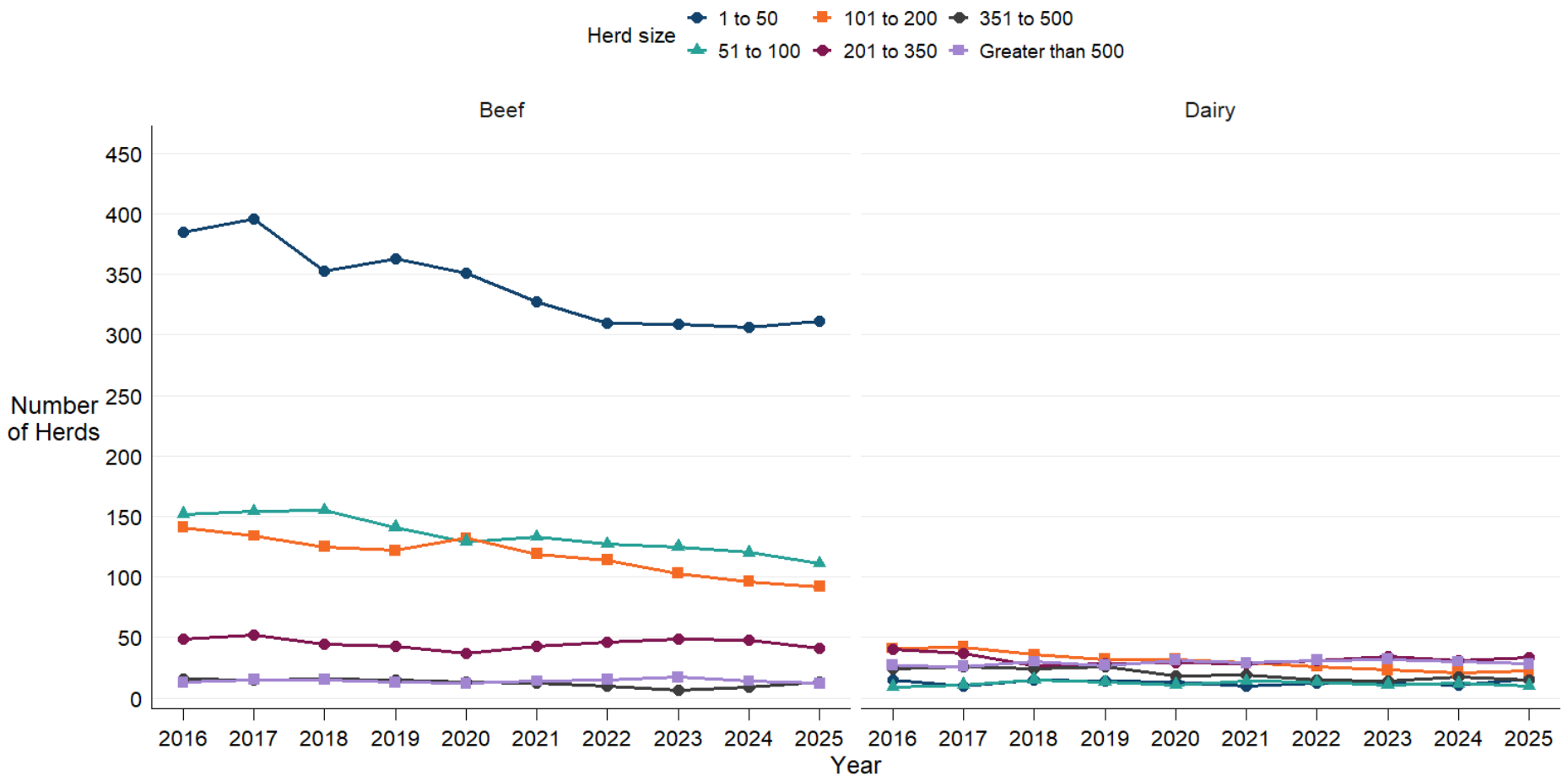


Figure 1: Number of herds with ≥1 animal on the last day of the reporting year in Leicestershire by herd size and herd type (dairy and beef), between 2016 to 2025.

Number of new TB incidents

In 2025, 50 new TB herd incidents were declared in the whole county, 23 OTF-W and 27 OTF-S, an increase of 7 (16%) compared to 2024 (22 OTF-W and 21 OTF-S) (Figure 2). In September 2024, the boundary of TB hotspot 23 (spanning north-east Leicestershire) was revised, bringing cattle herds within this area onto a 6-monthly testing regime (with radial testing within the hotspot ceasing at the same time). This marked the first instance of any part of Leicestershire being subject to regular 6-monthly testing, and the increased surveillance frequency is may have contributed, at least in part, to the rise in incidents disclosed since that point.

The proportion of new OTF-W incidents in Leicestershire in 2025 was similar to previous years (46%). The annual number of OTF-W incidents increased steadily from 17 in 2016 to 33 in 2020, then halved to 14 in 2021, followed by an increase to 20 in 2022. There was a large drop to 7 OTF-W incidents in 2023, then an increase to 22 in 2024 and 23 in 2025.

The annual number of new OTF-S incidents fluctuated between 25 and 27 from 2016 to 2020 and then climbed to a peak of 40 incidents in 2021. The number of new OTF-S incidents then steadily declined to 21 in 2024, before rising again to 27 in 2025.

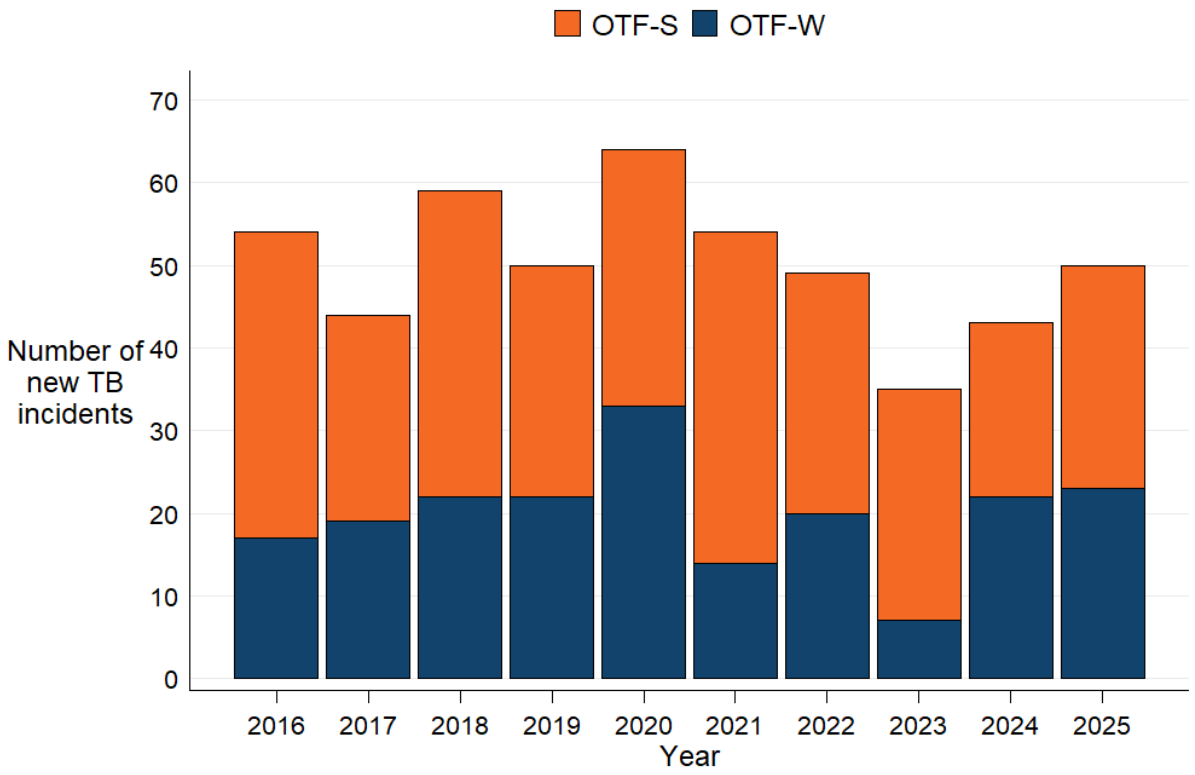


Figure 2: Annual number of new TB incidents in Leicestershire, from 2016 to 2025.

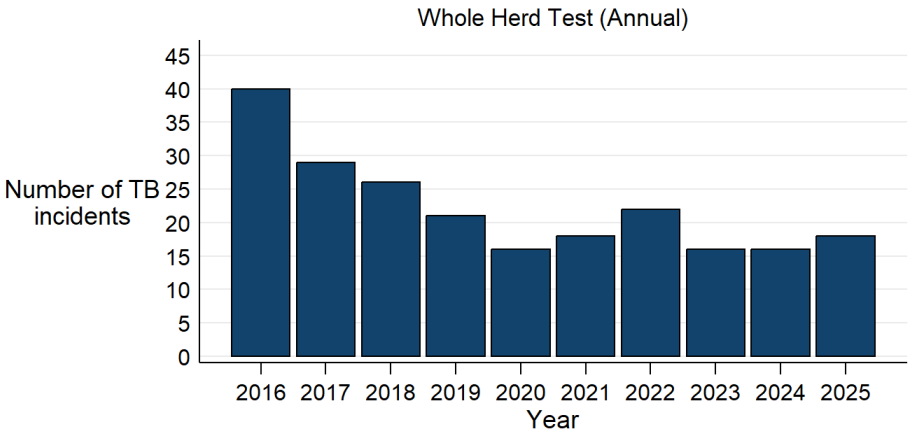
Disclosing TB surveillance method

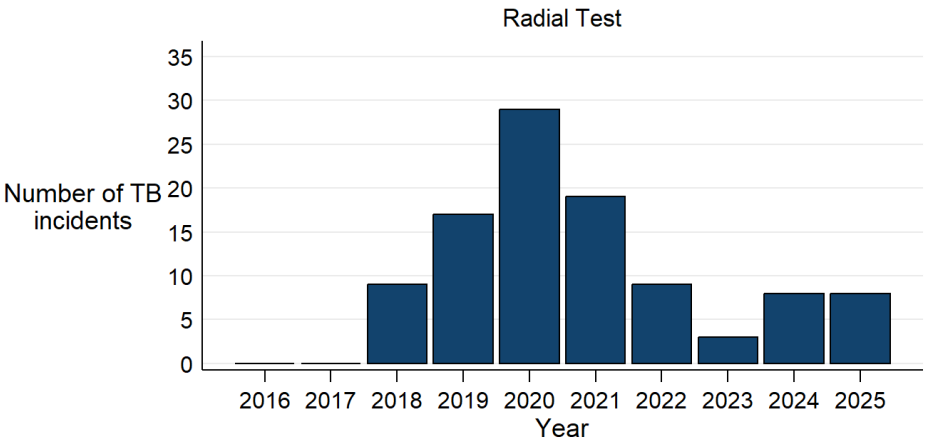
Over the 10-year period from 2016 to 2025, annual whole herd testing typically detected the greatest proportion of new TB incidents in Leicestershire (18, 36% of the 50 incidents that began in 2025) (Figure 3). This was followed by radial (RAD) testing (8, 16%), which has detected a large proportion of incidents each year since 2018. Five incidents (10%) were detected by enhanced TB surveillance testing in the TB hotspot area in 2025 (referred to as 'Hotspot testing'). When considering these figures, it should be remembered that Hotspot testing increased in frequency from 12-monthly to 6-monthly in September 2024, and that radial testing within TB Hotspot 23 ceased at the same time.

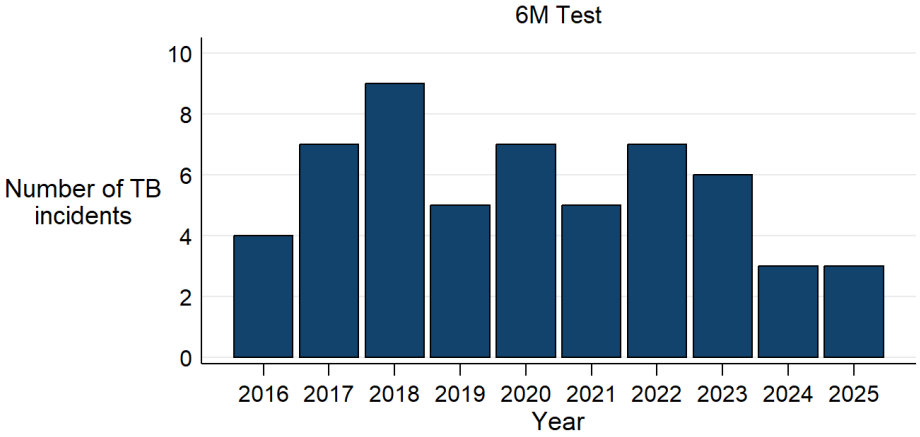
Three incidents in 2025 were detected by 6-monthly (post-incident) herd testing (6M tests). With 2024, this was the joint lowest number of incidents disclosed on 6M tests in Leicestershire since 2016. This is a reduction from 6 in 2023 and 7 in 2022. This reflects that in recent years, fewer herds that have resolved a TB incident are recrudescing 6 months later. This is consistent with the relatively low recurrence rate in the county (see 'Recurrent TB Incidents' below).

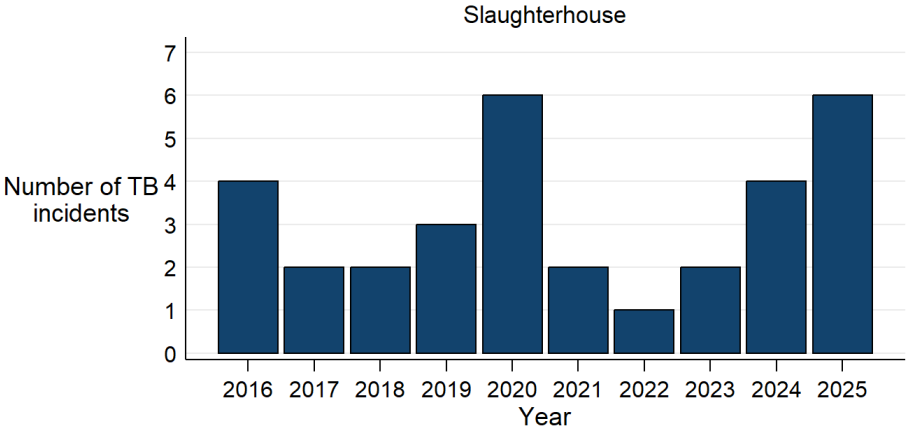
The identification of 10 incidents shown under 'Other' through additional testing routes, including pre-movement herd testing (3), contiguous testing (3) and check testing (1), demonstrates the clear value of these measures beyond the routine whole herd test. These supplementary tests provide a highly effective, proportionate means of enhancing detection and strengthening overall disease surveillance. Additionally, 2 incidents were detected by 6-month whole herd tests and a further one was detected by 'other' tests which includes, but is not limited to, private testing, inconclusive reactor (IR) retests, and export tests.

Slaughterhouse surveillance detected 6 (12%) new TB incidents in 2025 and is explored further in the section below. This detected the highest number of incidents in the county since 2020.


Whole Herd Test (Annual)
Number of TB incidents
0
5
10
15
20
25
30
35
40
45
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
Year


Radial Test
Number of TB incidents
0
5
10
15
20
25
30
35
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
Year


6M Test
Number of TB incidents
0
2
4
6
8
10
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
Year


Slaughterhouse
Number of TB incidents
0
1
2
3
4
5
6
7
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
Year

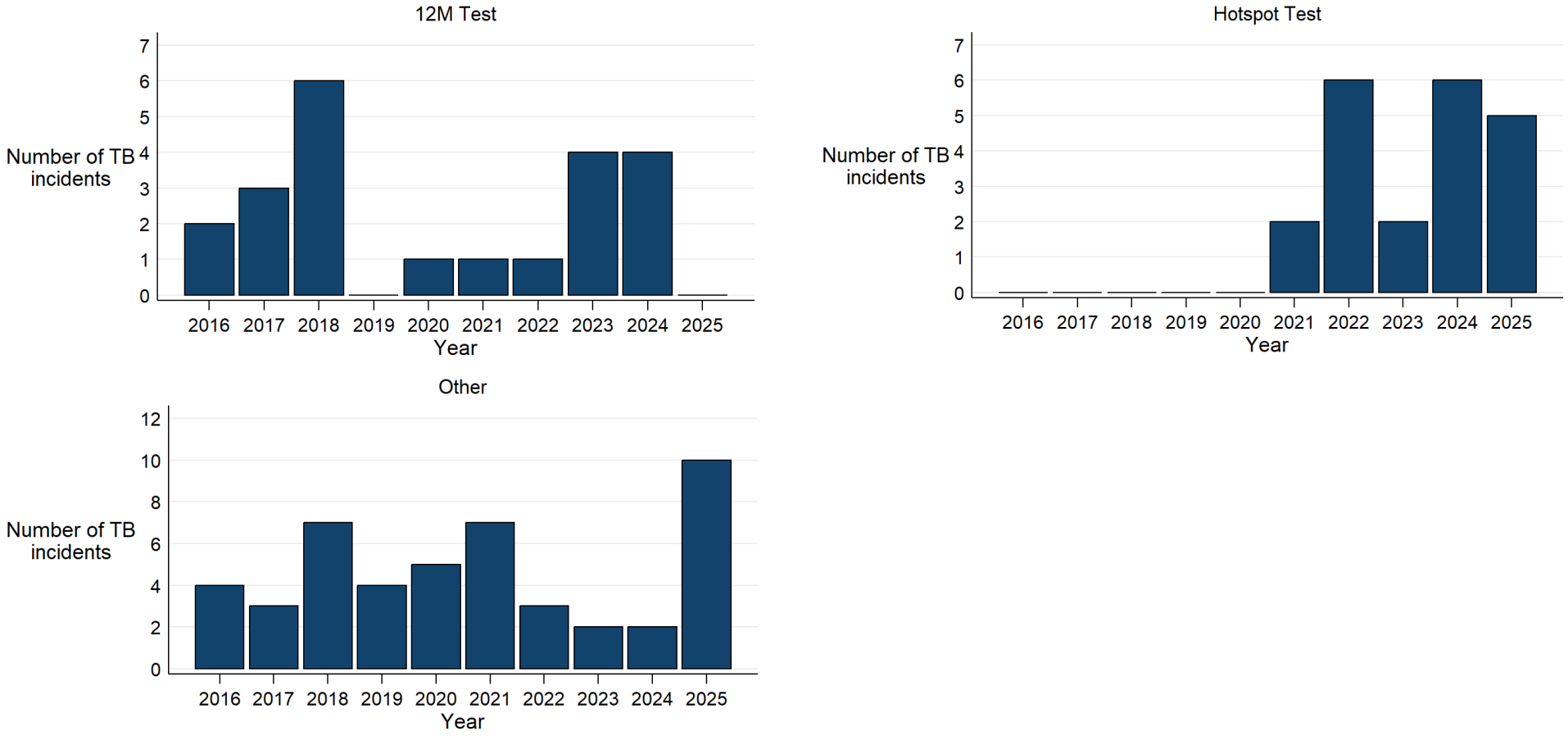


Figure 3: Bar charts showing number of TB incidents per disclosing test type or surveillance stream per year between 2016 and 2025. Categories with less than or equal to 5 incidents per year (namely, new herd check tests, check tests, tracing tests, pre-movement tests, contiguous tests, and 6-monthly whole herd tests) are included in the 'Other' category.

Slaughterhouse surveillance

In 2025, there were 9 non-reactor cattle from 6 OTF herds with suspected tuberculous lesions detected at post-mortem meat inspection (PMMI), during commercial slaughter, and from which tissue samples were submitted to APHA for laboratory testing.

Of these 9 submissions in 2025, 6 (67%) were positive for M. bovis on real-time polymerase chain reaction (PCR) or culture at APHA laboratories, the joint highest proportion of positive submissions in the last decade. Since 2016, the total number of cattle with suspected tuberculous lesions detected at PMMI from OTF herds ranged between 5 and 12. The annual proportion of M. bovis positive slaughterhouse case submissions from OTF herds in Leicestershire fluctuated over the last decade, decreasing from 57% in 2016 to 22% in 2017 before increasing to 60% in 2019. This was followed by a steady decrease to 14% in 2022 then increased to 67% in both 2024 and 2025.

These slaughterhouse surveillance detections from OTF herds resulted in a total of 6 new OTF-W TB incidents in Leicestershire in 2025, accounting for 12% of all new TB incidents in 2025, which was similar to previous years. The number of new incidents resulting from detection of TB lesions at PMMI highlights the importance of slaughterhouse surveillance. The tuberculin skin test, despite being the internationally recognised gold standard for ante mortem diagnosis of TB, has an imperfect sensitivity and is performed at set intervals (specific time points), and so will not detect all infected cattle tested. Thus, ongoing TB surveillance at the slaughterhouse between skin herd tests, carried out by meat inspectors under the supervision of official abattoir veterinarians, act as a critical backstop in the detection and eradication of TB.

Three further slaughterhouse case submissions were received from 2 herds already under TB incident restrictions in 2025. Since 2016, the annual number of cattle with suspected tuberculosis lesions detected at PMMI from herds already experiencing a TB incident ranged between 0 and 4. In 2025, all 3 cattle were positive for M. bovis on PCR or culture, which was similar to previous years as the numbers ranged from 0 to 3 over the last decade.

Duration of TB incidents

Of the 53 TB incidents that were resolved in Leicestershire in 2025, 28 had started in 2025, 24 in 2024 and 1 in 2023. This was an increase from 42 the previous year. None of those herd incidents resolved in 2025 were categorised as persistent (lasted more than 550 days), compared to one persistent incident that resolved in 2024.

Of those 53 incidents, 23 were OTF-W. Three of those were resolved within 101 to 150 days, 14 were resolved within 151 to 240 days, and 6 incidents lasted between 241 and 550 days (Figure 4).

Of the 30 OTF-S incidents that ended in 2025, 6 were resolved within 151 to 240 days, 17 within 151 to 240 days, and 7 lasted between 241 and 550 days.

There were 24 incidents ongoing at the end of 2025, of which 22 began in 2025 and 2 in 2024. None of those incidents were persistent at that time. This was a slight decrease compared to 2024 with 27 ongoing incidents, none of which were persistent.

Figure 4 shows the 5-year trend in the duration of TB incidents that were resolved in Leicestershire each year. The median duration decreased from 206 days in 2021 to 179.5 days in 2022, then increased thereafter to 192.5 days and 197.5 days in 2023 and 2024, respectively, before decreasing to 186 days (interquartile range = 154 to 239) in 2025.

In 2025, Leicestershire had the second lowest median duration in the 11 Edge Area counties. This median duration was higher than 2 of the 11 High Risk Area (HRA) counties. The median duration presented in previous years may differ in this report as AFUs have been excluded from the data in this report.

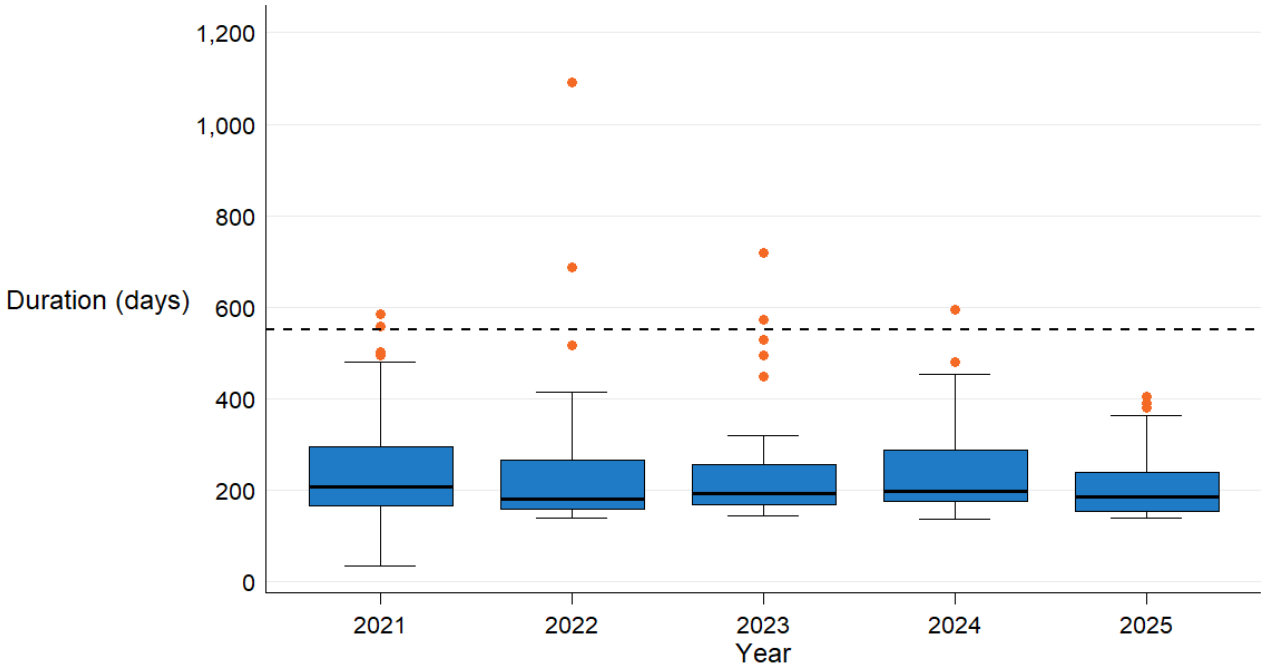


Figure 4: Box plots showing the duration of resolved TB incidents in days by year (2021 to 2025).

Figure 4 description: In each boxplot, the central line represents the median duration. The lower and upper boundaries of the box correspond to the 25th percentile (January to March) and 75th percentile (July to September), respectively, thereby capturing the interquartile range (IQR). The whiskers extend to the lowest and highest observed values within 1.5 times the IQR below January to March and above July to September. Observations falling outside this range are plotted individually as points and could be considered outliers. The black horizontal dashed line shows the cut-off for incidents that are deemed persistent (lasted for more than 550 days).

Incidence of TB

During 2025, the 12-month smoothed herd incidence rate ranged from 6.2 to 7.1 incidents per 100 herd years at risk (HYR). The rate at the end of 2025 (October to December) was 7.1 incidents per 100 HYR, the sixth highest rate among the 11 counties in the Edge Area, and slightly higher than the overall incidence rate for the Edge Area in 2025 (6.8 incidents per 100 HYR), as shown in Figure 5.

Over the 10-year period of interest, the incidence rate in Leicestershire increased gradually from 4.8 at the start of 2016 to a peak of 8.6 at the start of 2021 and then decreased to 4.5 in July to August of 2023. The incidence rate has been steadily growing since.

In the same period, there was a steady rise in the incidence rate in the Edge Area from 5.4 in early 2016 to 10.5 at the start of 2021. The incidence then declined to 7.0 at the start of 2023, followed by a relatively stable period, with a minor increase to 7.4 between April and May 2025 before declining again. Whilst incidence trends in Leicestershire broadly mirrored those seen across the wider Edge Area up to 2023, its incidence has increased since then whereas the incidence of the wider Edge Area has remained comparatively stable.

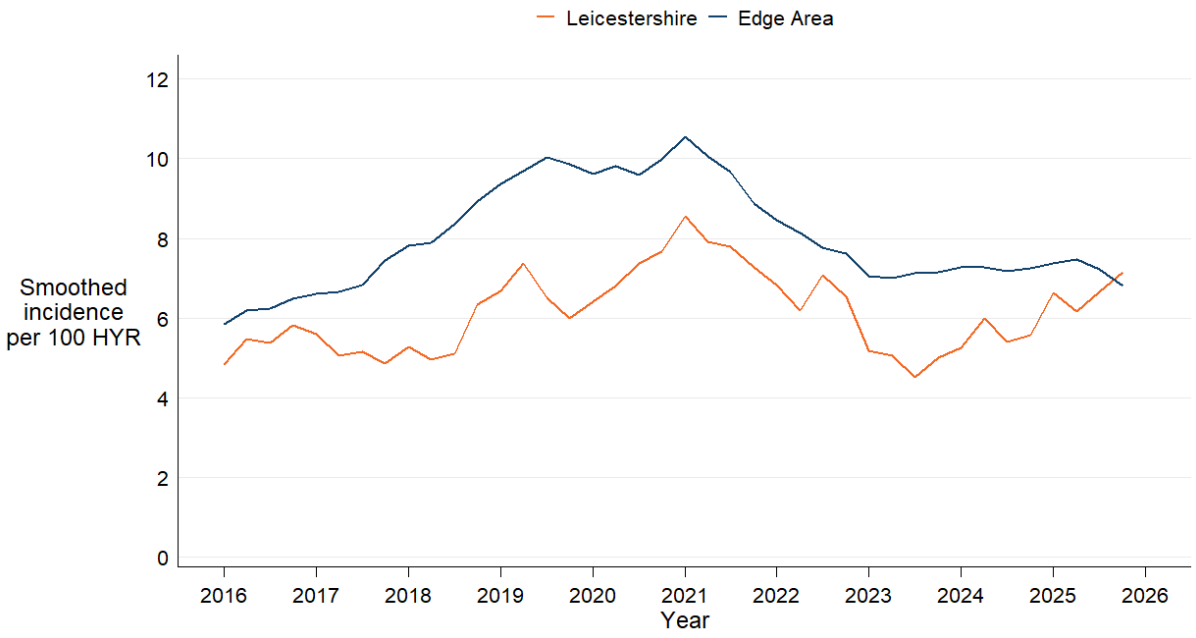


Figure 5: 12-month smoothed quarterly incidence rate per 100 herd-years at risk for all new incidents (OTF-W and OTF-S) in Leicestershire and the Edge Area, from 2016 to 2025.

Prevalence of TB

The monthly herd prevalence (12-month moving average) rose steadily from 1.7% at the start of 2016 to a peak of 3.8% towards end of 2019, decreased to 3.2% during 2020 then peaked again at 4.6% towards the end of 2021 (Figure 6). There was a gradual decline to 2.3% at the start of 2024 then an increase to 3.6% around August 2025. The monthly herd prevalence decreased slightly to 3.5% at the end of the year.

There were a couple of brief periods when the monthly herd prevalence in Leicestershire was higher than the whole Edge Area. This occurred in October 2022 (3.4% and 3.2%, respectively) and in April 2025 (4.8% and 4.5%, respectively).

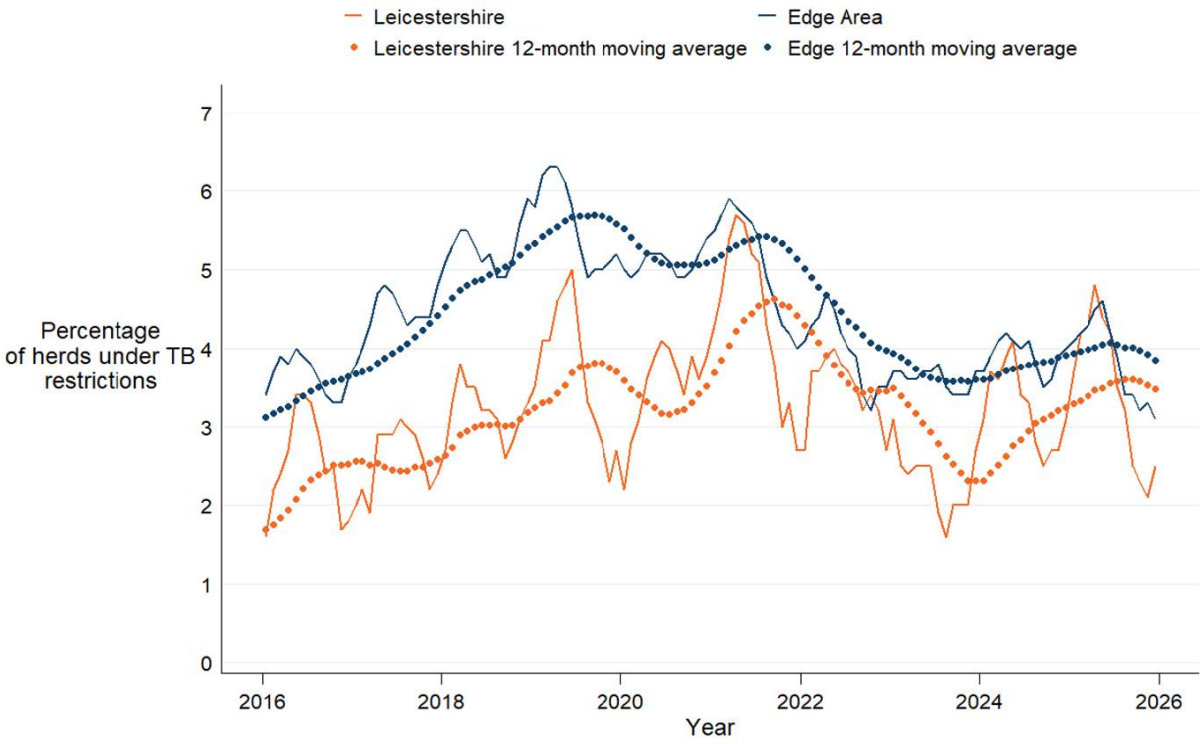


Figure 6: Mid-monthly 12-month moving average of herd prevalence (proportion of live herds under movement restrictions due to a TB incident) in Leicestershire and in the Edge Area overall, from 2016 to 2025.

Skin test reactors and interferon gamma test-positive animals removed

A total of 439 cattle were compulsory removed from TB incident herds as skin test reactors (196) or IFN-γ test positive animals (243) in Leicestershire during 2025 (Figure 7). Animals that were both skin test reactors and IFN-γ test positive are counted in this report as skin test reactors only. This was a 13% increase from 384 total reactors removed in 2024, and the highest annual number of cattle removed

since 2021. This has mainly been driven by an increase in IFN-γ test positive animals. However, it is important to note that 94 (48%) of all skin test reactors removed in Leicestershire during 2025 came from just 2 explosive epidemiologically linked incidents which are further described in the Geographical Distribution of Incidents section 'North (in HS23)'. These 2 incidents were also responsible for 35 (14%) of the 243 IFN-γ test positive animals removed in the county in 2025.

The annual number of skin test reactors increased steadily from 161 in 2016 to 263 in 2021. There was a decline to 143 in the subsequent year, followed by an increase to 237 in 2024.

The annual number of IFN-γ test positive animals removed from herds increased from 103 in 2016 to 318 in 2019. The numbers fluctuated thereafter from 219 to 116 between 2020 and 2024, before rising again to 243 in 2025.

In 2025, 5,411 IFN-γ tests were carried out in TB incident herds in Leicestershire, a 13% increase compared to 2024 (4,726). Prior to 2024, the number of IFN-γ tests performed ranged between 2,650 and 6,860.

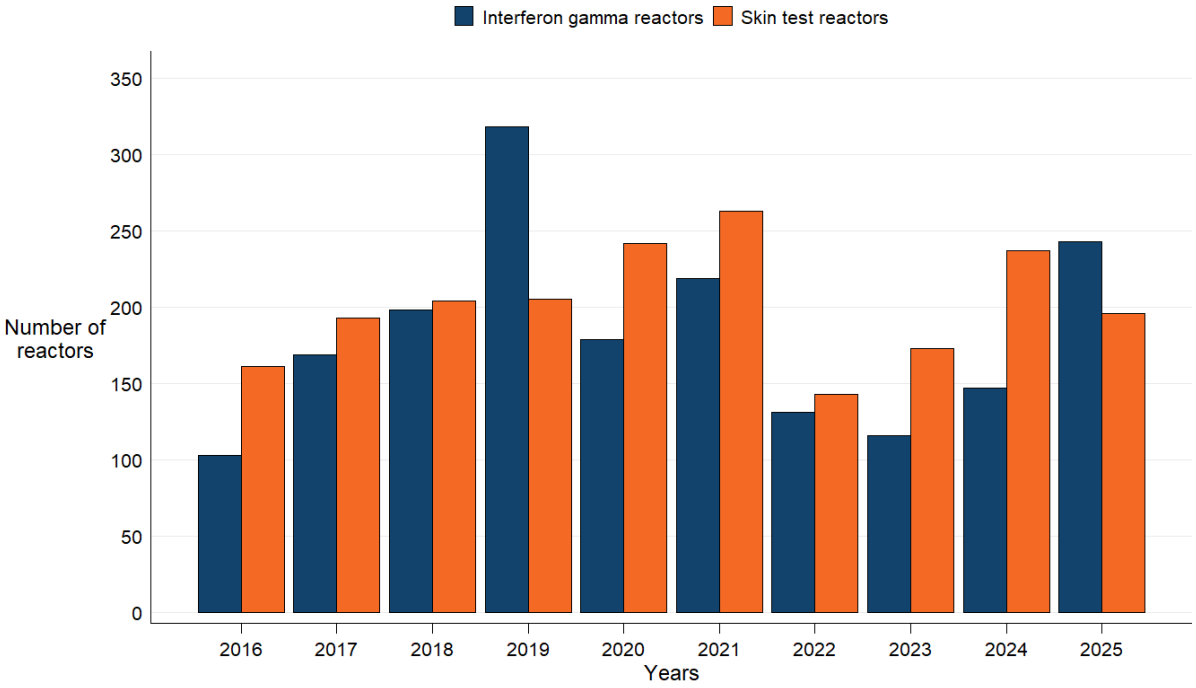


Figure 7: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Leicestershire, from 2015 to 2025.

Recurrent TB incidents

Three-year recurrence

A new herd incident in 2025 was defined as recurrent if it had also experienced another TB incident in the 3 years preceding the disclosing TB test.

Of the 50 herds in Leicestershire with a new TB incident in 2025, 12 (24%) had experienced another TB incident in the previous 3 years (Figure 8). This was the lowest proportion of recurrent herd incidents recorded in the county since 2021. Recurrence in Leicestershire in 2025 was the lowest of the Edge Area and HRA counties.

Of the 23 herds in Leicestershire with a new OTF-W incident in 2025, 4 (17%) had experienced another TB incident in the previous 3 years. The recurrence in OTF-W incident herds has remained below 30% in the last 5 years except in 2023 when 86% of incidents were recurrent. Three-year recurrence in OTF-S incidents increased from 30% in 2021 to 43% in both 2023 and 2024, then returned to 30% in 2025.

The overall 3-year recurrence in the Edge Area increased from 46% in 2021 to 51% in 2023, decreased to 47% in 2024 and then dropped further to 46% in 2025.

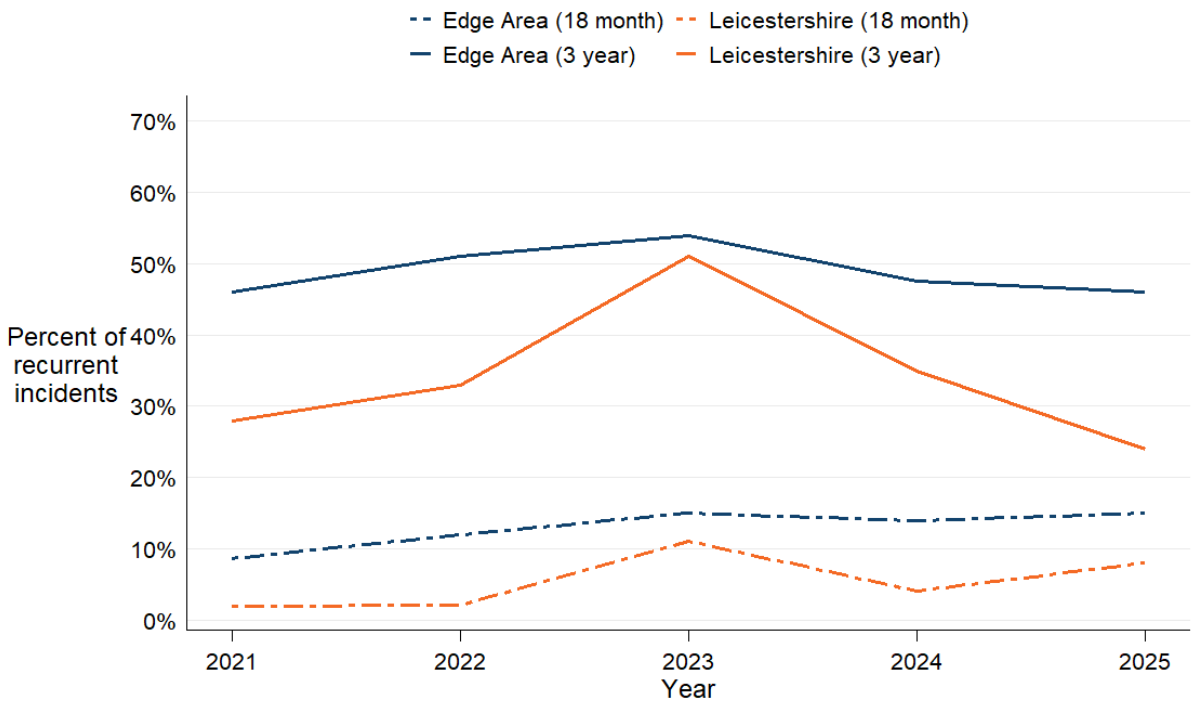


Figure 8: Annual proportion of herds with a new TB incident in Leicestershire in 2025 that experienced another TB incident in the previous 18 months or 3 years of the disclosing test.

In 2025 Leicestershire had the second lowest 18-month recurrence of the Edge Area counties (8.0%), lower than the Edge Area overall (14.6%). The 18-month recurrence

in Leicestershire increased slightly from 1.9% in 2021 to 2.0% in 2022, then there was a 5-fold increase to 11.4% in 2023. It then decreased to 7.0% in 2024 before rising to 8.0% in 2025.

The overall 18-month recurrence for all the Edge Area counties increased from 8.6% in 2021 to 14.9% in 2023, then decreased to 14% in 2024 and rose slightly to 14.6% in 2025 (Figure 8).

The relatively low proportion of recurrent TB incidents for Leicestershire in 2025 is encouraging and could be due to surveillance methods during TB incidents successfully resolving infection and herds that have experienced incidents in the past taking measures to reduce their risk of disclosing new incidents.

Geographical distribution of TB incidents

WGS clades

In Leicestershire in 2025, multiple whole genome sequence (WGS) clades of M. bovis were detected. By far the most common was B3-11, which was isolated in 17 out of the 23 OTF-W incidents. Three of the 23 incidents had only non-B3-11 clades detected: 2 were B6-62 and one was B6-14. The remaining 3 OTF-W incidents were culture negative and so it was not possible to determine the Whole Genome Sequencing (WGS) clade for those incidents.

Genetic relatedness of incidents

All of the B3-11 isolates from Leicestershire cattle herds that sustained an OTF-W incident in 2025 could be placed in 2 specific clusters of the B3-11 phylogenetic tree, denoted as ‘Section A’ and ‘Section B’ for the purposes of consistent referencing in this report.

Isolates in each cluster are closely related to some of the other isolates in that same cluster, but the genetic distance separating the 2 clusters is large enough that the 2 clusters are not considered closely related to each other. This suggests that in 2025, the B3-11 isolates circulating in Leicestershire were from 2 distinct genetic backgrounds.

Both Section A and Section B of the B3-11 tree contain Leicestershire isolates from 2025 from herds both within TB Hotspot 23 (HS23) and outside of HS23, indicating that infection within HS23 is genetically related to Leicestershire infection outside of HS23.

There is geographic overlap between these 2 sections of the B3-11 tree, although as a whole, Section A had more isolates from the northern and central-eastern part of the county. Section A also had more isolates from previous herd incidents in Leicestershire (dating back to 2015) and included some isolates in parts of Nottinghamshire and Lincolnshire, which border north Leicestershire.

Section B had much more recent isolates and holds the majority of the Leicestershire 2025 isolates. Currently, Section B holds one 2022 isolate, and multiple 2024 and 2025 isolates. The isolates in this section of the B3-11 tree were distributed from the south-west to the south of the county and also included the group in the centre, to the east of Leicester city. This chronological distribution of isolates in each cluster suggests that there may have been a recent incursion of the Section B clade B3-11 into the county and that the Section A clade has been circulating in the county for much longer (over a decade). Furthermore, Section B isolates are also closely genetically related to B3-11 isolates from TB Hotspot 29 in Cumbria. Investigation into the B3-11 phylogenetic tree and potential epidemiological links between Leicestershire and HS29 are ongoing.

Non-endemic infection

There were 2 non-B3-11 clades detected in Leicestershire in 2025, across 3 separate incidents: B6-62 (occurring in 2 separate incidents, 379 and 662) and B6-14 (incident 3). One of the B6-62 incidents (662) was in a herd that was not part of HS23, but each of the other 2 incidents (3 and 379) involved herds using land for cattle within HS23. Interestingly, each of these 3 isolates were cultured from Slaughterhouse (SLH) cases.

All of the animals these clades were isolated from were moved into Leicestershire from outside of the county, with risk pathways, phylogenetic evidence, and cattle movement data indicating that infection was most likely purchased into each of these herds. This means that there is currently no evidence of any clade other than B3-11 being endemic in Leicestershire (reflected in Figure 11). This is also evidence that long-range cattle movements from outside of the county remain a significant risk factor for the introduction of M. bovis infection.

Overall spatial distribution of incidents

The spatial distribution of incidents in 2025 was concentrated in the central part of the county, to the east of Leicester city. The density of OTF-W incidents was highest in this area, with other OTF-W incidents occurring across the south and south-west of the county (Figure 9).

Of the 14 OTF-W incidents identified in the central area (including those extending into the south of the county and the southern extent of the hotspot), 11 occurred in suckler or finishing herds. The remaining 3 were in dairy herds.

Centre

As mentioned above, in 2025 there was a large cluster of incidents with WGS clade B3-11 in the centre-east of the county, to the east of Leicester city and towards the southern part of Hotspot 23 (HS23) and below (Figure 9). Most OTF-W incidents in this area had a low/very low cattle movement source of infection risk identified in the Cattle Movement Algorithm (CMA). Though some of this area has remained endemic

since 2023 and 2024, in 2025 there was clear evidence of spread of infection north and south of this area (Figure 10).

Seven of the incidents in this central cluster (28, 202, 203, 204, 677, 654, and 222) were reported in herds that kept cattle in HS23 (meaning that these incidents are reported as HS23 incidents, see HS23 section under Areas of Concern below). Two of these incidents (203 and 677) were OTF-S and thus lacked genetic M. bovis data for further analysis. Of the other 5 incidents, 2 had isolates on Section A of the B3-11 phylogenetic tree (28, 222) and 3 had isolates on Section B of the B3-11 tree (202, 204, 654). Isolates on each section of the tree were genetically related to other local Leicestershire isolates. This demonstrates that in 2025, infection in HS23 reflected both groups of endemic B3-11 (Section A and Section B) in Leicestershire.

HS23 isolates from 2025 on Section B of the B3-11 tree were identical or closely genetically related to multiple other 2025 Leicestershire isolates from herds outside of HS23 (96, 364, 374, 497, 552, 670, 674, 829), as well as isolates from 3 non-HS23 Leicestershire incidents starting in 2024 and ending in 2025.

This phylogenetic evidence indicates that the B3-11 infection within HS23 is not specific to herds within the HS23 boundary and is in fact closely related to the majority of recent B3-11 incidents in the county. Historically, infection in this hotspot originated from more central parts of the county and crept north-eastwards towards and into the Low Risk Area (Lincolnshire). However, the endemicity map (Figure 10) indicates that since 2023, endemic infection has retracted in the parts of neighbouring Nottinghamshire and Lincolnshire which border North Leicestershire (HS23) but has spread more in the central and southern part of the county. This infection is genetically related to HS23 and so suggests a recent directional pattern of infection pressure moving southwards through Leicestershire in 2025, related to HS23. This pattern of local spread of B3-11 infection in the north, centre, and south of the county can also be seen in Figure 11, which shows which incidents from 2021 to 2025 are associated with local transmission events according to WGS data. This map shows that B3-11 incidents associated with local transmission have occurred more frequently in 2025 in the centre and south of the county than in previous years.

There was a cluster of 9 incidents (8 OTF-W, 1 OTF-S) in the central area of the county that started between September 2024 and June 2025 all with very close land parcels. The 2025 incidents in this cluster were 96, 202, 28, 204, and 203 (the first 4 of these were OTF-W and the last one, incident 203, was OTF-S). The other 4 were OTF-W incidents that started in 2024 and ended in 2025. Seven of these incidents were in herds with grazing land in HS23, 4 of these starting in 2025 (202, 28, 204, and 203) and 3 starting in 2024. Six of these incidents (202, 204, 96, and 3 starting in 2024) were in Section B of the B3-11 tree and were closely genetically related. Two of these incidents (28, starting in 2025, and one starting in 2024) were in Section A of the B3-11 tree. Interestingly, the herd reporting incident 204 in Section B of the tree has a 2019 isolate in Section A of the tree, which is very closely related to

the 2024 incident in this cluster also in Section A of the tree. Links between the 9 herds in this cluster included occasional movements of low numbers of cattle (excluding any of the reactors) involving 6 of the herds, potential (limited) nose-to-nose contact between some of the herds, and the suspected movement of infected wildlife between herds.

Incidents 674, 552, 670, 215, 497, and 829, all in the cluster to the east of Leicester city, all had isolates in Section B of the B3-11 tree which were closely related. None of these herds have cattle land in HS23. Incident 95 was negative on culture for M. bovis, which means that M. bovis was not isolated. However, as the animal in question was a skin test reactor and had visible TB lesions at post-mortem, the incident is still classified as OTF-W. Incidents 401 and 645 were OTF-S. Risk pathways from TB incident investigations (referred to as Disease Report Forms, DRFs) across the OTF-W incidents were weighted most heavily towards infected badgers. This was supported by phylogenetic evidence showing close genetic relatedness of M. bovis isolates between geographically close herds with limited evidence of other epidemiological links between the herds that could explain the close relatedness of the isolates.

There was one OTF-W incident (incident 3) with clade B6-14 in the centre of the county, just to the north of Leicester city. Although the farm point of this incident is outside of the HS23 boundary, the owner did keep cattle on land within the HS23 area and so this was counted as one of the HS23 incidents. This was a finishing herd in which no cattle breeding took place and in which high numbers of cattle were purchased from across GB. The disclosing animal originated in the High TB Area West in Wales and the isolate from this animal was genetically identical to multiple isolates from this area of Wales, indicating that this infection was purchased.

North (in HS23)

In the north of the county, within HS23, there were 2 OTF-W incidents with clade B3-11 (incidents 688 and 571).

Incident 571 was linked to another incident that started in November 2024 and ended in 2025. The herd which underwent incident 571 was a temporary county parish holding (CPH) of the linked incident that started in 2024 (the permanent CPH), the 2 herds consisted of the same epidemiological group of cattle and so both incidents were synchronised and managed together. Incident 571 was disclosed in March 2025, during incident testing of the permanent CPH. The 2 incidents were explosive, with a total of 94 skin test reactors, 35 IFN-γ-test reactors, and 21 direct contacts being removed across both incidents, with 112 of these having visible lesions at slaughter. The incident on the permanent CPH was disclosed by a SLH case. At the first short interval (SI) test on this holding, 69 of the 70 skin reactors removed were youngstock in the same cohort, all housed together, and all fed pooled raw milk during rearing. At post-mortem meat inspection of the carcases, macroscopic TB lesions suggestive of systemic infection were recorded, with many

of them identified in the mesenteric LNs, consistent with the source of infection being pooled, untreated milk fed to the group during rearing. Isolates from incident 571 were on Section A of the B3-11 phylogenetic tree and were closely genetically related to other isolates from within HS23 and Leicestershire. This herd purchased very high numbers of cattle on a regular basis from across GB and within Leicestershire, including HS23 herds. The origin of infection within this herd was suspected to be infected cattle purchased into the herd that produced contaminated milk that was fed to calves.

Incident 688 was also considered to be due to cattle movements. This holding also purchased very high numbers of cattle from across GB and Leicestershire. The disclosing animal in this incident was purchased from Staffordshire, in the High Risk Area of England. The isolate cultured from this animal was closely related to other Staffordshire isolates, including one from the herd of origin of this animal.

Evidence from TB incident investigations (DRFs) and cattle movement data suggests that local cattle movements within HS23 are one of the drivers of endemic infection in Leicestershire. Cattle movements that are not local also act as a source of infection pressure for HS23 and the county as a whole, providing a source of infected cattle that can then infect local cattle or wildlife.

There was also one incident (379) within HS23 near the border with Nottinghamshire caused by clade B6-62. This incident had a high/very high likelihood of infected cattle movements identified in the CMA. The disclosing animal was purchased into the herd and phylogenetic analysis indicated that the B6-62 isolate was closely related to the area that the reactor originated from in Warwickshire.

Further south along the border with Nottinghamshire there was one OTF-S incident (566) located in a cluster with 2 other OTF-S incidents that occurred in herds registered to Nottinghamshire. These 3 herds were all part of HS23. The herd in which incident 566 occurred is a combined dairy and fattening beef herd and purchased some beef calves from one of the Nottinghamshire herds in this cluster of 3 OTF-S incidents, as well as purchasing cattle from other local Leicestershire and Nottinghamshire herds (some within and some outside of HS23). Risk pathways for incident 566 gave infected cattle movements the highest weighting, whereas risk pathways for the 2 Nottinghamshire incidents gave infected badgers the highest weighting. This fits with the pattern for HS23, where local cattle movements and infected wildlife appear to be driving the majority of infection, although purchases from outside of the county still play a role, as noted above.

East

There was one OTF-S incident detected in the east of Leicestershire outside HS23 and close to the county border with Lincolnshire (incident 280, Figure 9). OTF-S incidents have been reported sporadically in the east of the county in previous years:

2 in 2022, one in 2021, and 2 in 2020. The highest-weighted risk pathways for this incident were cattle movements from the Edge and High Risk Areas of England.

There was another OTF-S incident (incident 582) further south near the border with Northamptonshire. This was located near a previous OTF-W incident detected in 2022. The highest-weighted risk pathway for this incident was residual infection (the herd had a previous OTF-W incident from 2022 to 2024).

South

There was a cluster of 2 OTF-W incidents (incidents 374 and 364) and 2 OTF-S incidents (incidents 365 and 321) in the south of the county, to the west of Market Harborough. New OTF-S incidents continue to occur in this area each year and there is evidence of spread of infection to this area since 2023 and 2024 (see Figure 11).

Phylogenetic analysis of WGS clade data from incident 374 indicated that this infection was very closely related to M. bovis isolates from incident 364, a contiguous herd (although no nose-to-nose contact was reported between the herds). WGS clade data from incident 374 was identical to M. bovis isolates from another contiguous herd which had an OTF-W incident starting in 2024 and ending in 2025. Nose-to-nose contact was reported between cattle of these 2 herds. These isolates are in Section B of the B3-11 tree and were closely genetically related to the incidents in the central part of the county (described in the section above). Incident 374 was associated with a high cattle movement source of infection risk in the CMA as the reactor was born in the High Risk Area and the affected herd purchased a lot of animals from across GB, including from Leicestershire. However, no purchases were made from the 2 contiguous herds. As the isolate from this incident was so closely related to isolates from those 2 contiguous herds and not closely related to any isolates from Leicestershire herds from which purchases were made, the phylogenetic evidence actually suggests that the infection was acquired from one of these herds and not from cattle movements.

Both OTF-S incidents 365 and 321 had both residual infection and cattle movements from the Edge Area as likely risk pathways in their DRFs. Incident 321 also had contact with contiguous cattle as a possible risk pathway due to reported possible nose-to-nose contact with a contiguous herd that had an OTF-S incident in 2024.

Badger activity was reported on these 4 farms (incidents 374, 364, 365, and 321), infection spread by badgers is a potential source of closely related infection between geographically-close herds. Evidence from risk pathways for these 4 incidents suggests that there could be multiple factors driving this cluster of infection. Thus, there are multiple areas where keepers could take action to reduce risk, including taking biosecurity measures to prevent contact between neighbouring cattle herds and between cattle and badgers.

There was one OTF-S incident (496) to the east of this cluster, involving a cattle farm located on the county border with Northamptonshire. Infected wildlife was the highest-weighted risk pathway in the DRF for this incident.

There was one OTF-S incident (272) at the very south of the county. No new incidents have been reported in this area since 2021. The highest-weighted risk pathway for this incident was infected badgers and the CMA identified a negligible/low cattle movement source of infection risk. This part of the county borders Warwickshire, a 6-monthly testing Edge Area county, where M. bovis infection is known to be endemic in wildlife populations. Thus, there is concern that badgers in this area of Leicestershire could also be infected.

South-west

In the south-west of the county 3 new OTF-W incidents (210, 662 and 513, Figure 9) were detected in 2025. This area has remained endemic since 2023. One incident (210) near the border with Warwickshire with clade B3-11 had a medium cattle movement source of infection risk identified in the CMA. The affected farm business consisted of a large dairy herd that regularly purchased cattle in from across GB, from outside of Leicestershire and HS23. The M. bovis isolate from this incident was on Section A of the B3-11 tree and was closely related to other Leicestershire isolates both within and outside of HS23.

Another OTF-W incident further north (incident 662) was due to infection with clade B6-62. This was a finishing beef herd that purchased hundreds of animals each year with no breeding of cattle on farm. The disclosing animal was purchased from the West Midlands in the HRA 6 months before being identified as a SLH case. The B6-62 isolate cultured from this animal was closely related to other isolates from the West Midlands. The CMA identified a high cattle movement source of infection risk and the highest-weighted risk pathway for this incident was cattle movements from the HRA. Other incidents with this clade have occurred in previous years in Leicestershire: 2 in 2024 and 2 in 2022.

There was one new OTF-W incident in this part of the county in which the WGS clade was undetermined (incident 513). The cattle movement level in the CMA for this incident was negligible/low and the risk pathways in the DRF were residual cattle infection (previous OTF-W incidents occurred in the same herd in 2022 and 2017) and infected badgers.

West

There was one OTF-W new incident in the west of the county (incident 639), which had an undetermined WGS clade. The incident was associated with a low cattle movement source of infection risk in the CMA and the highest-weighted risk pathway in the DRF was infected badgers.

There were some clusters of new OTF-S incidents in the west of the county.

OTF-S incidents 875, 803, and 81 to the south-west of Market Bosworth formed one of those clusters. The herds sustaining incidents 875 and 803 were contiguous but with no nose-to-nose contact reported between them. Manure from 875 was swapped for straw from 803 and thus contaminated fomites were a possible risk pathway for transmission between the 2 herds. Cattle movements and infected badgers were also both possible risk pathways in the DRFs for these 2 incidents, and infected badgers were the highest-weighted risk pathway in the DRF for incident 81. The close proximity of the 3 incidents without reported direct contact between the cattle and with evidence of badger activity in the area supported the potential involvement of infected badgers in transmitting infection between the herds.

OTF-S incidents 266 and 507 further north formed a small cluster of 2 contiguous herds near the county border with Derbyshire. Residual infection was the highest-weighted risk pathway in the DRF for incident 266 (this herd had an OTF-S incident from 2023 to 2024), with infected badgers also noted as a likely risk pathway. Incident 507 also had infected badgers as the highest-weighted risk pathway according to the DRF. Additionally, in 2021, the herd reporting incident 507 moved 2 cattle from the herd reporting incident 266, providing another epidemiological link between these 2 incidents.

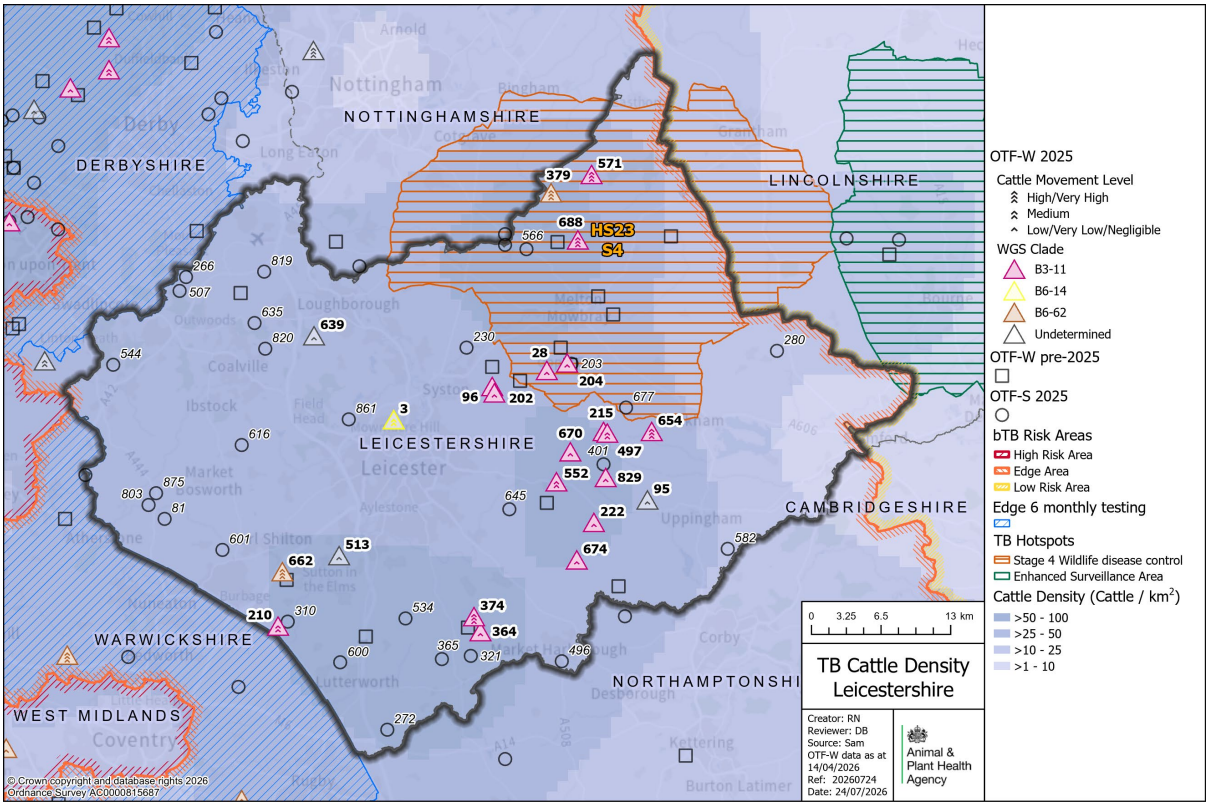


Figure 9: Location of cattle holdings in Leicestershire with new TB incidents (OTF-W and OTF-S) in 2025, and cattle holdings with pre-2025 OTF-W incidents still ongoing at the beginning of 2025, overlaid on a cattle density map (as in 2024).

Figure 9 description: A map of Leicestershire and adjoining areas showing the cattle density, the geographical location of cattle holdings with new TB incidents

(OTF-W shown as triangles and OTF-S shown as circles) in 2025, and cattle incident holdings with OTF-W incidents still ongoing at the beginning of 2025, shown as squares. The 2025 OTF-W incidents are coloured by WGS clade. Pink represents clade B3-11, bright yellow represents clade B6-14, light brown represents clade B6-62 and transparent triangles represent incidents where the WGS clade was undetermined. Dark blue areas represent higher cattle density and light blue represent lower cattle density. TB hotspot areas are shown with hashed lines. The colour of the hotspot, along with its suffix, indicates the stage of controls in place in 2025: dark orange is stage 4 (S4 is wildlife disease control). The Enhanced Surveillance Area (ESA) of South Kesteven in the south of the Lincolnshire (directly to the east of HS23) is represented in hashed green lines. The locations of new TB incidents are described in the main text.

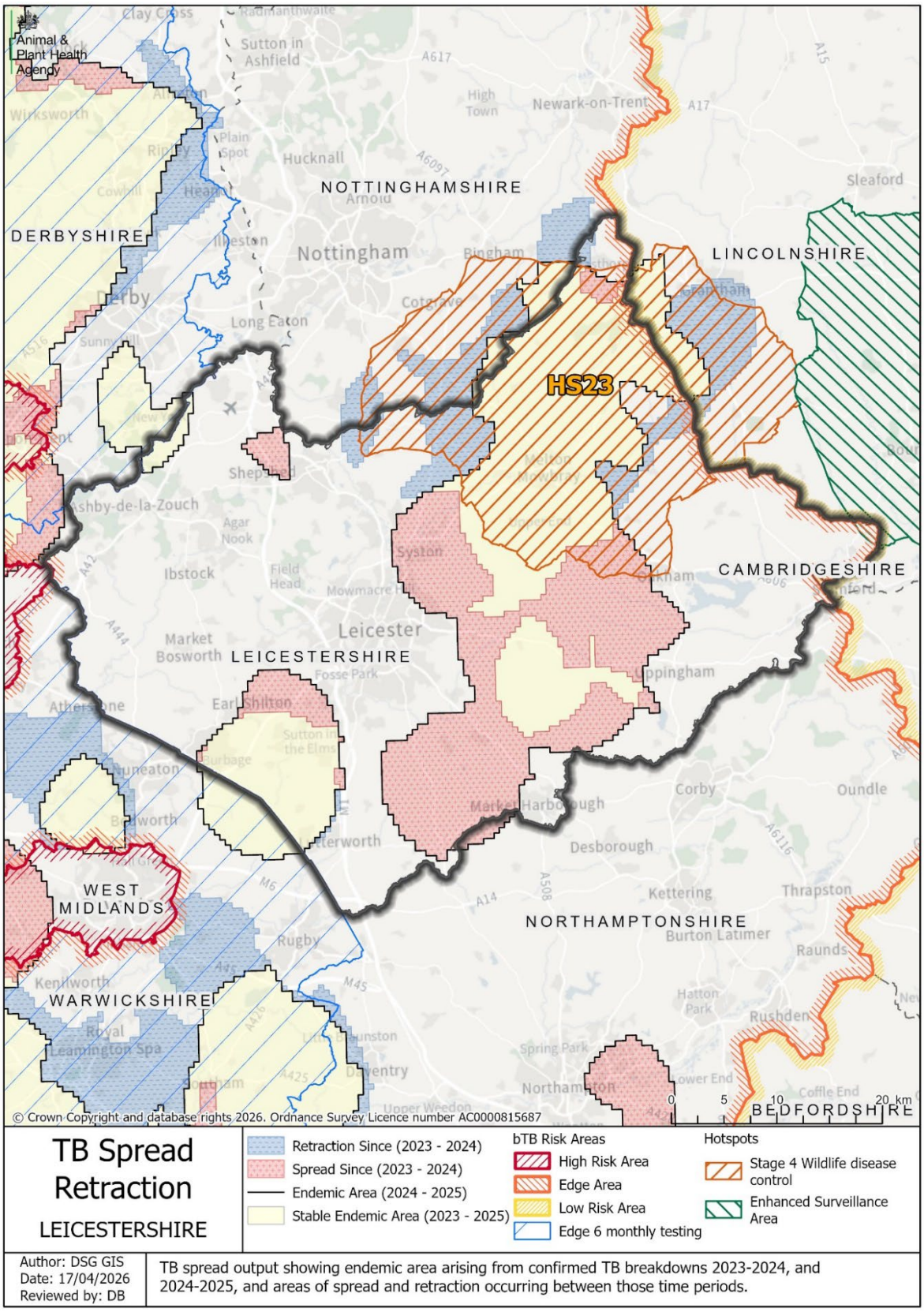


Figure 10 Map displaying the spread (pink shading) and retraction (blue shading) of the endemic bovine TB area (yellow shading) of Leicestershire (and adjoining counties) between January 2022 to 2024 and January 2023 to 2025.

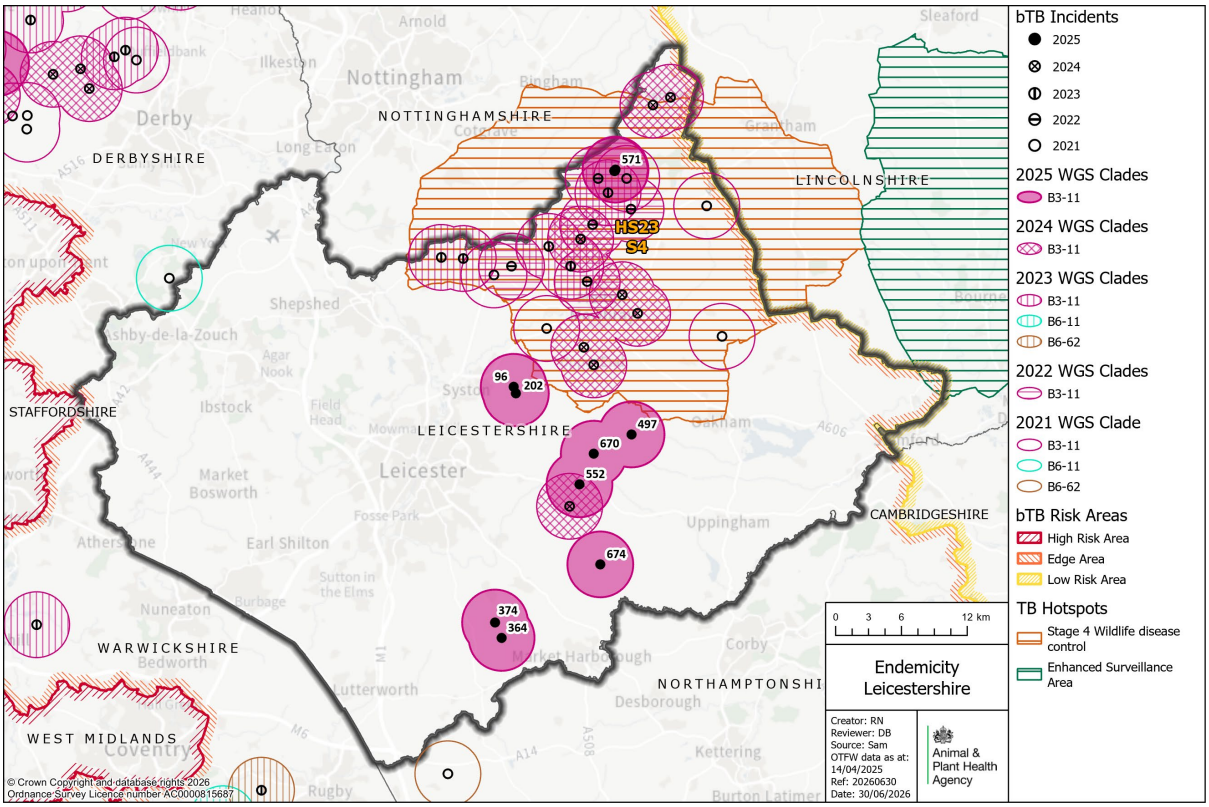


Figure 11: WGS clades of M. bovis detected in Leicestershire between 2020 and 2025, where the WGS clade identified in the infected herd was within 3 Single Nucleotide Polymorphisms (SNPs) of another TB incident that was within 9km and occurred in the previous 4 years or 6 months after the incident of interest, with a 3km buffer zone around each incident.

Figure 11 description: Map of Leicestershire and adjoining areas showing the location of TB incidents with a WGS clade where a local transmission event was identified. This map will only show incidents which meet the given criteria. Clades are shown as circles on the map with each clade represented by a different colour. The year from which the clade was identified is shown a solid colour (2025) or different types of hash (for 2021 to 2024).

Non-bovine livestock

There were no TB incidents in non-bovine livestock in Leicestershire in 2025.

Main risk pathways and key drivers for TB infection

Disease Report Forms

In 2025, 39 out of 50 (78%) new TB incidents in Leicestershire received a preliminary or final APHA veterinary investigation (Disease Report Form or 'DRF') to identify the likely sources of infection for the affected cattle herds. The top 3 possible drivers of new TB incidents detected in the county in 2025 are listed below, and the tabulated summary of identified risk pathways from these investigations and the subsequent calculated weighted contribution are given in Appendix 3.

Details of the protocol used for these investigations, and the subsequent methodology used to calculate the weighted contribution of the different suspected sources of M. bovis infection can be found in the explanatory supplement for the annual reports 2025.

The top 3 possible drivers of the occurrence of TB in cattle in Leicestershire during 2025 were:

- exposure to infected badgers
- movements of undetected infected cattle
- residual cattle infection

The most likely infection pathway for new incident herds in 2025 identified during APHA veterinary investigations was potential exposure to infected badgers, accounting for a weighted contribution of 41.6% (Appendix 3). This was lower compared to the previous year (49.8%) but higher than in 2023 (37.3%).

The movement of undetected, infected cattle into (and within) the county represented a weighted contribution of 30.8%, higher than in the previous year (15.9% in 2024).

Residual cattle infection had a weighted contribution of 8.7%, lower than the year before (10.7% in 2024).

Data driven methods for source attribution

It is not always possible for a veterinary investigation to be carried out for every new TB incident. Therefore, new data-driven methods to quantify the likelihood of risk pathways for TB infected herds have been developed by APHA to supplement the information gathered through the DRFs, which include:

- the Cattle Movement Algorithm (CMA), which assesses the likelihood (from negligible to very high) that infection may have been introduced through the movement of undetected infected cattle into a herd

- the Residual Infection Algorithm (RIA), which assesses the likelihood of residual infection remaining within a herd from a previous incident, and
- the Local Infection Indicator (LII), which identifies evidence of local transmission by comparing M. bovis WGS data from incident herds with genetically related isolates occurring within defined spatial and temporal windows

More detail on the methodology used can be found in the explanatory supplement for the annual reports 2025.

The CMA, Residual Infection Algorithms (RIA) and Local Infection Indicator (LII) outputs represent source attribution assessments based on the information available at the time the analyses were undertaken. Additional epidemiological, cattle movement and WGS data may become available subsequently and can alter the interpretation of individual incidents. Where later evidence informed a revised assessment, this is described in the 'Geographical distribution of incidents' section. As a result, the source attribution outputs shown in Figures 12 and 13 may not always align fully with the descriptions of individual incidents presented elsewhere in this report.

There is always a degree of uncertainty about the estimated true route for introduction of TB infection into a herd. Where no local transmission event has been identified through phylogenetic analysis of the WGS of M. bovis isolates, and there is no strong evidence of high-risk cattle movements or residual infection persisting within the affected herd, these pathways cannot be ruled out.

WGS data was available for 20 new OTF-W TB incidents (87%) in Leicestershire in 2025, 40% of all new TB incidents at the time of report production. A local transmission event was identified by the LII where WGS data were available and another M. bovis isolate was identified that:

- was within a genetic distance of 3 single nucleotide polymorphisms
- which occurred within a 9km radius
- was detected within the previous 4 years or following 6 months after confirmation of the incident of interest

The closely related isolates may have originated from the same herd or a different local herd.

Although the identity of the WGS clade was available for 20 of the incidents, analysis of distances of single nucleotide polymorphisms was not available for 4 of these incidents at the time when LII outputs were generated. See 'Local transmission pathways' below for further discussion of this.

It is important to note that failure to identify a local transmission event does not rule out local transmission, as detection depends on the availability of suitable WGS-derived isolates for comparison within the defined temporal and spatial windows.

Furthermore, the 9 km radius used is based on the main farm points registered to each herd and not all of the land parcels used by the cattle in the herd.

Nonetheless, the evidence provided by the Cattle movement algorithm (CMA) and Residual Infection Algorithms (RIA), and WGS data in the Local Infection Indicator (LII), when combined, can provide valuable insights into the possible infection risk pathways.

Figure 12 provides the number and percentage of herds in Leicestershire with new TB incidents disclosed in 2025 where each risk pathway combination was identified. Each category is described in greater detail in the following text.

Cattle movements (mid pink, pale pink, Figure 12)

Introduction of infection through cattle movements was assessed as the most likely source of infection for 8 (16%) incidents in Leicestershire in 2025. This is because the available evidence indicated that there was:

- a high likelihood of cattle movements as the source of infection (CMA)
- a low likelihood of residual infection (RIA)
- no evidence of a local transmission event identified by WGS (LII), or no WGS available (applicable to 4 OTF-S incidents)

For presentation purposes, outputs from the Cattle Movement Algorithm (CMA) were grouped into binary categories of either ‘high’ or ‘low’ likelihood of infection being introduced through cattle movements. Incidents assigned a ‘medium’ CMA outcome were therefore included within the ‘low cattle movements’ category. This applied to incident 3, which is represented by a mid-orange triangle in Figure 13 and contributes to the mid-orange segment in Figure 12.

However, as noted above, subsequent review and interpretation may differ from the source attribution outputs shown in Figures 12 and 13 where additional evidence becomes available after the analyses were undertaken. For incident 3, the veterinary DRF assessment identified cattle purchased into the herd as the most likely source of infection (see the ‘Geographical distribution of TB incidents’ section describing incidents in the centre of the county). Consequently, this incident would more appropriately be represented by a mid-pink triangle in Figure 13 and included within the mid-pink segment of Figure 12.

Residual infection (pale green, Figure 12)

Residual infection left undisclosed in the herd from a previous TB incident was identified as the most likely source of infection for 4 (8%) incidents. This is because available evidence indicated there was:

- a high likelihood of residual infection (RIA)
- a low likelihood of cattle movements as a source of infection (CMA), and

- either strong evidence of a local transmission event identified by WGS, or no evidence of a local transmission event detected (LII), or no WGS available (applicable to all 4 incidents, all of which were OTF-S)

However, for these incidents it is not possible to rule out other local infection pathways such as contiguous contact with infected cattle, or direct or indirect contact with infected wildlife.

Local transmission pathways (darkest orange, Figure 12)

Other local transmission pathways, including direct or indirect contact with infected wildlife, contiguous contact with infected cattle or indirect contact via fomites were assessed as the most likely infection pathways for 7 (14%) incidents. Available evidence indicated there was:

- strong evidence of a local transmission event identified by WGS (LII)
- a low likelihood of residual infection (RIA), and
- a low likelihood of cattle movements as the source of infection (CMA)

This category does not include any OTF-S incidents as the LII algorithm requires WGS.

As noted above, the source attribution outputs shown in Figures 12 and 13 reflect the data available at the time of analysis. For 4 of the 20 incidents with WGS data (incidents 28, 204, 654 and 829), single nucleotide polymorphism (SNP) distance data were not available when the Local Infection Indicator (LII) was run. Consequently, these incidents were classified as ‘No Local WGS’ and are represented by mid-orange triangles in Figures 12 and 13.

Subsequent review of SNP distance data identified that all 4 incidents fell within one of the 2 B3-11 phylogenetic clusters containing Leicestershire isolates (Sections A and B). The ‘Geographical distribution of TB incidents’ section describes incidents in the centre of the county based on this latest available data. Had these data been available at the time of analysis, these incidents may have been classified as ‘Local WGS’ and represented by darkest orange squares in Figure 13.

Similarly, incident 222 involved cattle that used land some distance from the registered farm location. If this information could have been incorporated into the LII analysis, the incident may also have been identified as ‘Local WGS’ and represented by a darkest orange square in Figure 13.

Taken together, these examples suggest that incidents classified as ‘No Local WGS’ may be overestimated in Figures 12 and 13, while incidents classified as ‘Local WGS’ may be underestimated.

Mixed evidence (darkest pink, Figure 12)

For 2 (4%) incidents, the available evidence was consistent with multiple competing infection pathways and did not permit attribution to a single source of infection. Available evidence indicated there was:

- a low likelihood of residual infection (RIA)
- a high likelihood of cattle movements as the source of infection (CMA), and
- strong evidence of a local transmission event detected by WGS (LII)

Limited evidence for assessed pathways (mid orange, pale orange, Figure 12)

For 29 (58%) incidents there was insufficient evidence to indicate a particular pathway. Available evidence indicated there was:

- a low likelihood of residual infection (RIA)
- a low likelihood of cattle movements as a source of infection (CMA)
- no evidence of a local transmission event (LII) (applicable to 7 OTF-W) or no WGS data available (applicable to 19 OTF-S incidents and 3 OTF-W)

See ‘Local transmission pathways’ above for discussion of 5 incidents represented as mid orange in Figures 12 and 13 for which subsequent evidence may support a different source attribution outcome.

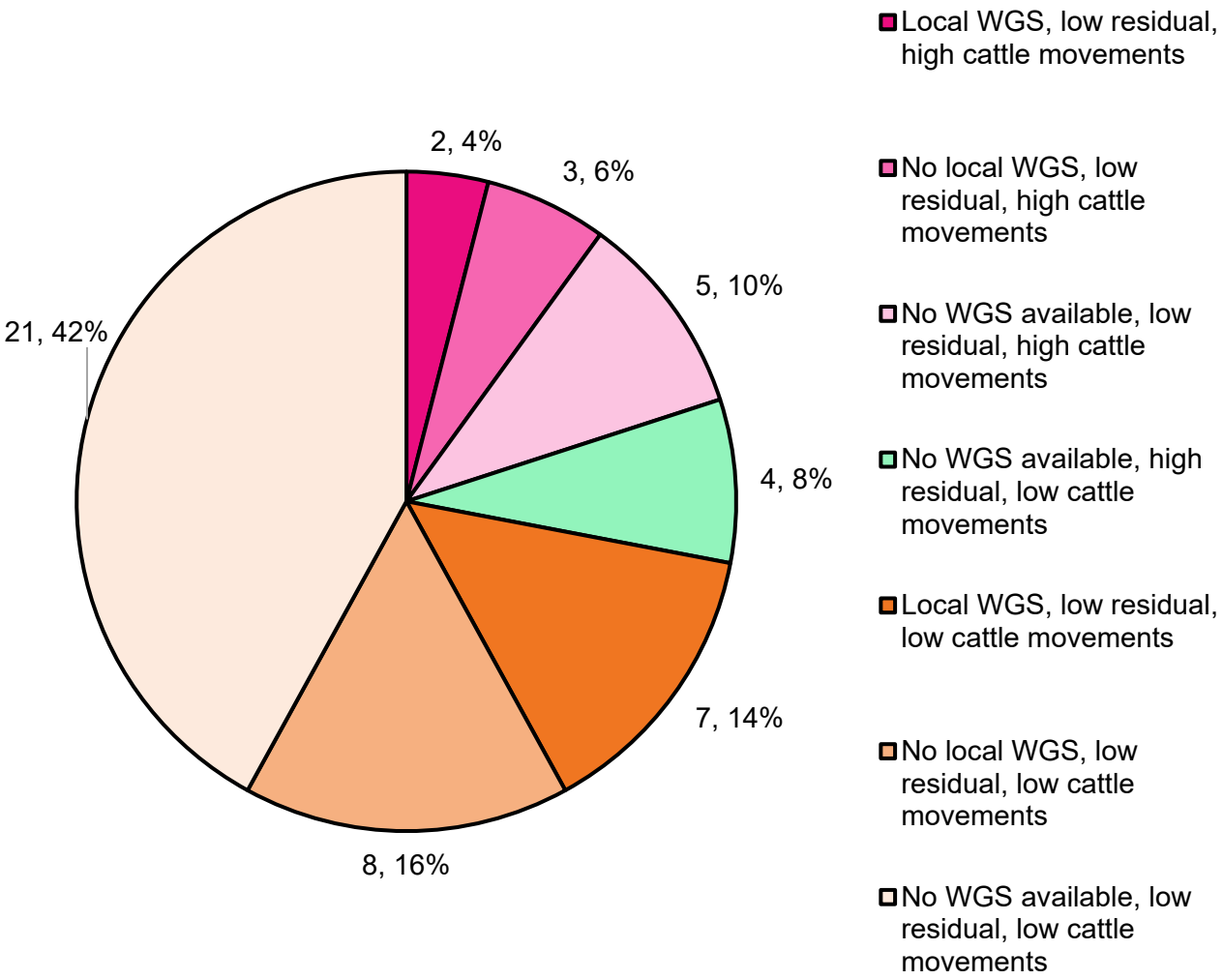


Figure 12: Pie chart showing the risk pathway combinations identified by the Local Infection Indicator (LII), residual tree algorithm and cattle movement algorithm for all 50 new TB incidents starting in Leicestershire in 2025. Numbers presented alongside each segment display the number of new TB incidents in 2025 and the percentage of the total new TB incidents in Leicestershire in 2025 that the segment represents.

The spatial distribution of these the risk pathway combinations for new TB incidents in Leicestershire in 2025 is presented in Figure 13.

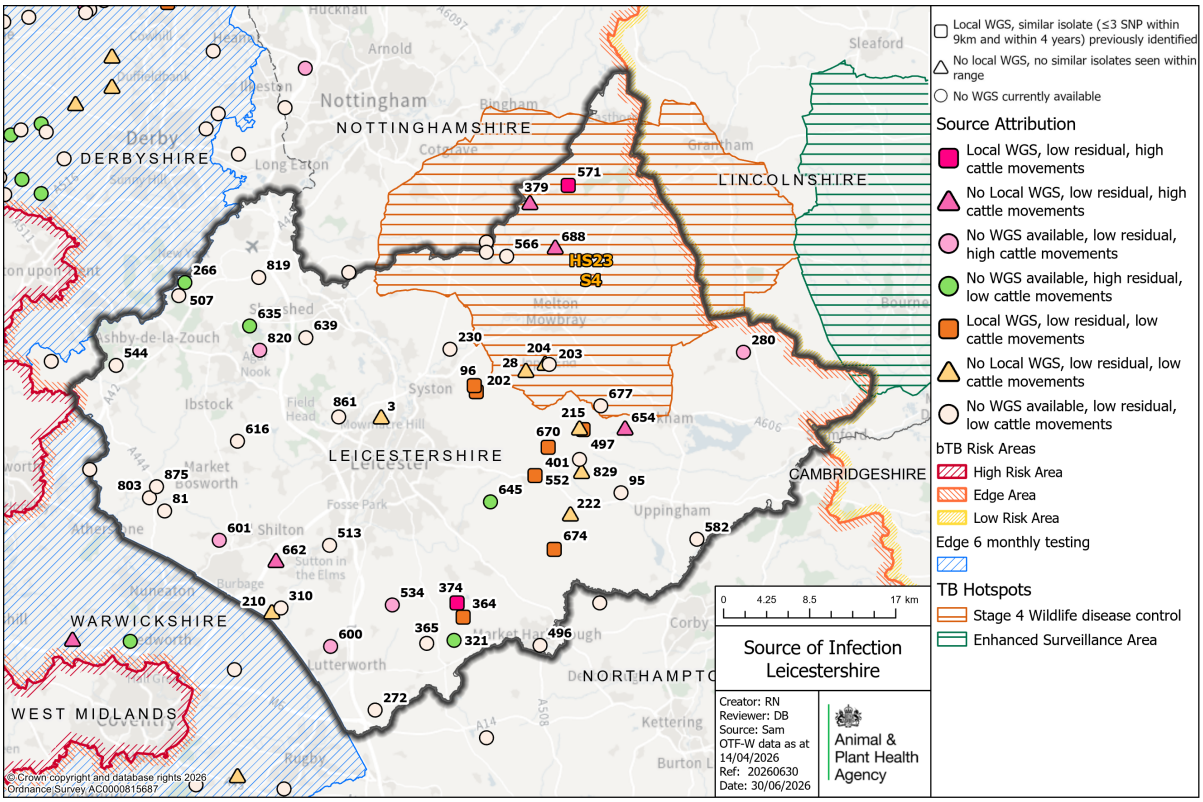


Figure 13: Map displaying the location of the 50 herds with a new TB incident (OTF-W or OTF-S) in Leicestershire in 2025, according to the available evidence for risk pathways of TB infection into each herd.

Where further data and information was available for manual source attribution for TB incidents after Figure 13 was generated, the conclusions drawn from this are described in the 'Geographical distribution of incidents' section of the report. Consequently, there may be some discrepancies between descriptions of incidents in this section of the report and this map. See 'Cattle movements' and 'Local transmission pathways' above for caveats pertaining to incidents 3, 28, 204, 222, 654, and 829.

Evidence from DRF risk pathways combined with the presence of multiple herds with closely related M. bovis isolates where there are not always identifiable epidemiological links between the herds points to the role that infected wildlife is likely playing in spreading TB infection to and between cattle herds in the county. Local cattle movements, contact between contiguous cattle herds, and spread via contaminated fomites is also likely to be involved in this spread of infection.

Overall, the data-driven analysis highlights the complexity of TB transmission in Leicestershire. In most cases, the available evidence prevents definitive attribution, indicating that multiple overlapping risk pathways are likely contributing to disease persistence. This reinforces the need for a broad, multifaceted approach to TB control, recognising that no single intervention will be sufficient and that managing risks from long range and local cattle movements, residual infection, and wildlife in parallel remains essential.

Areas of Concern

There was one hotspot active in Leicestershire at the start of 2025: Hotspot 23 (HS23), visible in Figures 9, 10, 11, and 13.

Further details on TB hotspots in the Low Risk Area of England can be found following the link.

In this report the number of incidents per year in each Hotspot has been gathered using field veterinarian data. Previously, spatial GIS data was used to inform whether an incident was inside of a designated Hotspot. This change may create discrepancies between the number of incidents per year reported here, compared to previous reports.

Furthermore, incidents shown on the maps (Figures 9,11,13) are point located at the centre of their County Parish Holding number (CPH). Incidents discussed in this section may also include holdings which are point located outside the boundary, but with land inside the hotspot boundary.

Hotspot 23

HS23 was first established in 2018 in north-east Leicestershire (Edge Area) and south-west Lincolnshire (Low Risk Area) following the detection of a cluster of OTF-W cattle TB incidents associated with WGS clade B3-11 (formerly genotype 25:a). M. bovis of clade B3-11 was also isolated in 3 ‘found dead’ badger carcases in the hotspot that were submitted to APHA for post-mortem examination and culture (2 in 2019, one from Leicestershire and one from Lincolnshire, and one from 2020 in Lincolnshire). The boundary of the hotspot was shifted in 2020 and again in 2024, both times in response to the local epidemiological disease situation. Since 2020, small parts of south-east Nottinghamshire (Edge Area) have also been included in the boundary.

Herds across the hotspot were subjected to annual TB surveillance testing (with supplementary radial testing around OTF-W incidents) since September 2020 and then to 6-monthly testing (without radial testing) from September 2024 onwards. There were 9 new OTF-W incidents detected within HS23 in 2025 (11 in 2024), and 6 new OTF-S incidents detected in 2025 (5 in 2024). 12 of these incidents were in Leicestershire. Figures 9, 11, and 13 show the location of the farm point of the herd affected by the TB incident in question. For HS23, any incident pertaining to a herd with cattle land within the hotspot counts as a HS23 incident, even if the farm point is located outside of the hotspot. The Leicestershire HS23 incidents in 2025 were 571, 379, 688, 566, 28, 202, 203, 204, 677, 654, 222, and 3.

All 9 of the new OTF-W incidents and 3 of the 6 new OTF-S incidents detected in HS23 in 2025 involved herds in the Leicestershire portion of the hotspot, compared to 10 OTF-W and 4 OTF-S incidents in 2024. The annual number of OTF-W incidents in the Leicestershire part of HS23 has fluctuated between 3 and 10 since the hotspot was established in 2018. By contrast, the number of OTF-S incidents gradually increased from 5 in 2018 to 17 in 2020, followed by a decrease thereafter (Figure 14). One new OTF-S incident and no new OTF-W incidents were detected in the Lincolnshire portion of HS23 in 2025, compared to one OTF-W and no OTF-S incidents the previous year. The annual number of OTF-W incidents in this part of HS23 fluctuated between 2 and 3 since establishment of the hotspot until 2023. The number of OTF-S incidents also ranged between 2 and 3 from 2018 to 2022, then increased to 5 in 2023.

In 2025, there were 2 new TB incidents in the Nottinghamshire portion of HS23, both OTF-S. The annual number of OTF-W incidents in this part of HS23 has mostly ranged between 1 and 3, except in 2018 when there were 4 incidents. The number of OTF-S incidents increased from one in 2018 to 3 in 2020. Three new OTF-S incidents were detected each year thereafter, except for one in 2024 and 2 in 2025.

In 2025, the following WGS clades were detected in the hotspot: B3-11 from 7 incidents, B6-62 from 1 incident, and B6-14 from 1 incident. All of these were detected in Leicestershire herds (no WGS clades were isolated from Lincolnshire or Nottinghamshire herds in HS23 in 2025). Both non-B3-11 clades were detected in animals that were purchased from outside of Leicestershire and HS23.

Badger controls have taken place in HS23 from 2020 onwards, due to concerns about the role played by infected badgers in spreading infection to and between cattle herds within the hotspot. In Leicestershire, badger culling took place from 2020 to 2023 under an intensive culling licence and from 2024 to 2025 under a supplementary culling licence. In the Lincolnshire part of the hotspot, culling took place from 2020 to 2024 and then badger vaccination replaced licensed culling in 2025. See April 2026: TB hotspots in the Low Risk Area of England - GOV.UK (Area 54) and Summary of 2025 supplementary badger control operations - GOV.UK (Area 48) for further information.

M. bovis isolates cultured from badgers culled in Leicestershire and Lincolnshire in the hotspot over the years have been WGS clade B3-11 and have been genetically related to cattle isolates in the hotspot.

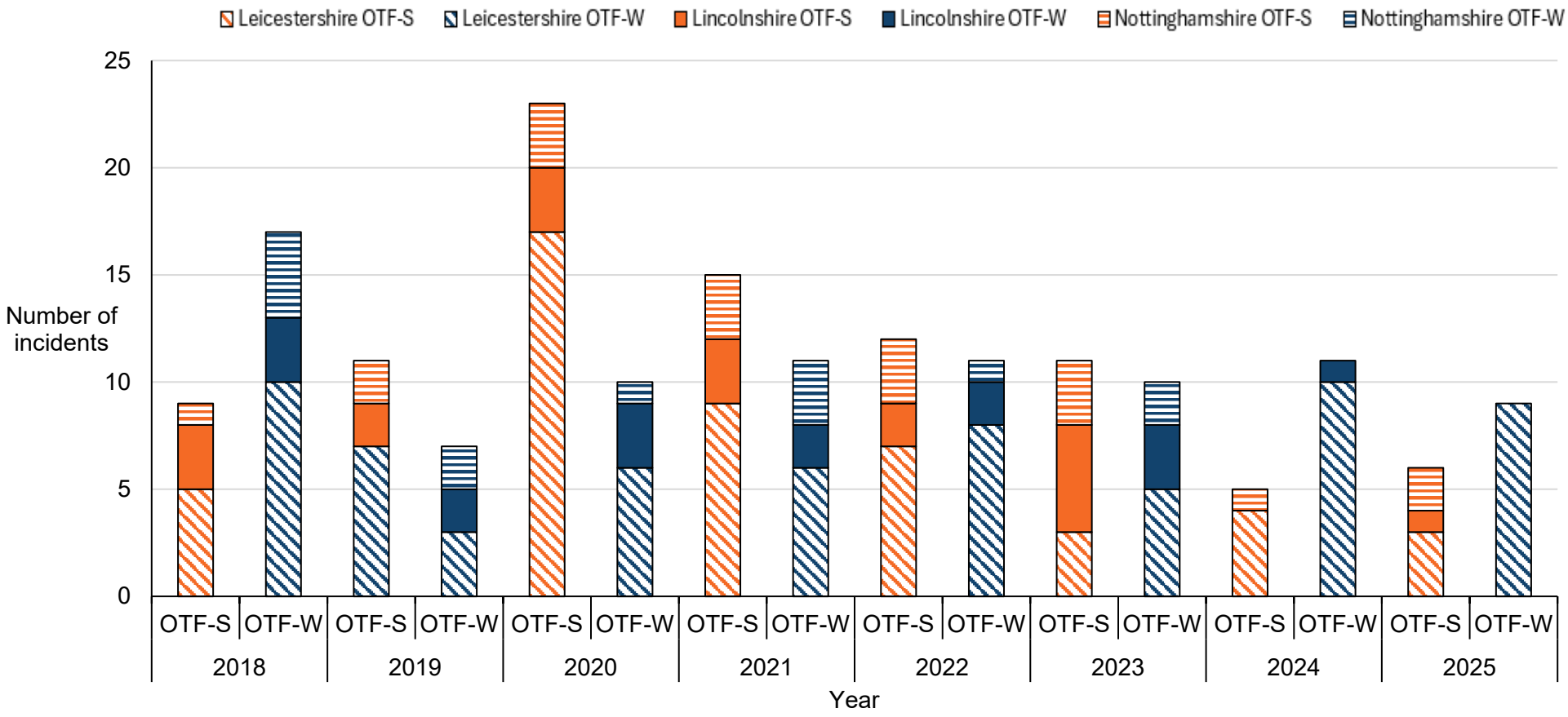


Figure 14: Annual number of new TB incidents detected in HS23, from 2018 to 2025.

Forward look

A key concern for Leicestershire in 2025 was the continued increase in TB incidents, rising year-on-year from 2023 through to 2025. This trend has occurred despite a small reduction in the number of herds from 2024 to 2025. As a result, it remains uncertain whether Leicestershire will meet the target of Officially TB-Free (OTF) status by 2038. Investigation of TB incidents starting in 2025 suggests that the causes of incidents in the county are multifactorial and thus interventions by government, keepers, private vets, and industry will need to take this into account.

However, there were some encouraging signs. Within Hotspot 23, the number of incidents has reduced steadily year-on-year since the peak of 33 incidents in 2020. This is likely in response to the effective application of targeted cattle and badger interventions within the hotspot.

WGS data from Leicestershire OTF-W incidents in 2025 provided clear evidence that the endemic genetically-related B3-11 infection in HS23 was not contained with the hotspot boundary and in fact was endemic across large parts of the centre, south, and south-west of the county. B3-11 infection in Leicestershire herds both within and outside of HS23 is genetically related (with isolates in both areas being found on both Section A and Section B of the B3-11 tree). HS23 was originally established in the part of Lincolnshire bordering north-east Leicestershire to protect the disease status of this part of the Low Risk Area. However, in 2025, the disease picture in the hotspot actually reflects genetically-related infection across Leicestershire, not all of which is currently being captured by HS23 control measures. With the TB Strategy Refresh published in June 2026, there is scope to adopt more dynamic and responsive control measures that adapt to the local TB epidemiology and disease trends. Thus, going forwards, a key recommendation will be to look at whether HS23 control measures need to be adjusted to reflect the B3-11 infection outside of the current HS23 boundary that is genetically related to that within the hotspot.

The TB Strategy Refresh provides a constructive framework for future action, placing a strong emphasis on controlling infection within cattle through risk-based measures and enhanced testing. Improved data availability is highlighted as a priority, enabling farmers to make more informed purchasing and management decisions to mitigate disease risk, and an emphasis on improved biosecurity. The strategy also highlights the highly anticipated implementation of cattle BCG vaccination alongside a licensed DIVA skin test by 2030.

In addition, the strategy promotes better use of surveillance data to understand the risk posed by infected wildlife and non-bovine species, ensuring that any interventions are proportionate and evidence-based. Targeted badger vaccination in high-priority areas will play an important role in reducing transmission risk to cattle, supported by strengthened on-farm biosecurity and responsible risk management practices.

Successful delivery will depend on strong collaboration between industry, government, veterinary surgeons, and scientists, underpinned by improved data sharing and greater local ownership of non-statutory control measures.

In the context of Leicestershire, priority actions should include:

- engaging consistently with stakeholders, including local ownership groups and keepers, to support the cattle industry in tackling disease
- encouraging cattle keepers to use available data (including online tools such as ibTB - Mapping bovine TB (bTB) in England and Wales) to enable them to make more informed cattle purchasing decisions to reduce the risk of bringing infected animals into their herds
- encouraging the consistent adoption of robust on-farm biosecurity measures to reduce opportunities for transmission between cattle and wildlife, and between neighbouring herds
- work within government to look at how farm-level data can be made available to cattle keepers so that they can be empowered to make risk-based herd-management decisions in collaboration with private veterinary surgeons
- promoting the use of additional discretionary surveillance testing in cattle herds where appropriate, including expanding the use of IFN-γ testing
- maintaining and building upon wildlife-focused measures within HS23, including badger vaccination, biosecurity, and proportionate management of local wild deer populations where appropriate
- expanding the consistent use of data-driven methods of analysis within APHA to support APHA vets in assessing risk pathways for TB incidents
- further work on how control measures for HS23 can be adapted and potentially expanded to capture HS23 related, endemic B3-11 infection across the county
- continuing to strengthen diagnostic capability, surveillance systems, and epidemiological understanding to improve the timely detection and removal of infection from cattle herds

Overall, while the current trajectory presents challenges, the combination of targeted local measures and the strategic direction set out in the 2026 bovine TB Strategy Refresh provides a clear pathway to improving disease control outcomes.

Appendix 1: cattle industry demographics

Table 1: Number (and percentage of total) of active cattle herds on the last day of the reporting year by herd type in Leicestershire (2023 to 2025).

Source: Sam

Breed purpose	2023	2024	2025
Beef	715 (80%)	711 (79%)	702 (79%)
Dairy	139 (15%)	138 (15%)	140 (16%)
Other	29 (3%)	32 (4%)	31 (3%)
Undetermined*	16 (2%)	19 (2%)	16 (2%)
Total	**899**	**900**	**889**

* Undetermined herd type herds are those are for which a herd type record is not available in Sam.

Table 2: Number of active herds on the last day of the reporting year in Leicestershire by herd size and herd type (dairy, beef, other and undetermined), between 2023 and 2025. Sources: Herds and herd type data from Sam, herd size data from RADAR (as of 31 December each year).

Year	Herd size	Beef	Dairy	Other	Undetermined	Total
2023	0	106	13	10	1	130
2023	1 to 50	309	12	14	6	341
2023	51 to 100	125	11	2	1	139
2023	101 to 200	103	23	2	1	129
2023	201 to 350	49	34	0	2	85
2023	351 to 500	6	14	0	2	22
2023	Greater than 500	17	32	1	3	53
2023	**Total**	**715**	**139**	**29**	**16**	**899**
2024	0	118	16	11	3	148
2024	1 to 50	306	11	15	7	339
2024	51 to 100	120	12	3	1	136
2024	101 to 200	96	21	2	2	121
2024	201 to 350	48	31	0	3	82
2024	351 to 500	9	17	1	0	27
2024	Greater than 500	14	30	0	3	47
2024	**Total**	**711**	**138**	**32**	**19**	**900**
2025	0	122	16	11	0	149
2025	1 to 50	311	16	14	8	349
2025	51 to 100	111	10	4	2	127
2025	101 to 200	92	22	2	2	118
2025	201 to 350	41	33	0	1	75
2025	351 to 500	13	15	0	1	29
2025	Greater than 500	12	28	0	2	42
2025	**Total**	**702**	**140**	**31**	**16**	**889**

Appendix 2: summary of headline cattle TB statistics

Table 3: Herd-level summary statistics for TB in cattle in Leicestershire between 2023 and 2025.

Source: Sam

Herd-level statistics	2023	2024	2025
(a) Total number of cattle herds live on Sam at the end of the reporting period	899	900	889
(b) Total number of whole herd skin tests carried out at any time in the period	846	1,005	1,011
(c) Total number of OTF cattle herds having TB whole herd tests during the period for any reason	735	727	712
(d) Total number of OTF cattle herds at the end of the report period (herds not under any type of TB movement restrictions)	831	818	819
(e) Total number of cattle herds that were not under restrictions due to an ongoing TB incident at the end of the report period	863	860	854
(f.1) Total number of new OTF-S TB incidents detected in cattle herds during the report period	28	21	27
(f.2) Total number of new OTF-W TB incidents detected in cattle herds during the report period	7	22	23
(f.3) Total number of new TB incidents (OTF-W and OTF-S) detected in cattle herds during the report period	6	2	7

Herd-level statistics	2023	2024	2025
(g.1) Of the new OTF-W herd incidents, how many can be considered the result of movement, purchase or contact from or with an existing incident based on current evidence?	1	9	8
(g.2) Of the new OTF-W herd incidents, how many were triggered by skin test Reactors or twice-inconclusive reactors (2xIRs) at routine herd tests?	1	9	8
(g.3) Of the new OTF-W herd incidents, how many were triggered by skin test Reactors or 2xIRs at other TB test types (such as forward and back-tracings, contiguous or check tests)?	6	13	15
(g.4) Of the new OTF-W herd incidents, how many were first detected through routine slaughterhouse TB surveillance?	2	4	6
(h.1) Number of new OTF-W incidents revealed by enhanced TB surveillance (radial testing) conducted around those OTF-W herds	0	0	0
(h.2) Number of new OTF-S incidents revealed by enhanced TB surveillance (radial testing) conducted around those OTF-W herds	9	15	15
(i) 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)	26	27	24
(j) New confirmed (positive M. bovis culture) incidents in non-bovine species detected during the report period (indicate host species involved)	0	0	0
(k.1) Number of grazing approved finishing units active at end of the period	12	12	10

Herd-level statistics	2023	2024	2025
(k.2) Number of non-grazing approved finishing units active at end of the period	0	0	0
(k.3) Number of grazing exempt finishing units active at end of the period	0	0	0
(k.4) Number of non-grazing exempt finishing units active at end of the period	893	891	881

Table 4: Animal-level summary statistics for TB in cattle in Leicestershire between 2023 and 2025.

Source: Sam

Animal-level statistics (cattle)	2023	2024	2025
(a.1) Number of cattle tested with tuberculin skin tests in the period	132,706	167,599	159,973
(a.2) Number of cattle tested with additional IFN-γ blood tests in the period	3,440	4,726	5,411
(a.3) Total number of cattle tested with tuberculin skin tests or additional IFN-γ blood tests in the period (animal tests)	136,146	172,325	165,384
(b.1) Reactors detected by tuberculin skin tests during the year	174	237	196
(b.2) Reactors detected by additional IFN-γ blood tests (skin-test negative or IR animals) during the year	115	147	241
(c) Reactors detected during year per incidents disclosed during year	8.3	8.9	8.7
(d) Reactors per 1,000 animal tests	2.1	2.2	2.6
(e.1) Additional animals slaughtered during the year for TB control reasons (dangerous contacts, including any first time IRs)	6	5	25
(e.2) Additional animals slaughtered during the year for TB control reasons (private slaughters)	2	18	3

Animal-level statistics (cattle)	2023	2024	2025
(f) Slaughterhouse cases (tuberculous carcases) reported by the Food Standards Agency (FSA) during routine meat inspection	11	6	12
(g) SLH cases confirmed by M. bovis PCR testing or bacteriological culture	5	4	9

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 in the table above.

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

Appendix 3: suspected sources of M. bovis infection for all the new OTF-W and OTF-S incidents identified in the report period

In 2025, 39 out of 50 (78%) new TB incidents in Leicestershire received a preliminary or final APHA veterinary investigation to identify the source of infection. Not all Disease Report Form (DRF) investigations were carried out in 2025.

Each TB incident investigated could have up to 3 potential risk pathways identified. Each risk pathway is given a score that reflects the likelihood of that pathway bringing TB into the herd. The score is recorded as either:

- definite (score 8)
- most likely (score 6)
- likely (score 4)
- possible (score 1)

The sources for each incident are weighted by the certainty ascribed. Any combination of definite, most likely, likely, or possible can contribute towards the overall picture for possible routes of introduction into a herd. If the overall score for a herd is less than 6, then the score is made up to 6 using the ‘Other or unknown source’ option. Buffering up to 6 in this way helps to reflect the uncertainty in assessments where only ‘likely’ or ‘possible’ sources are identified.

Table 5 combines the data from multiple herds and provides the proportion of pathways in which each source was identified, weighted by the certainty that each source caused the introduction of TB. The output does not show the proportion of herds where each pathway was identified (this is skewed by the certainty calculation). WGS of M. bovis isolates can be a powerful tool in identifying a likely source of infection, however WGS clades are not able to be determined for OTF-S herds. As a result of varying levels of uncertainty, only broad generalisations should be made from these data. A more detailed description of this methodology is provided in the explanatory supplement for the annual reports 2025.

Table 5: Suspected sources of M. bovis infection for the 39 incidents with a preliminary or a final veterinary assessment from APHA in Leicestershire in 2025.

Source of infection	Possible (1)	Likely (4)	Most likely (6)	Definite (8)	Weighted contribution
Badgers	19	10	15	0	41.6%
Cattle movements	12	5	10	2	30.8%
Contiguous	2	2	0	0	2.6%
Residual cattle infection	2	4	2	0	8.7%
Domestic animals	1	0	0	0	0.3%
Non-specific reactor	0	0	0	0	0.0%
Fomites	5	1	0	0	2.3%
Other wildlife	7	0	0	0	2.5%
Other or unknown source*	0	0	0	0	11.1%

Please note that each TB incident could have up to 3 potential pathways, so totals may not equate to the number of actual incidents that have occurred.

* For the purpose of reflecting uncertainty in the overall picture, this pathway may be ascribed additional weighting where there is low certainty (such as ‘possible’ or ‘likely’) within other pathways.

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