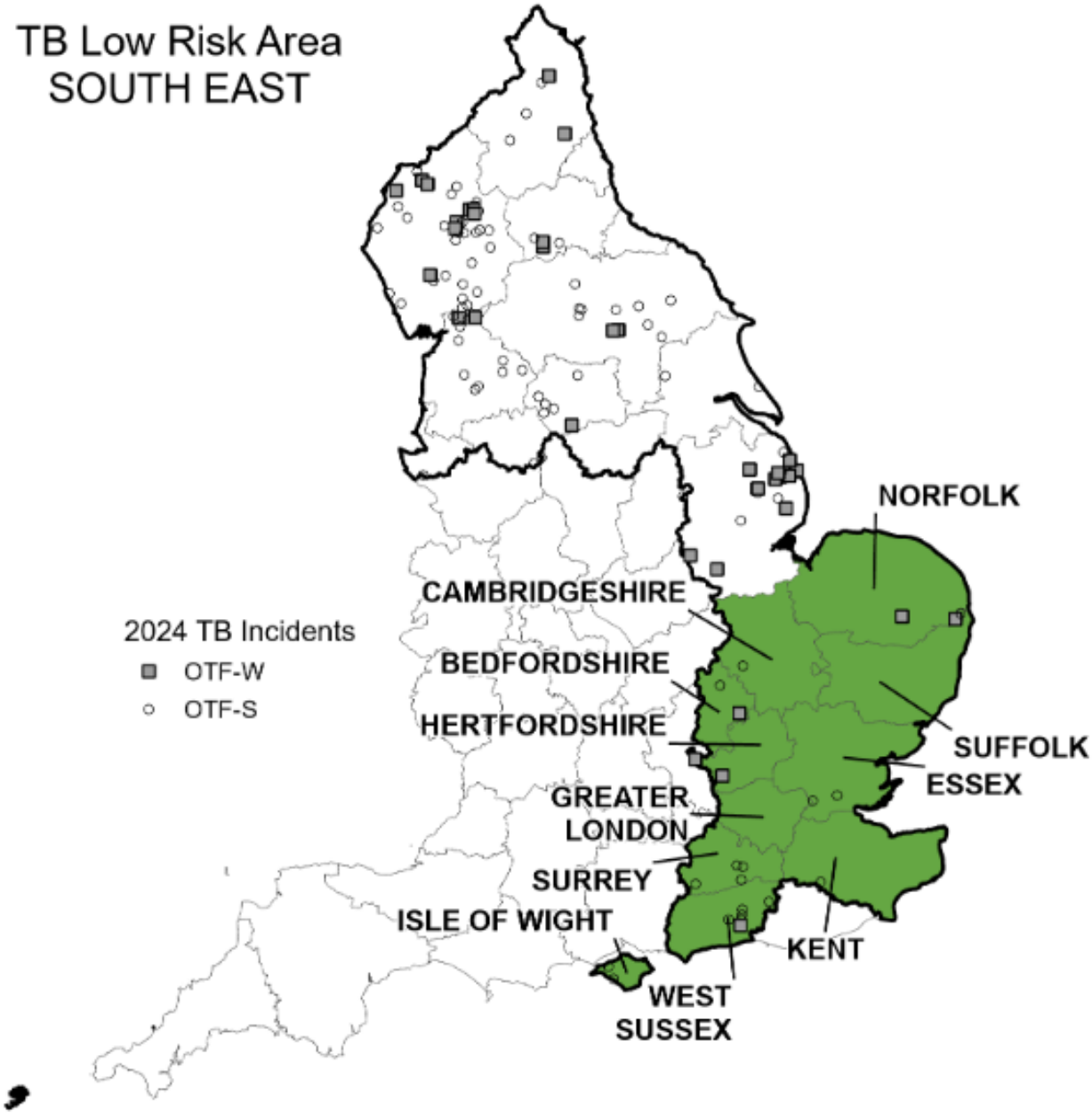
Animal &
Plant Health
Agency

Year End Descriptive Epidemiology Report: Bovine TB in the Low Risk Area of England 2024: South East of England



Contents

Introduction

The Low Risk Area (LRA) was established in 2013, along with the Edge and High Risk Areas of England. In 2014 the 3 bovine tuberculosis (TB) risk areas were incorporated into the UK government's strategy to achieve Officially TB 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 adjust the approaches to TB surveillance and control in each risk area accordingly. Overall, the LRA has a very low and stable incidence of TB infected herds. The current strategy for the LRA seeks to mitigate the risk of TB incursions via cattle movements and rapidly contain and eradicate any new foci of infection through:

- mandatory pre- and post- movement testing of cattle entering the LRA from higher risk areas of the UK
- more sensitive testing of infected herds
- temporarily enhanced TB surveillance (radial and hotspot testing) in the vicinity of herds experiencing lesion and/or PCR (Polymerase Chain Reaction) test (or culture) positive incidents of TB

The aim of this combination of measures is to preserve the favourable disease status of this area of England so that its constituent counties can be declared OTF as soon as possible.

This report describes the frequency and geographical distribution of TB in 2024 in cattle herds in the South East of England, which is part of the LRA. The South East region of the LRA includes 11 counties: Bedfordshire, Cambridgeshire, Essex, Greater London, Hertfordshire, Isle of Wight, Kent, Norfolk, Suffolk, Surrey, and West Sussex. It excludes East Sussex, however, which is part of the Edge Area. In 2024, 19% of all new TB incidents in the LRA were detected in the South East of England.

TB in cattle and other mammals is primarily caused by infection with the bacterium Mycobacterium bovis (M. bovis), and the disease is subsequently referred to as 'TB' in this report. Although other sources may refer to TB 'breakdowns', this report will use the term 'incidents' throughout. 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

Details of the data handling methodology used in this report, a glossary of terms, and the TB control measures adopted in the LRA, can be found in the explanatory supplement for the annual reports 2024.

Classification of TB incidents

Unless otherwise specified, this report includes all new TB incidents detected during the reporting period (1 January to 31 December 2024). 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, interferon gamma 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 interferon gamma test-positive animals), but without subsequent detection of TB lesions or positive PCR test (or culture) results in any of those animals.

Cattle herds can also have their OTF status suspended without necessarily experiencing a TB incident if, for instance, a TB test becomes overdue, or pending laboratory tests of suspected cases of TB reported at routine post-mortem meat inspection during commercial slaughter of cattle.

In the South East there were 9 Licensed Finishing Units (LFU) active during 2024 (1 each in Essex and Kent, 2 each in Norfolk and Suffolk, and 3 in Cambridgeshire). There were no new TB incidents, and no incidents which closed in LFUs in 2024. Incidents in LFUs are excluded from the numbers presented in this report due to the limited epidemiological impact of these incidents.

Cattle industry

The cattle industry in the South East of England is predominantly made up of beef herds. There were a total of 3,313 active cattle herds in the region in 2024, with the majority located in Norfolk, Kent, Suffolk and West Sussex. More than half of the cattle enterprises in each county were small herds consisting of no more than 100 animals, with herd sizes remaining relatively stable compared to the previous year (Appendix 1).

There were 4 livestock markets in the South East, located in Essex, Kent and Norfolk, and a collection centre operating in Essex. These were used regularly to trade cattle within and outside the South East region. There were no sales or collections approved by the Animal and Plant Health Agency (APHA) for the onward movement of cattle from TB-restricted premises directly to a slaughterhouse (SLH) in this region. Orange markets for the sale of negatively tested cattle from TB-restricted herds are not permitted within the LRA and therefore do not operate within the South East region.

In the South East region there were 9 LFUs and 1 Exempt Finishing Unit (EFU) operating during 2024. All of these units are subject to annual re-approval visits by the APHA.

Appendix 2 provides a summary of headline cattle TB statistics in the South East.

Number of new TB incidents

A total of 23 new TB herd incidents were disclosed across the South East region of the LRA during 2024, a 44% decrease compared to 2023 (41). Of these incidents, 6 were OTF-W (9 in 2023) and 17 were OTF-S (32 in 2023) (Figures 1a to 1k).

The 6 OTF-W incidents were disclosed in Bedfordshire (1), Hertfordshire (2), Norfolk (2) and Surrey (1). Of the 17 OTF-S incidents, 4 were disclosed in Surrey and 5 in West Sussex. There were 2 incidents in both Essex and the Isle of Wight. One incident was disclosed respectively in Bedfordshire, Cambridgeshire, Kent and Suffolk.

All counties saw a decrease in the total number of new incidents between 2023 and 2024, apart from Norfolk and the Isle of Wight (both of which experienced an increase from 1 to 2), and Greater London (which was unchanged with no cases). The reductions occurred in Bedfordshire (3 to 2), Cambridgeshire (4 to 1), Essex (3 to 2), Hertfordshire (5 to 2), Kent (6 to 1), Suffolk (3 to 1), Surrey (5 to 4), and West Sussex (10 to 6).

The total number of incidents in the South East has fluctuated in recent years, reaching a peak of 50 incidents disclosed in 2019. With only 23 incidents disclosed in 2024, this was the lowest number recorded across the region since 2017.

In Bedfordshire the number of new TB incidents has fluctuated over the past decade, with the number of OTF-S incidents peaking in 2018 at 4 incidents, and one incident disclosed in each year of 2016, 2019, 2021 and 2024 (Figure 1a). OTF-W incidents in the county peaked in 2021 at 3 and varied between 0 and 2.

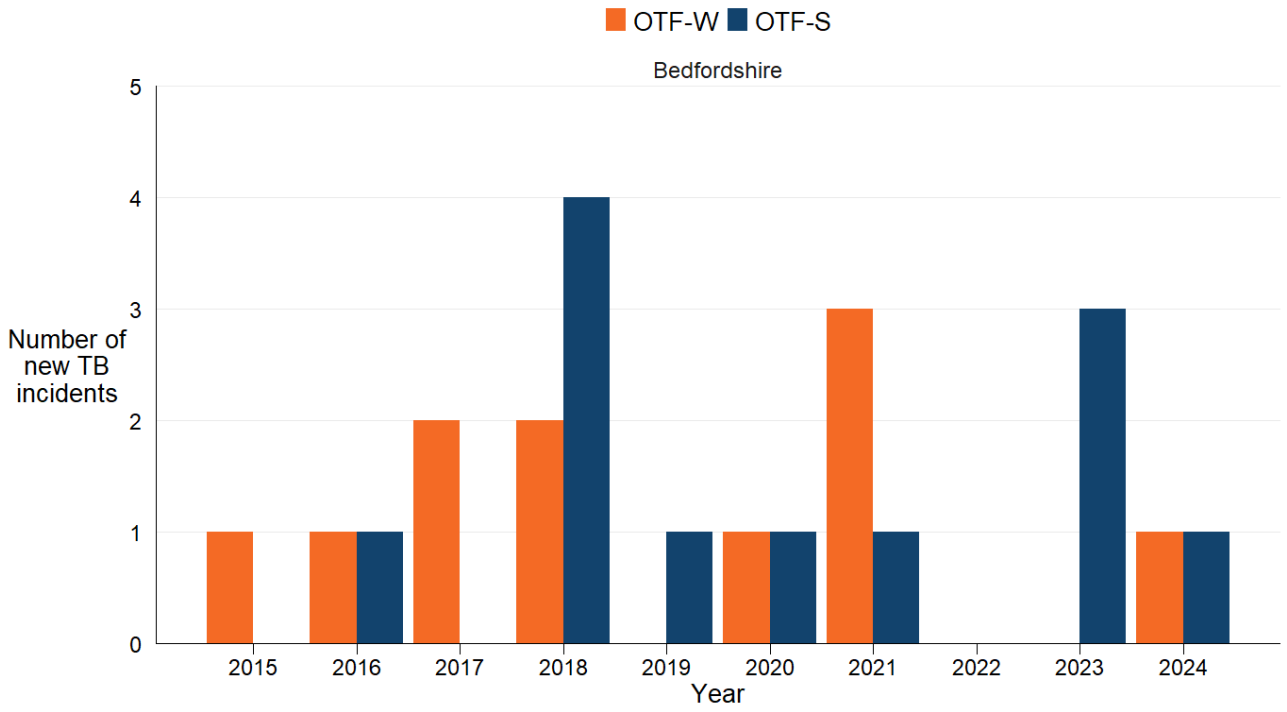


Figure 1a: Annual number of new TB incidents in Bedfordshire from 2015 to 2024.

In Cambridgeshire the number of OTF-W incidents varied between 0 and 3 between 2015 and 2024, peaking at 3 in 2015 and 2016 (Figure 1b). There was a slightly greater number of OTF-S cases detected in this county, with at least 1 incident disclosed each year, reaching a maximum of 5 incidents in 2022.

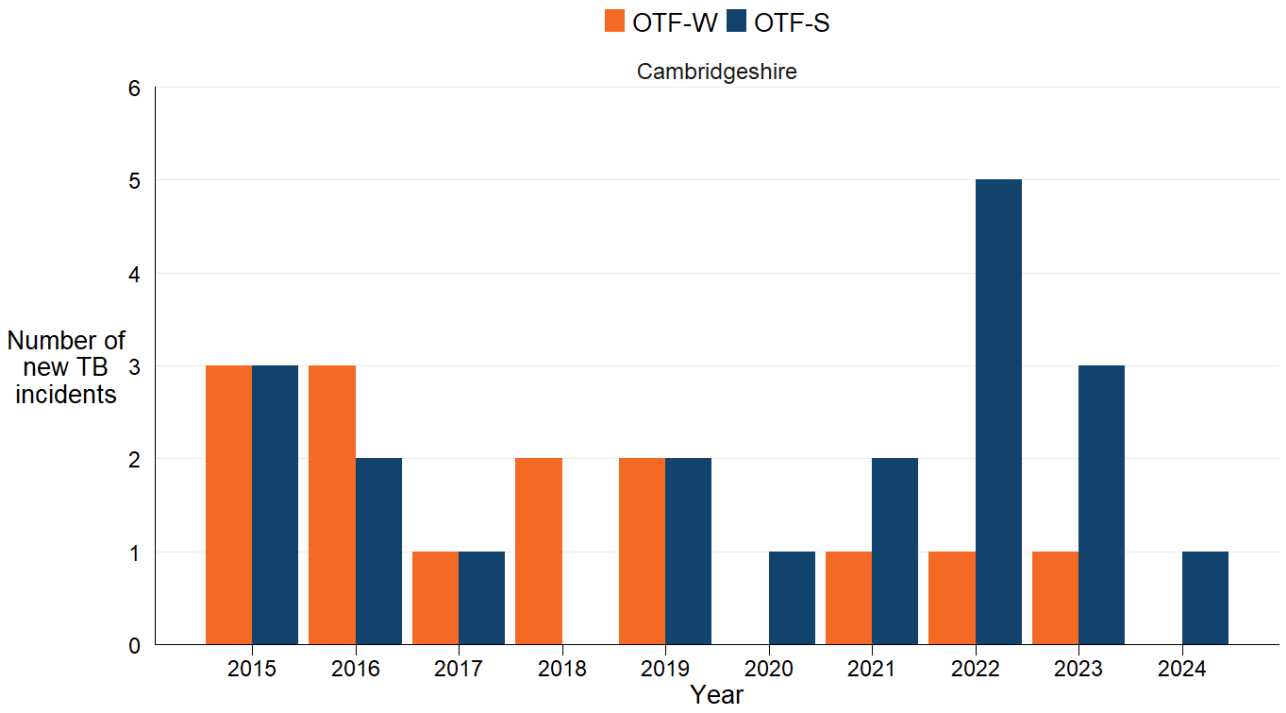


Figure 1b: Annual number of new TB incidents in Cambridgeshire from 2015 to 2024.

In Essex the number of OTF-S incidents fluctuated between 0 in 2020 and 5 in 2022 (Figure 1c). There were fewer OTF-W cases, varying between 4 cases in 2015 and 0 incidents in 2024.

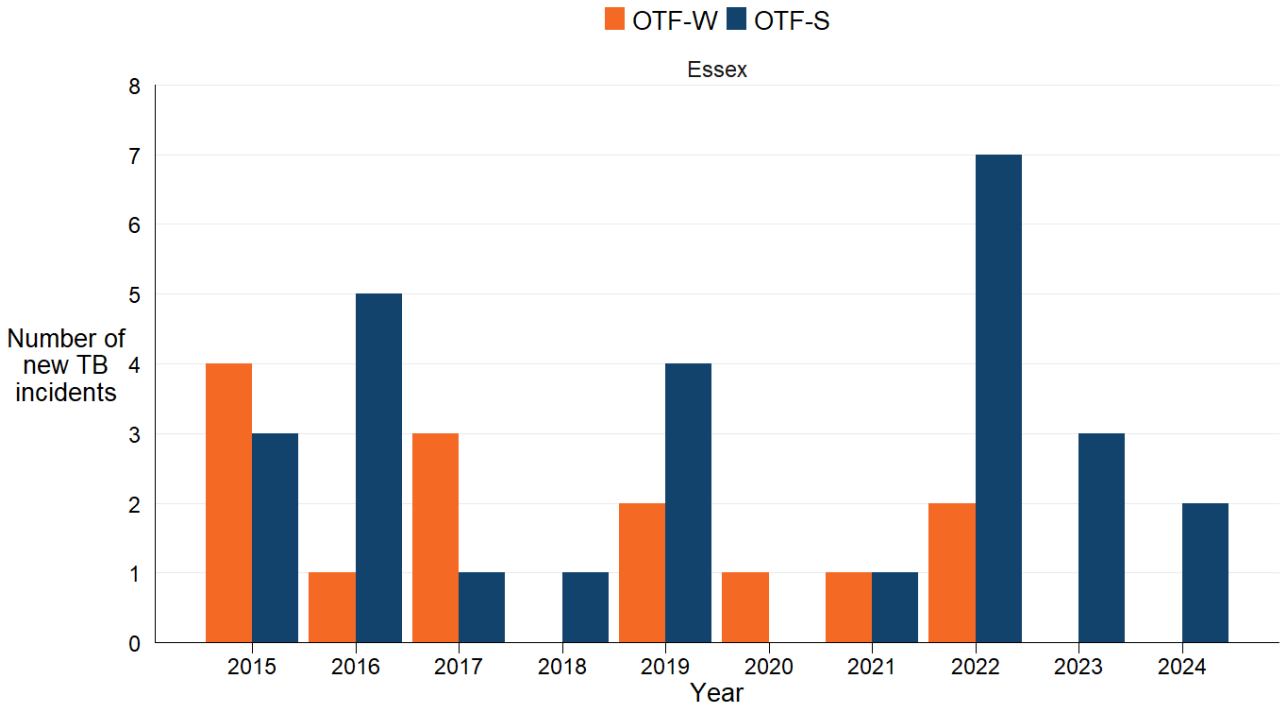


Figure 1c: Annual number of new TB incidents in Essex from 2015 to 2024.

Greater London experienced very few incidents across the last decade, with one OTF-S incident disclosed in 2015, 2018 and 2022, and one OTF-W incident in 2019 (Figure 1d).

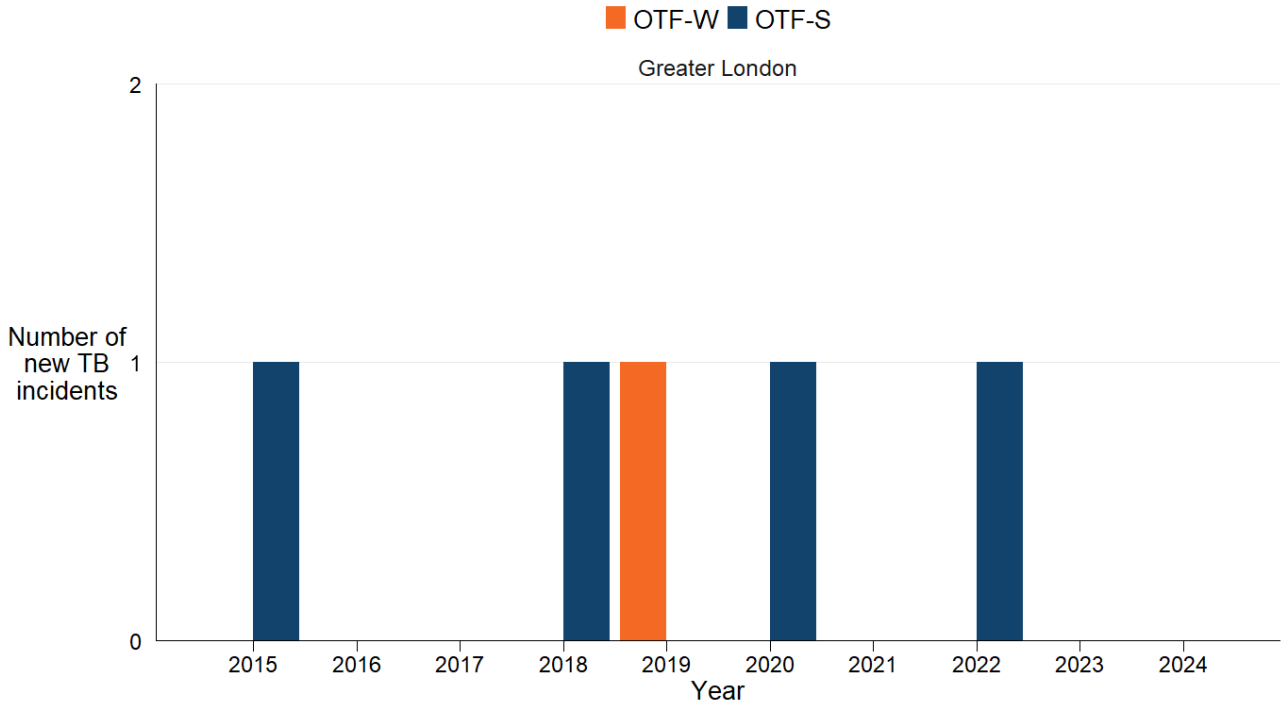


Figure 1d: Annual number of new TB incidents in Greater London from 2015 to 2024.

In Hertfordshire the number of OTF-W incidents remained relatively consistent between 2015 and 2024, ranging from 0 to 3 incidents per year. OTF-S incident numbers varied from 0 cases in 2016 and 2024 to a maximum of 4 in 2019 (Figure 1e).

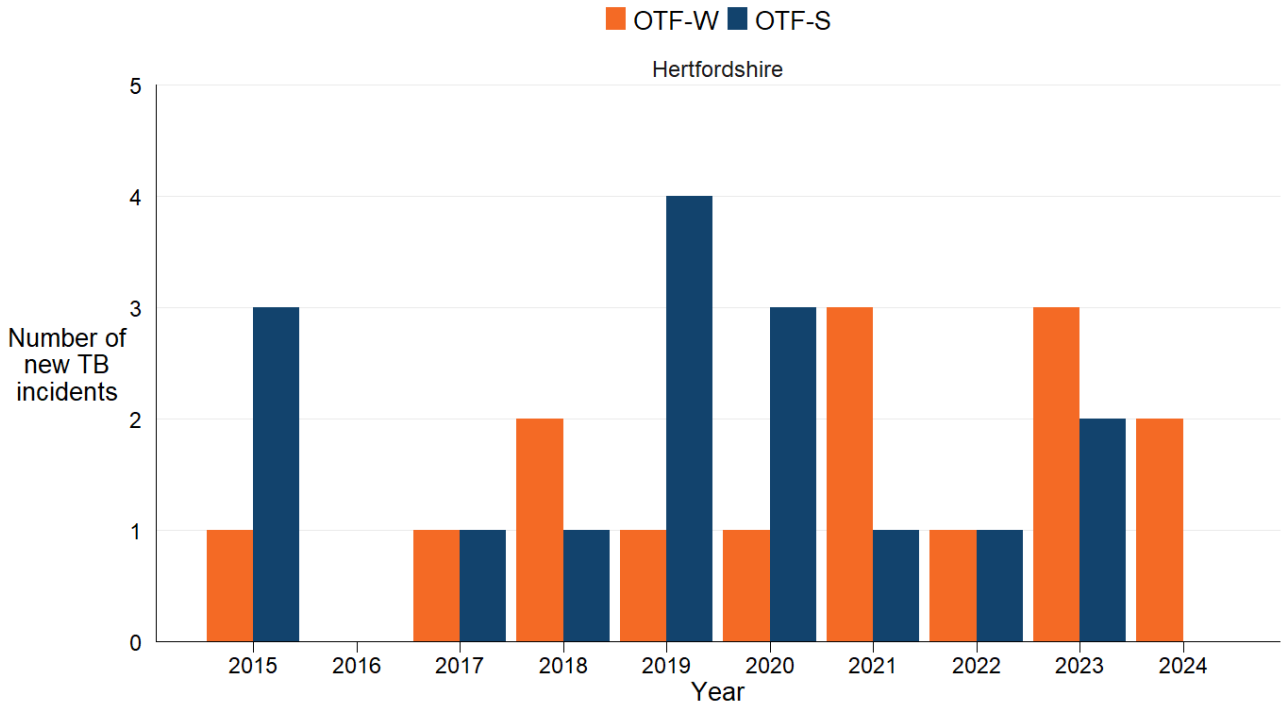


Figure 1e: Annual number of new TB incidents in Hertfordshire from 2015 to 2024.

In the Isle of Wight there were only 5 OTF-W incidents over the past 10 years, 2 in 2018 and one in 2016, 2019 and 2022 (Figure 1f). OTF-S incidents ranged from 0 to a peak of 5 in 2018.

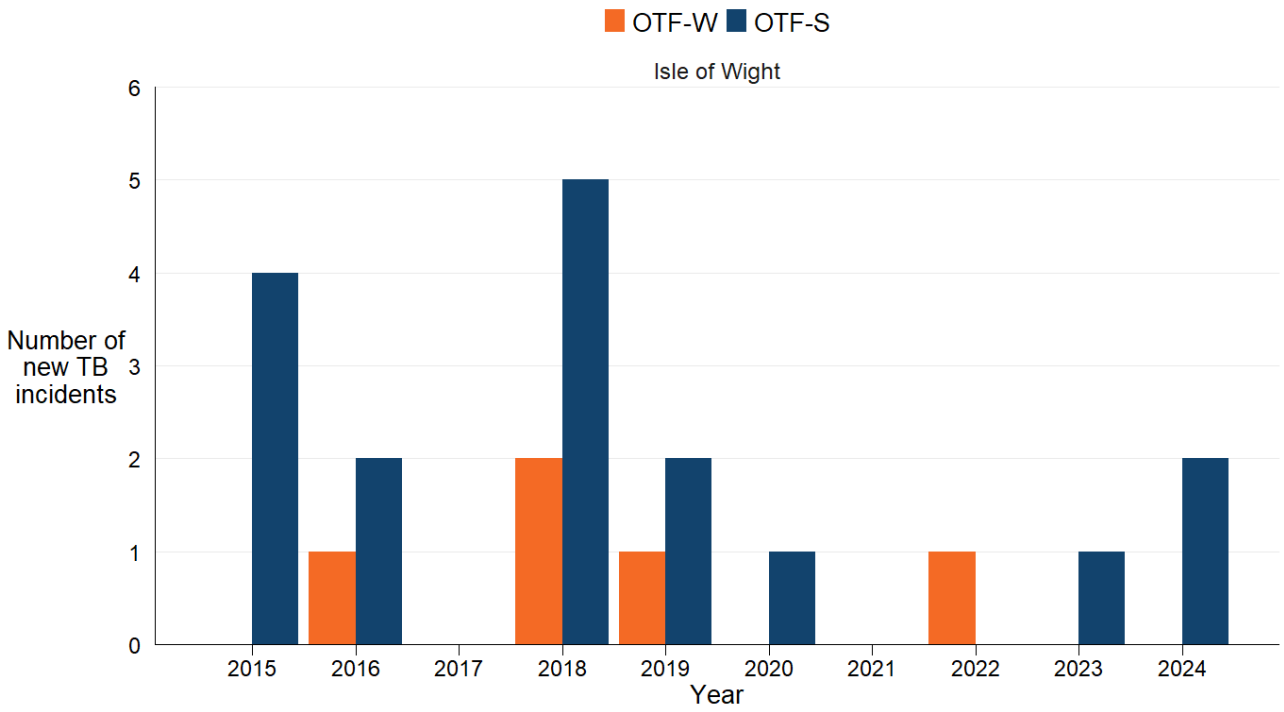


Figure 1f: Annual number of new TB incidents in Isle of Wight from 2015 to 2024.

There have only been 3 OTF-W incidents in Kent over the past decade, one in 2018, 2019 and 2022 (Figure 1g). OTF-S cases have been more numerous, varying widely from 1 in 2017 and 2024 to a peak of 9 in 2020.

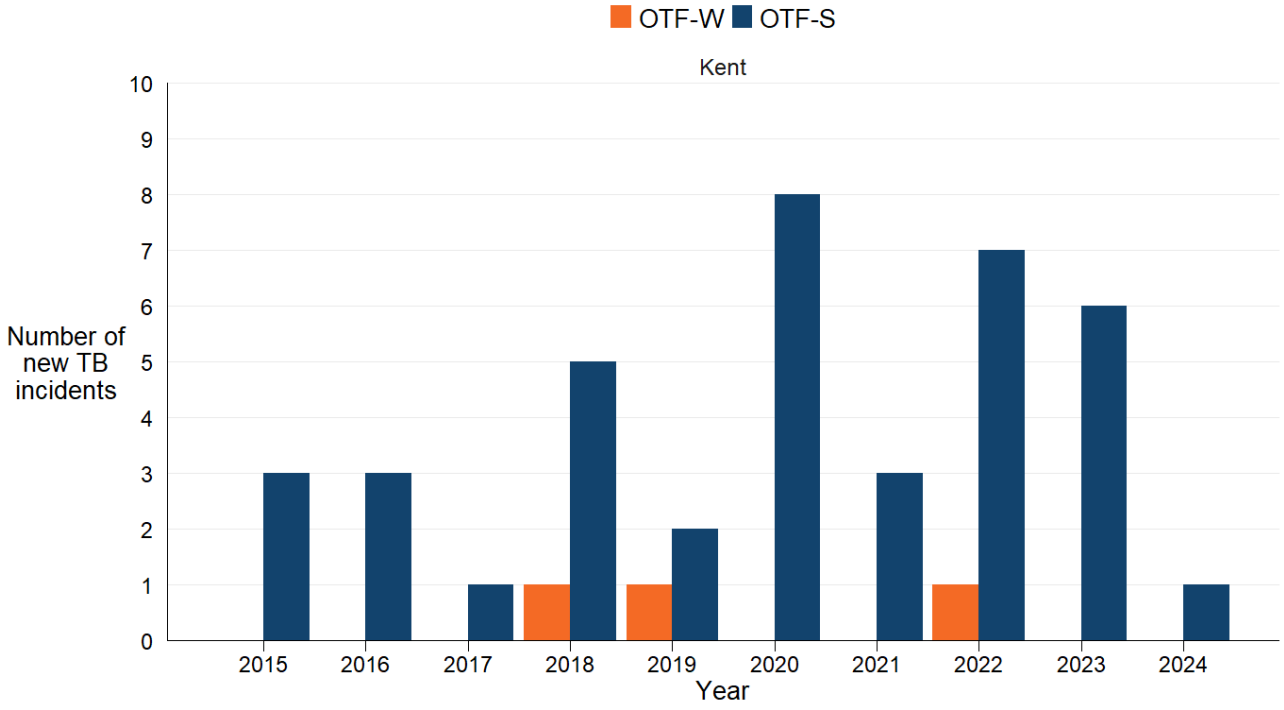


Figure 1g: Annual number of new TB incidents in Kent from 2015 to 2024.

In comparison, Norfolk experienced more frequent OTF-W incidents over 2015 to 2019 (10 in total), however 0 were disclosed in 2020-2022, 1 in 2023 and 2 in 2024 (Figure 1h). There were also more frequent OTF-S incidents disclosed in 2015-2022, varying from 1 to 6 in 2019. There have been no OTF-S incidents disclosed in the county since 2022.

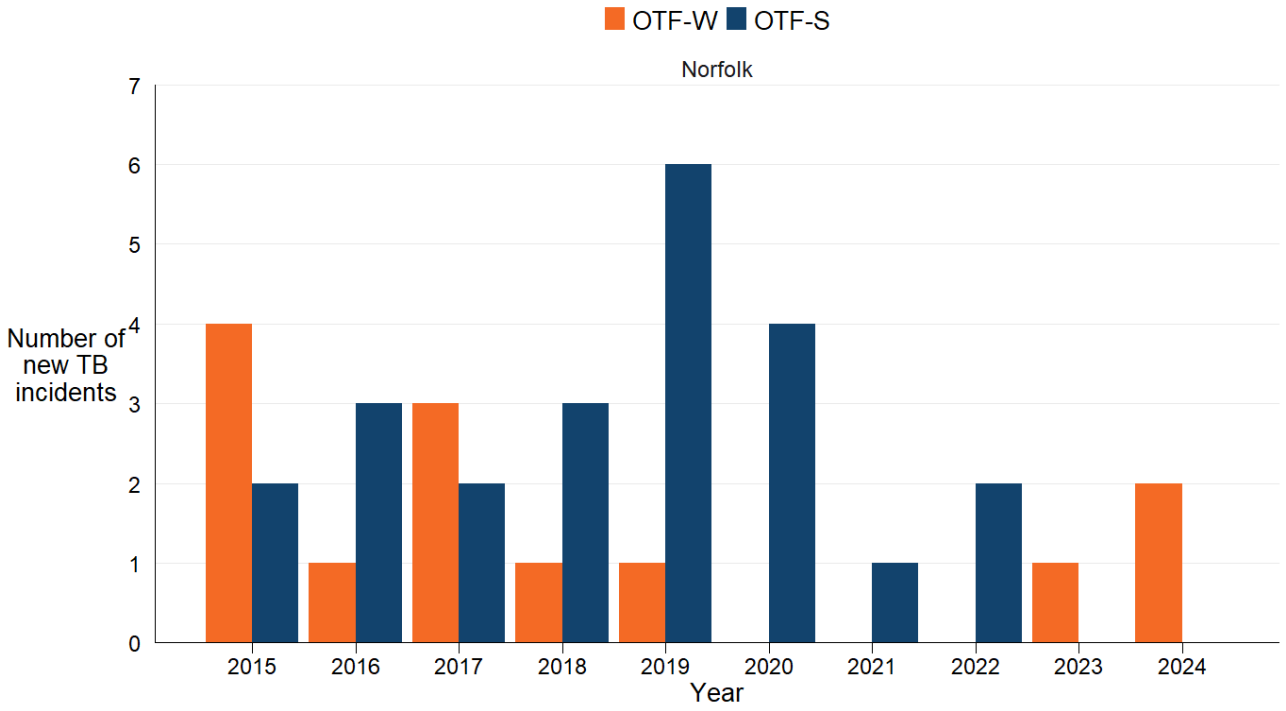


Figure 1h: Annual number of new TB incidents in Norfolk from 2015 to 2024.

In Suffolk, no OTF-W incidents have been disclosed since 2021: there was a peak of 4 in 2017, and one in each of 2015, 2016, and 2019-2021 (Figure 1i). Numbers of OTF-S incidents have remained relatively consistent, ranging between 0 and 3 incidents per year since 2015.

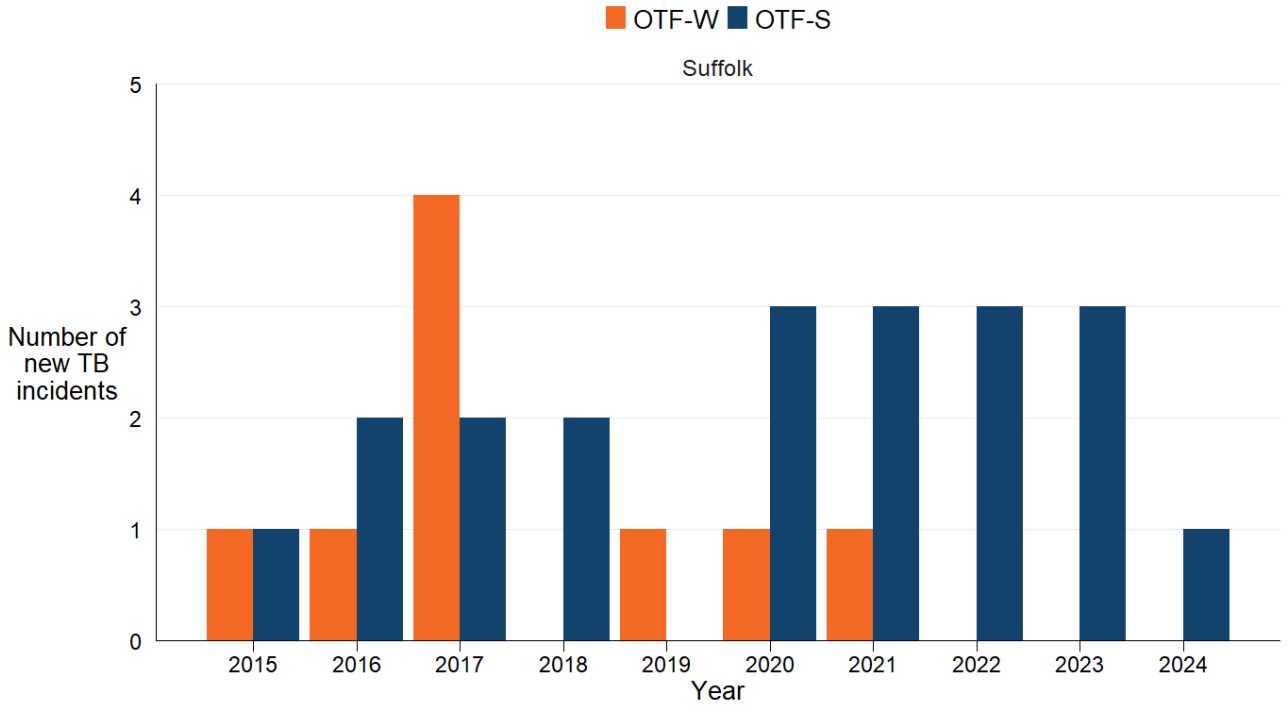


Figure 1i: Annual number of new TB incidents in Suffolk from 2015 to 2024.

In Surrey, no incidents were disclosed in 2020 or 2021 (Figure 1j). Prior to this there were between 3 and 5 OTF-S incidents, and 0 and 3 OTF-W incidents per year. Between 2022 and 2024 there were between 3 and 5 OTF-S incidents per year, and only one OTF-W incident which was disclosed in 2022.

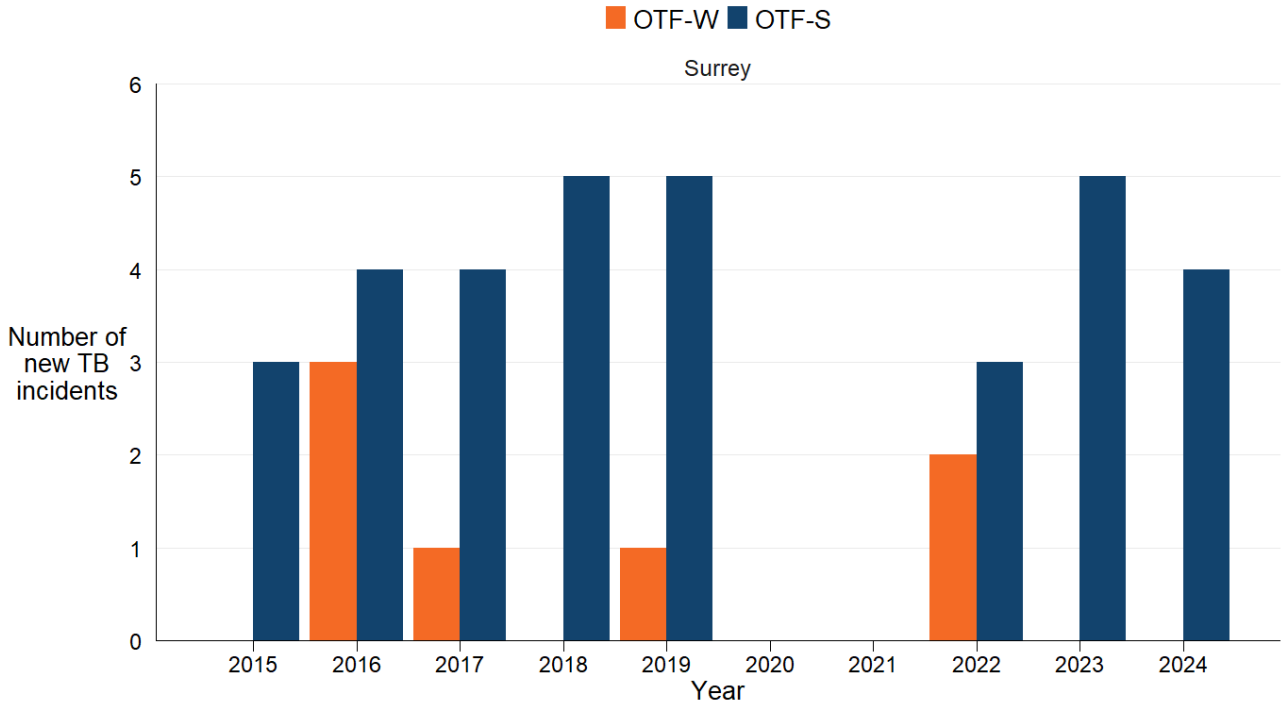


Figure 1j: Annual number of new TB incidents in Surrey from 2015 to 2024.

West Sussex has experienced the highest frequency of OTF-S incidents within the South East region, ranging from 12 per year in 2015, 2016 and 2019, to 4 incidents in 2021 (Figure 1k). OTF-W incidents were less frequent, ranging between 1 and 6 each year since 2015, except 2020 with no OTF-W cases.

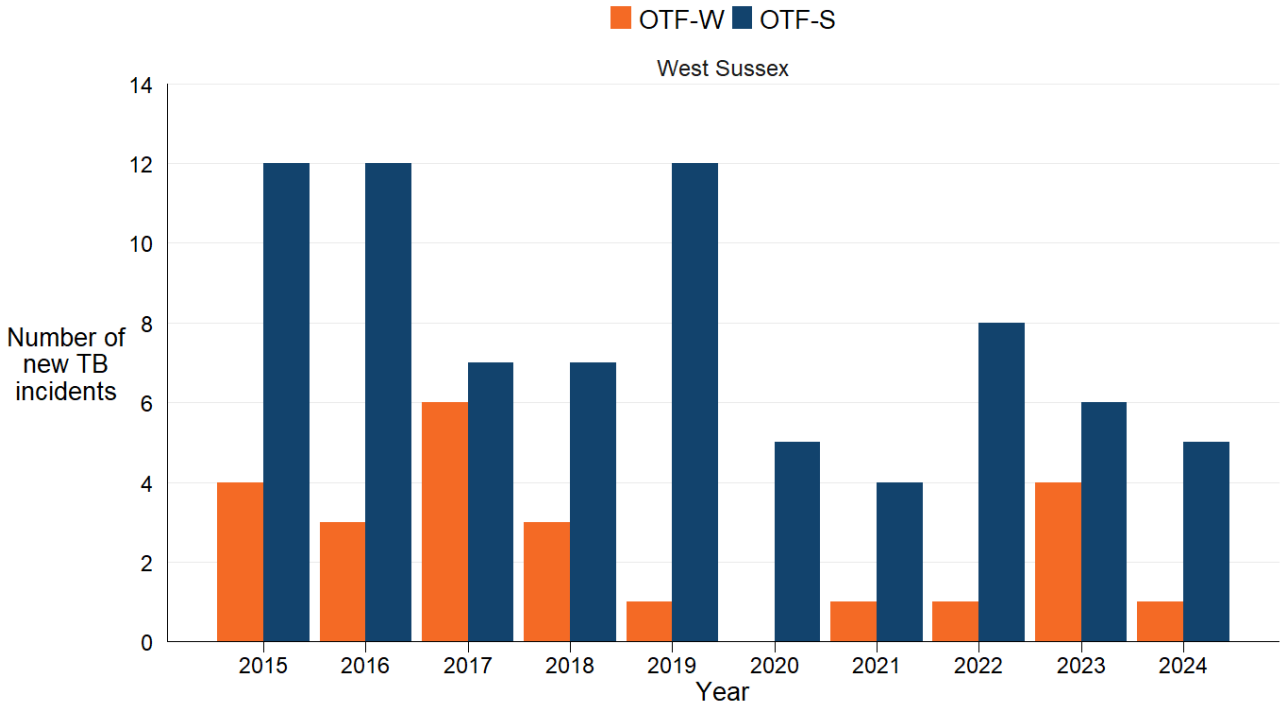


Figure 1k: Annual number of new TB incidents in West Sussex from 2015 to 2024.

Disclosing TB surveillance method

Figures 2a and 2b shows the surveillance methods that detected new TB incidents in 2024 for each county separately. Greater London is not shown as there were no new incidents in 2024. Incidents disclosed by 'Other' tests includes, but is not limited to, private testing, inconclusive reactor retests, and export tests.

Since 2021, routine herd testing (RHT) has disclosed the most incidents in the South East region, including 7 in 2024.

Slaughterhouse surveillance and targeted surveillance tests conducted around holdings affected by OTF-W incidents, commonly known as radial surveillance or radial ('RAD') tests, disclosed 4 incidents each in this reporting year. Three of the 4 new TB incidents initiated by RAD tests were in West Sussex herds.

Trace testing disclosed only one incident, compared to 3 in 2023. No incidents were disclosed by whole herd testing of a small proportion of higher risk cattle herds subjected to annual TB surveillance in 2024, compared to 2 during the previous year in 2024.

Two incidents were disclosed by 'Other' tests including but not limited to: private testing, inconclusive reactor (IR) retests, and export tests in 2024, compared to 2 during the previous year. These incidents were detected in Bedfordshire and Hertfordshire.

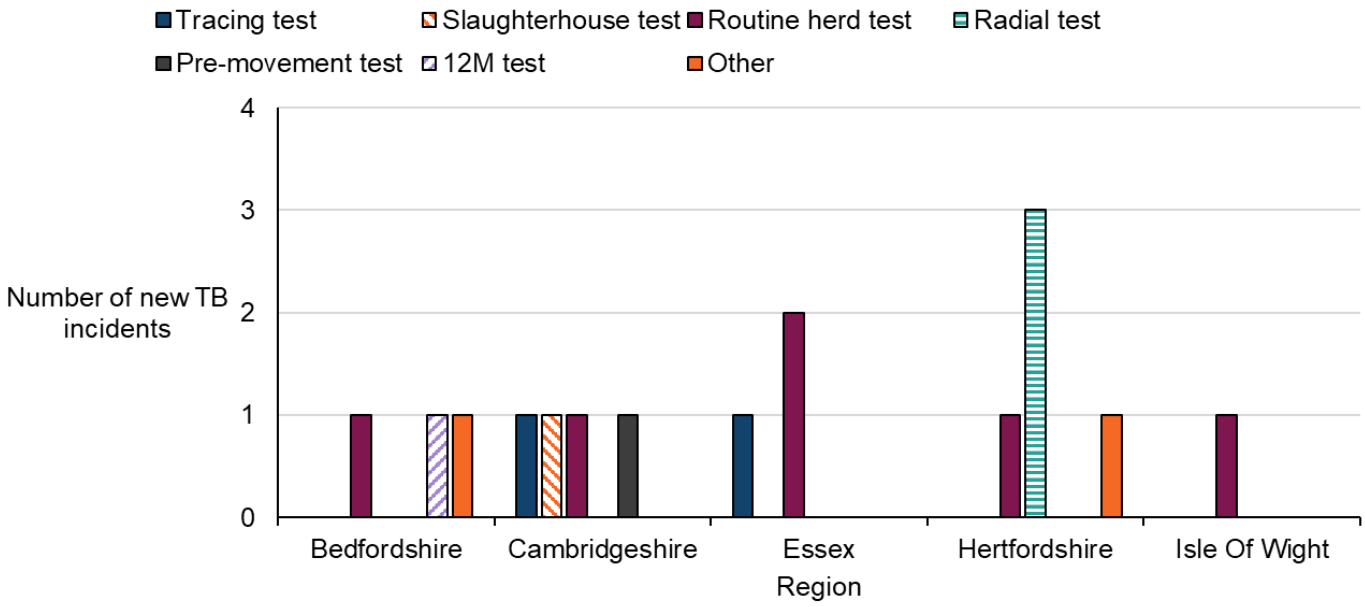


Figure 2a: Number of new TB incidents (OTF-W and OTF-S) in Bedfordshire, Cambridgeshire, Essex, Hertfordshire, and Isle of Wight in 2024, according to the surveillance methods that detected them.

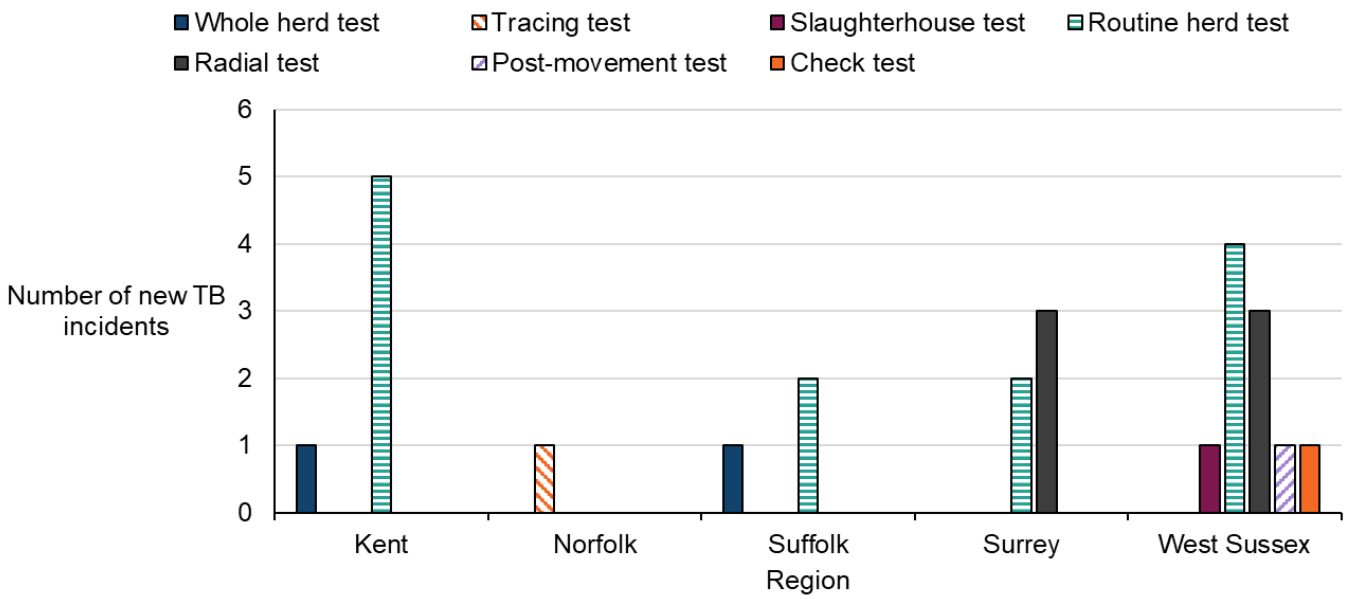


Figure 2b: Number of new TB incidents (OTF-W and OTF-S) in Kent, Norfolk, Suffolk, Surrey, West Sussex of England in 2024, according to the surveillance methods that detected them.

Duration of TB incidents

A total of 34 TB incidents were resolved during 2024 in the South East region of the LRA. Of these, 13 started in 2024, 17 in 2023 and 4 in 2022. Greater London did not experience any new TB incidents in 2024 and no incidents ended, therefore this subregion was not displayed in Figures 3a to 3j.

Of the 34 incidents ending in 2024, 12 were OTF-W. One was resolved quickly within 100 days, 7 within 151 to 240 days and a further 4 within 241 to 550 days.

Of the 22 OTF-S incidents that ended in 2024, 7 were resolved quickly within 100 days, 7 with 101 to 150 days, 4 within 151 to 240 days, 3 within 241 to 550 days. There was one OTF-S incident in West Sussex that closed in the year and was persistent (where the affected herd was under movement restrictions for more than 550 days).

There were fewer incidents ongoing in this part of the LRA at the end of the year compared to the previous year (14 in 2024 compared to 25 in 2023). Three of the ongoing incidents at the end of 2024 were persistent, one in Bedfordshire, one in Suffolk and one in Surrey.

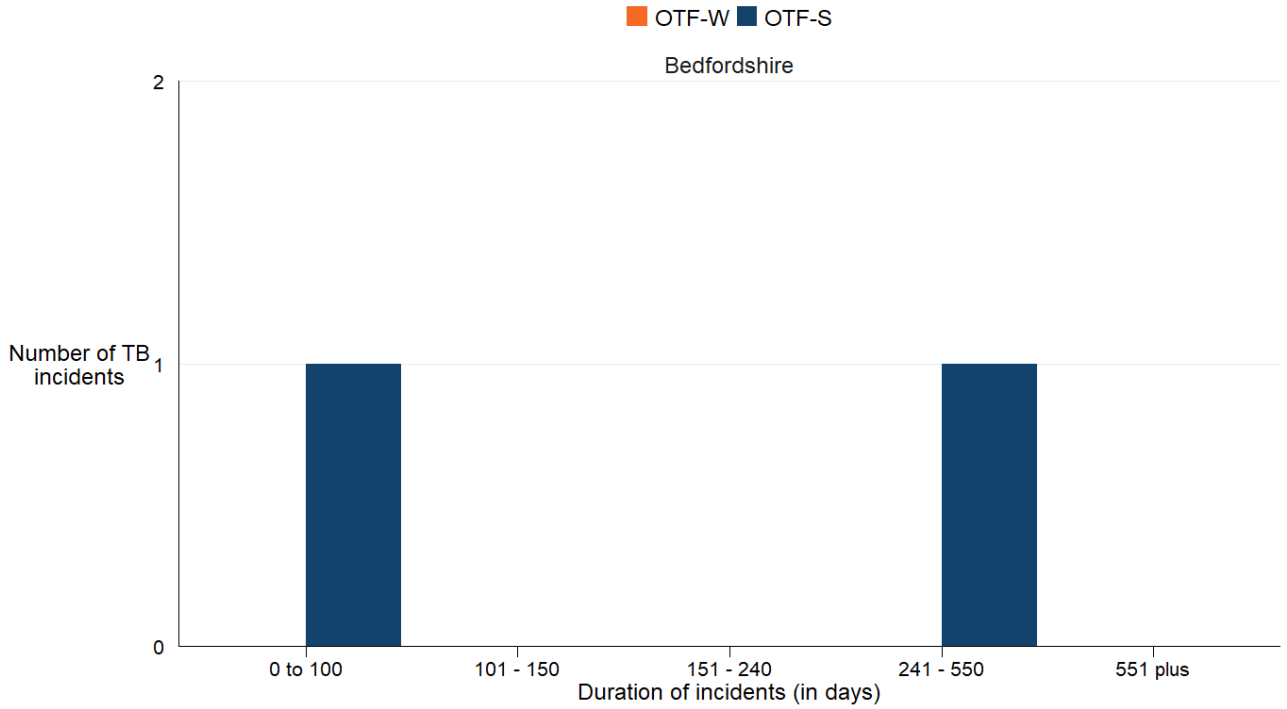


Figure 3a: Duration of TB incidents (OTF-W and OTF-S) that closed in Bedfordshire in 2024.

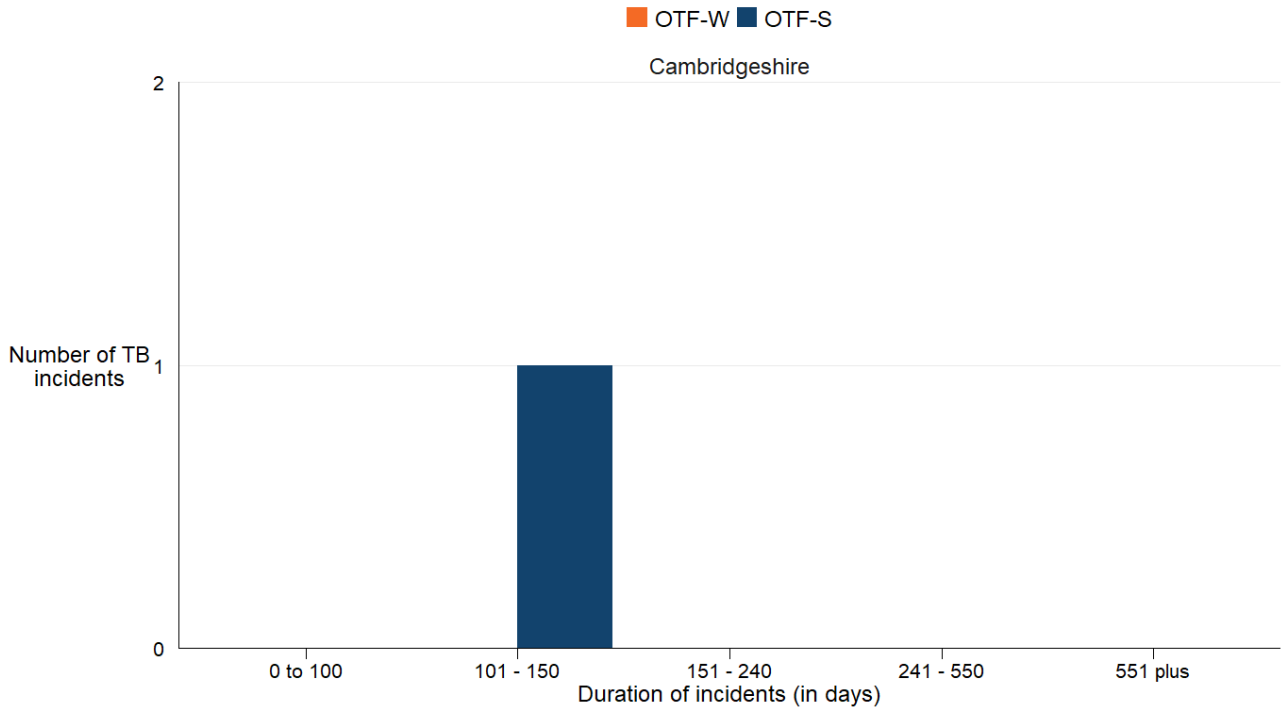


Figure 3b: Duration of TB incidents (OTF-W and OTF-S) that closed in Cambridgeshire in 2024.

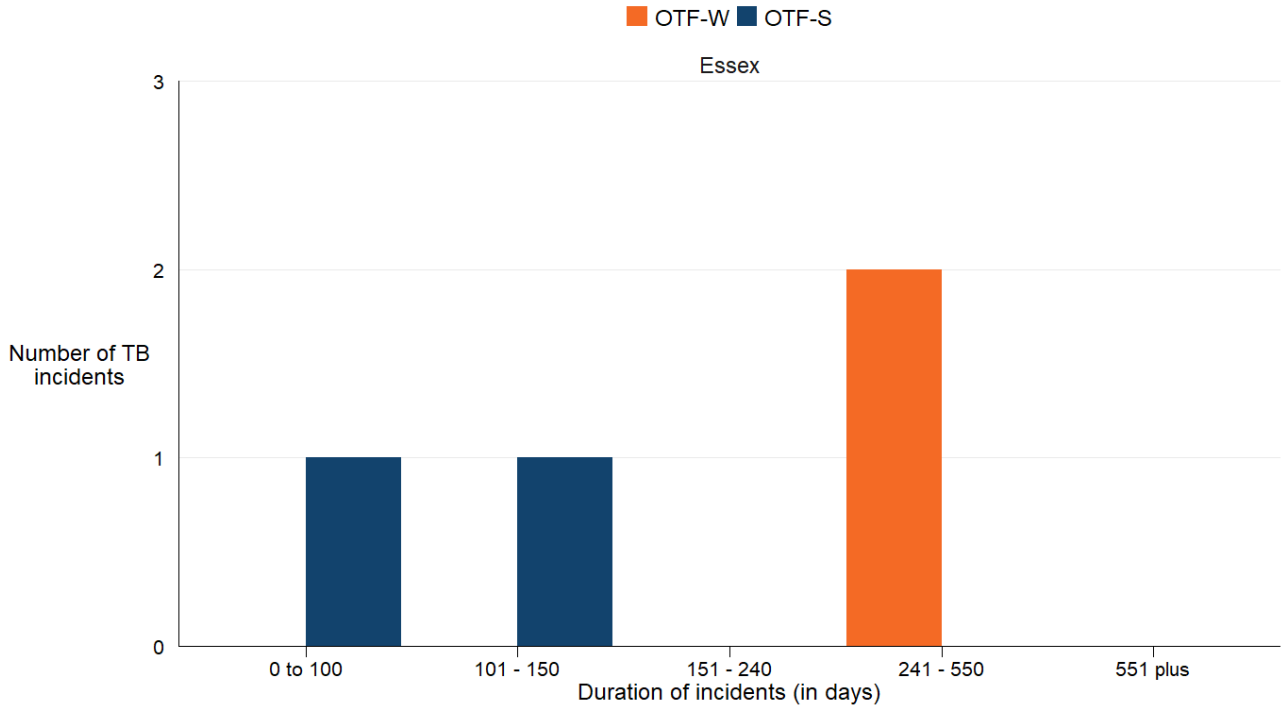


Figure 3c: Duration of TB incidents (OTF-W and OTF-S) that closed in Essex in 2024.

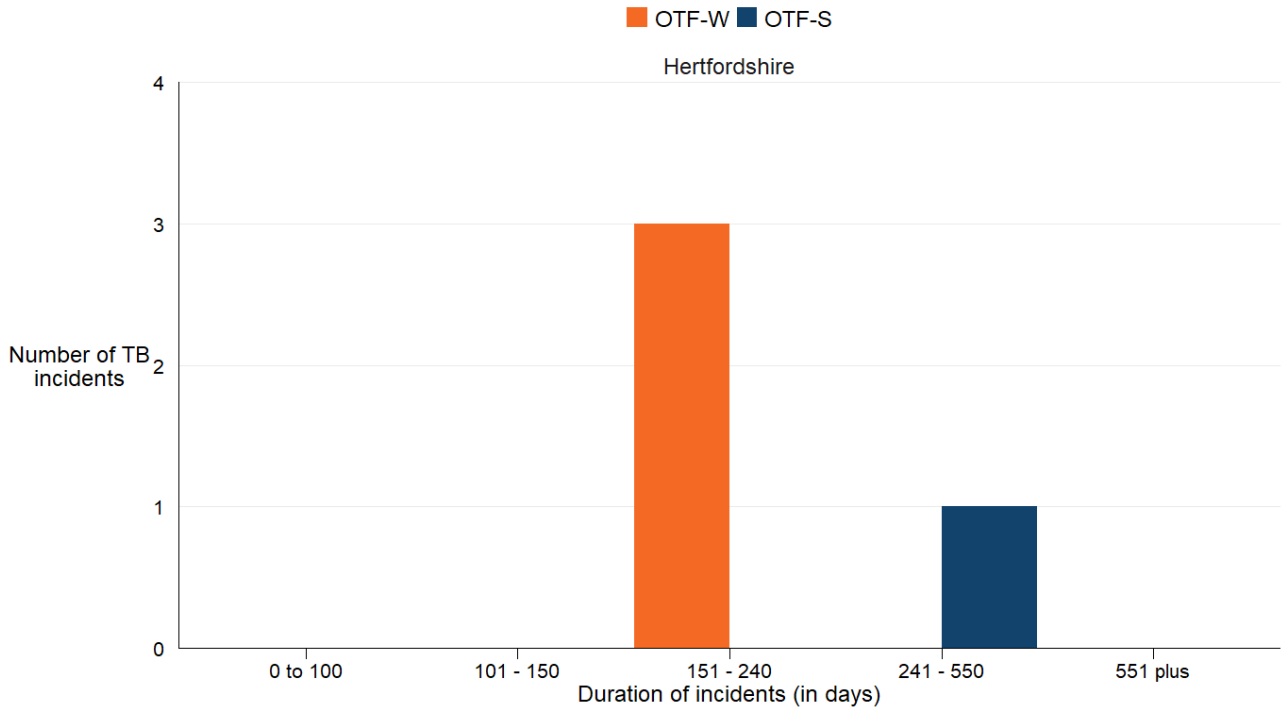


Figure 3d: Duration of TB incidents (OTF-W and OTF-S) that closed in Hertfordshire in 2024.

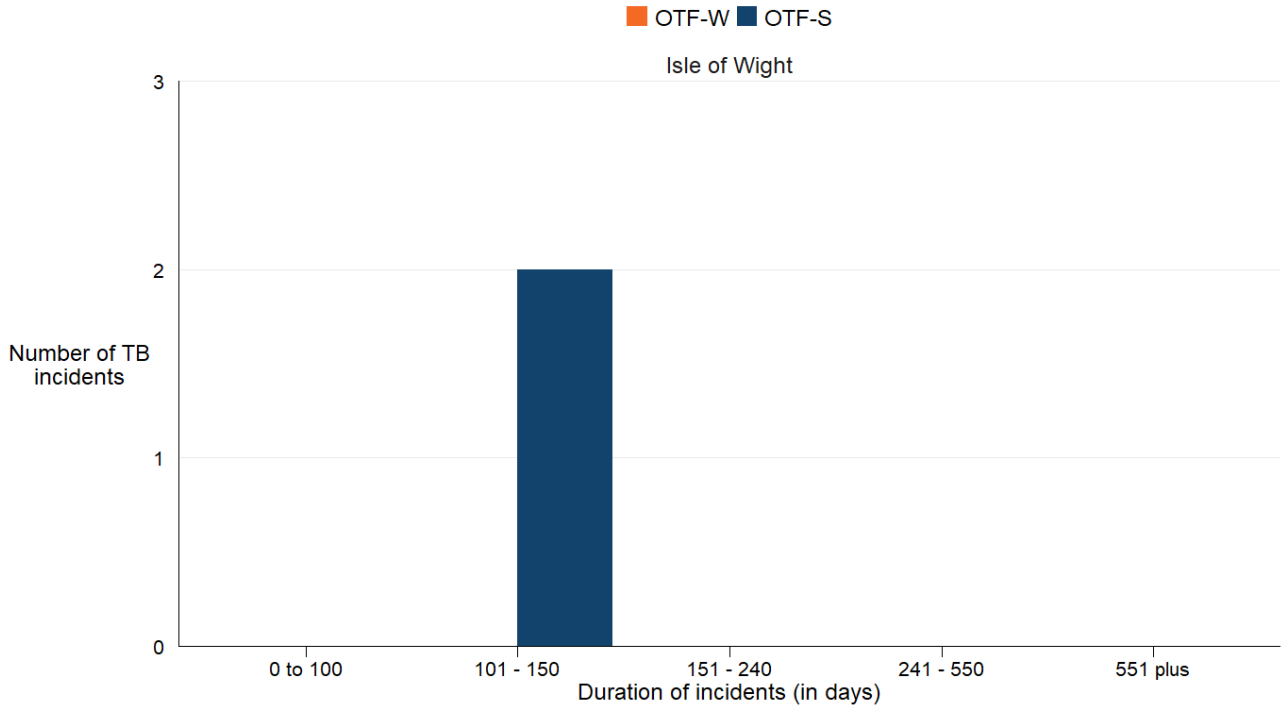


Figure 3e: Duration of TB incidents (OTF-W and OTF-S) that closed in Isle of Wight in 2024.

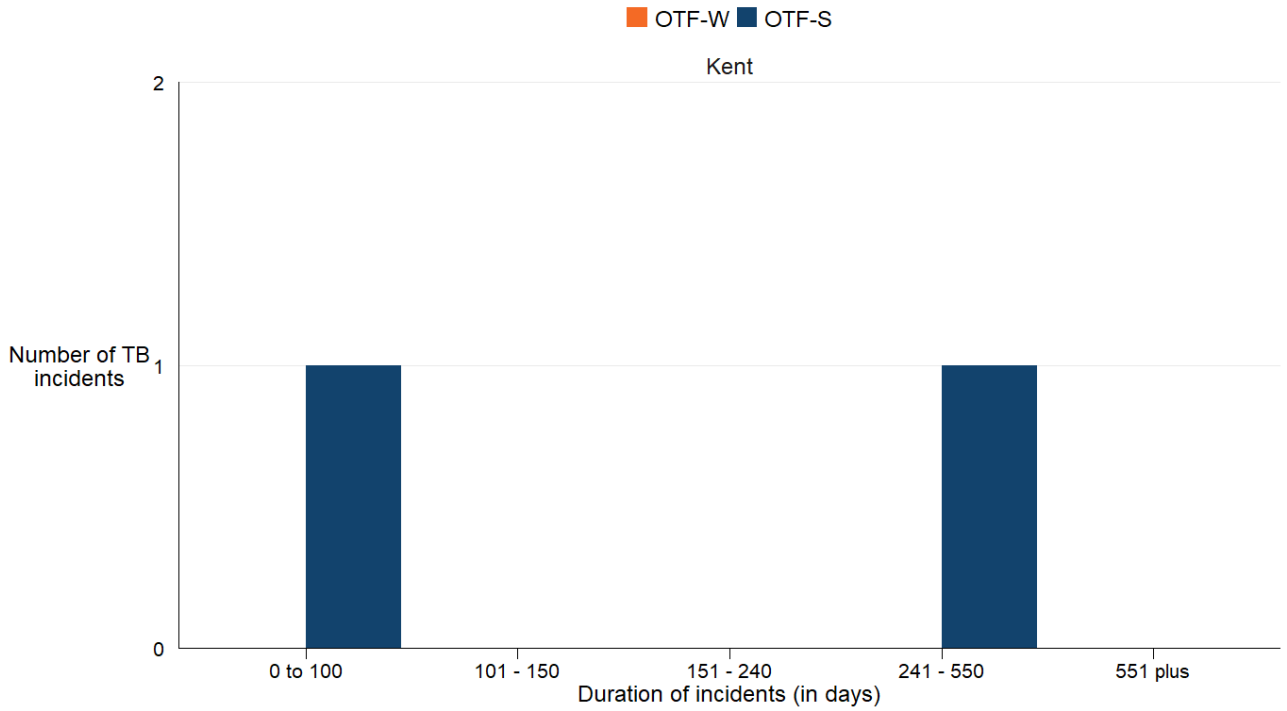


Figure 3f: Duration of TB incidents (OTF-W and OTF-S) that closed in Kent in 2024.

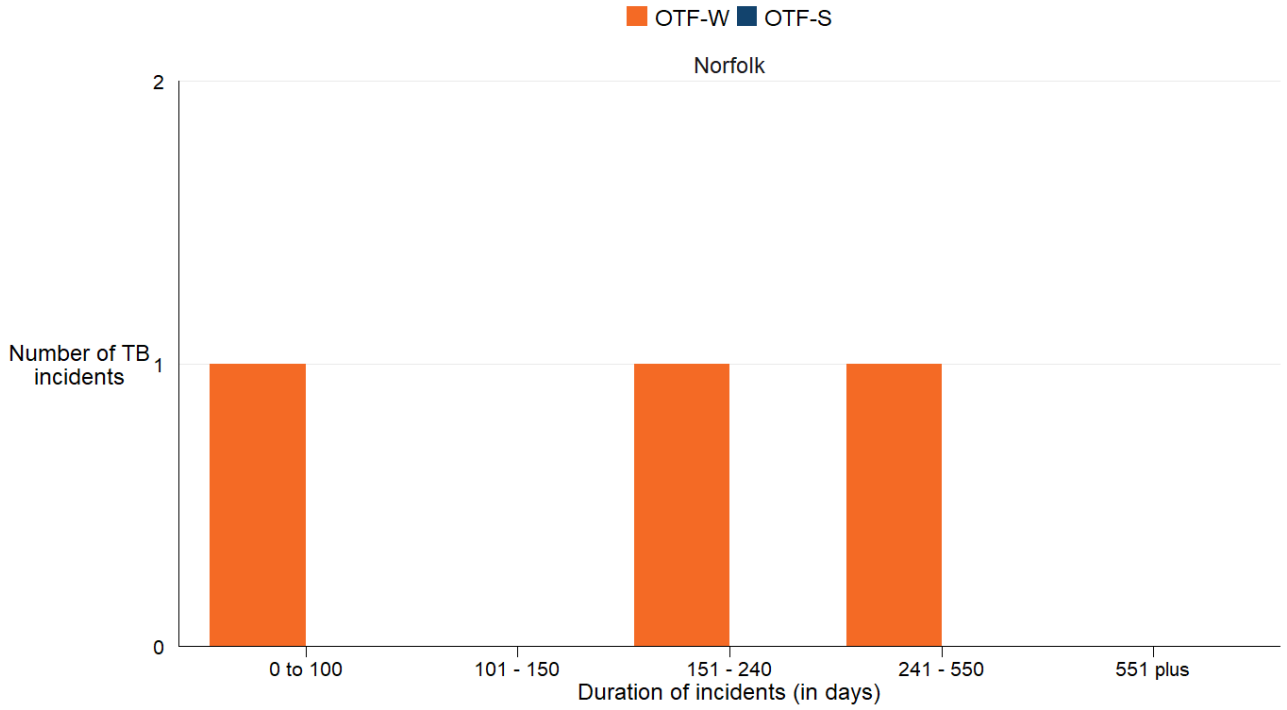


Figure 3g: Duration of TB incidents (OTF-W and OTF-S) that closed in Norfolk in 2024.

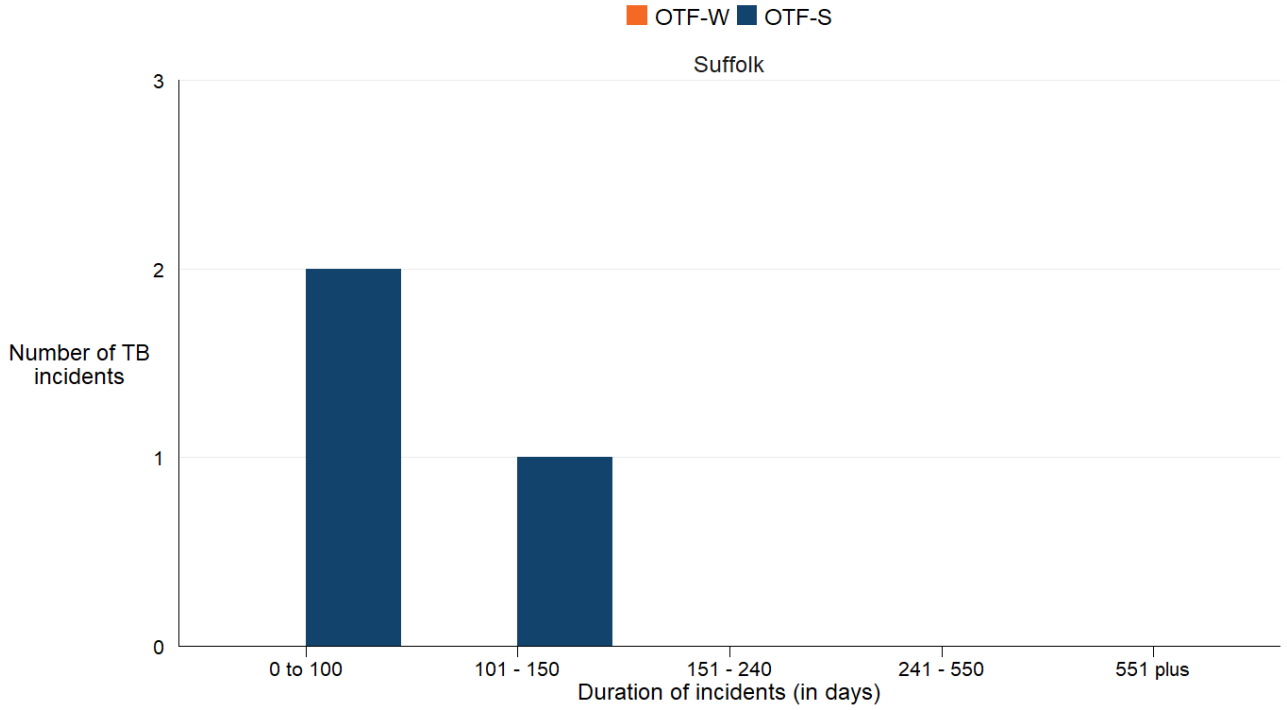


Figure 3h: Duration of TB incidents (OTF-W and OTF-S) that closed in Suffolk in 2024.

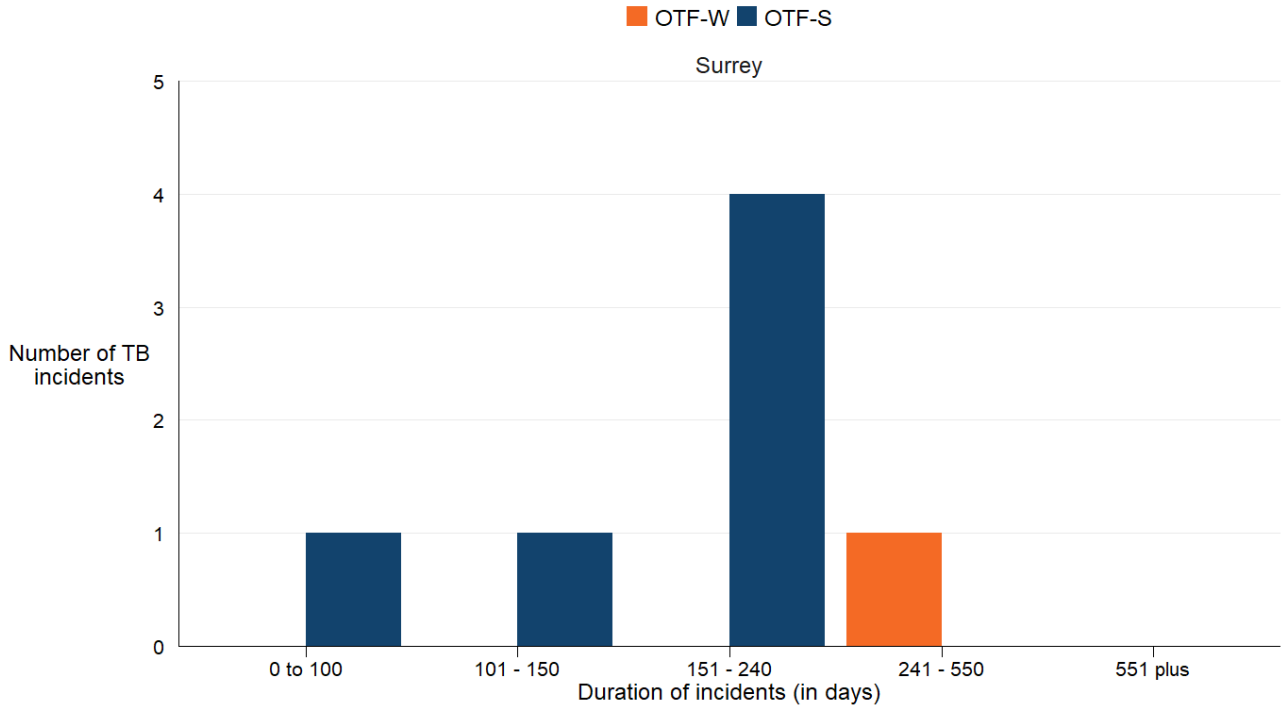


Figure 3i: Duration of TB incidents (OTF-W and OTF-S) that closed in Surrey in 2024.

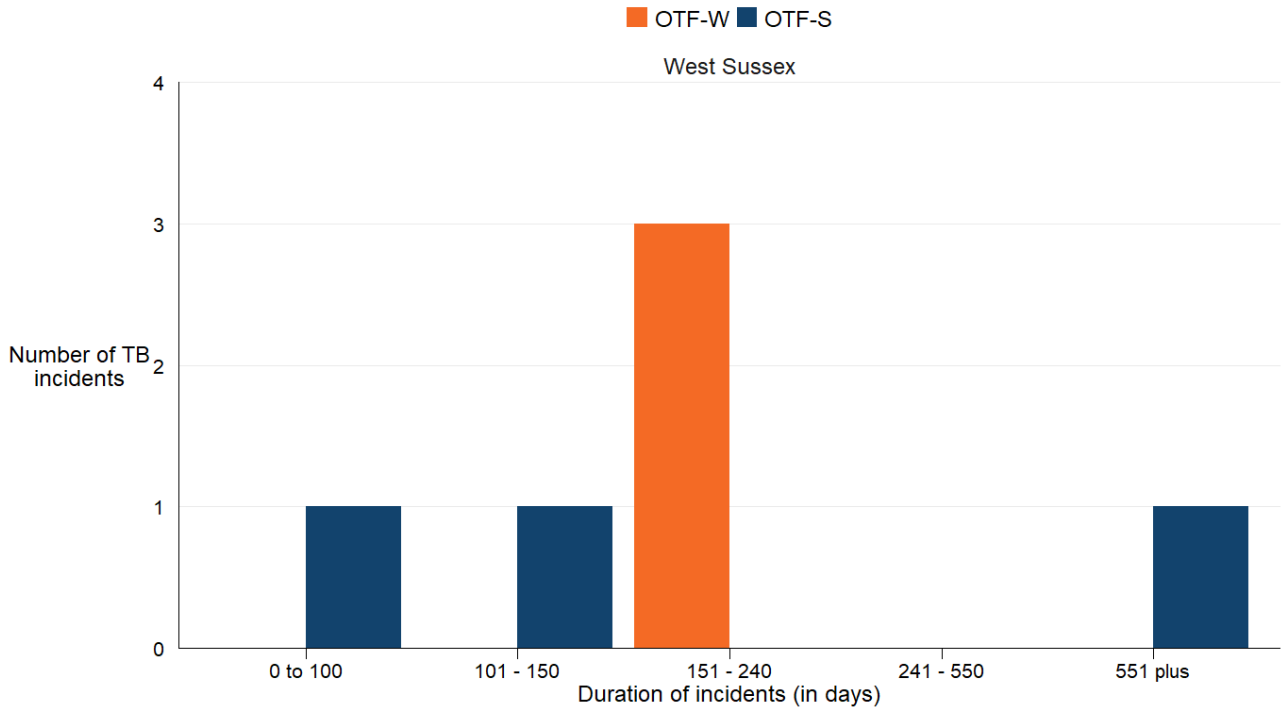


Figure 3j: Duration of TB incidents (OTF-W and OTF-S) that closed in West Sussex in 2024.

Skin test reactors and interferon gamma test positive animals removed

During 2024, a total of 96 cattle were removed as TB test reactors from incident herds in the South East region (247 in 2023). Of these, 44 were skin test reactors (compared to 143 in 2023) and 52 were positive to the supplementary interferon gamma blood test (compared to 104 in 2023) (Figures 4a to 4k). This represented a 61% overall decrease in the number of reactors removed in the region, consistent with the 44% reduction in the number of new TB incidents detected in 2024 relative to 2023.

A 69% decrease in skin test reactors was observed between 2023 and 2024. Marked decreases were observed in Bedfordshire (16 to 1), Essex (23 to 3), Kent (12 to 1), Surrey (32 to 12) and West Sussex (42 to 15). Slight decreases in reactor numbers occurred in Cambridgeshire (3 to 2), Hertfordshire (9 to 5), Norfolk (2 to 1) and Suffolk (3 to 1). On the other hand, there was a small increase in the number of skin test reactors on the Isle of Wight from 1 to 3. There was a 50% decrease in the number of IFN-γ positive animals removed in 2024 compared with 2023, which was mainly attributed to decreases in Bedfordshire (18 to 2), Essex (9 to 0), Norfolk (16 to 7), Surrey (14 to 0) and West Sussex (47 to 32). Conversely, more IFN-γ test-positive animals were removed from incident herds in Hertfordshire compared to 2023 (0 to 10) and Kent (0 to 1), although the numbers involved were small.

The number of skin test reactors in Bedfordshire has varied widely over the last 10 years, with a peak of 62 and a low of 1 (Figure 4a). The number of IFN-γ test positive animals removed has also fluctuated, with a high of 51 in 2017 and 0 in 2019. In 2024 2 IFN-γ test positive animals were removed, a decrease compared to 18 in 2023.

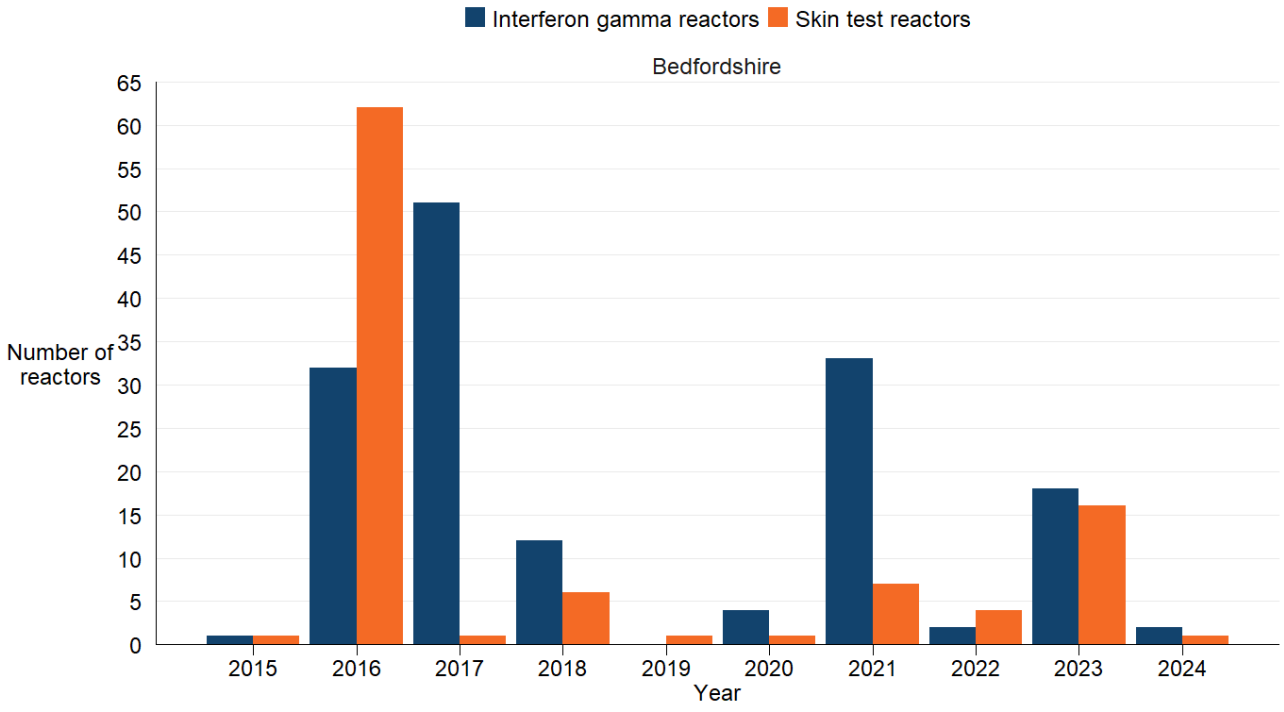


Figure 4a: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Bedfordshire from 2015 to 2024.

The number of skin test reactors removed from incident herds in Cambridgeshire has varied between 1 in 2020 and 17 in 2022 (Figure 4b). Over the last 2 years numbers have been low, with 3 removed in 2023 and 2 in 2024. In the last decade a total of 28 IFN-γ test positive animals have been removed (1 in 2017, 5 in 2018, 21 in 2019 and 1 in 2022).

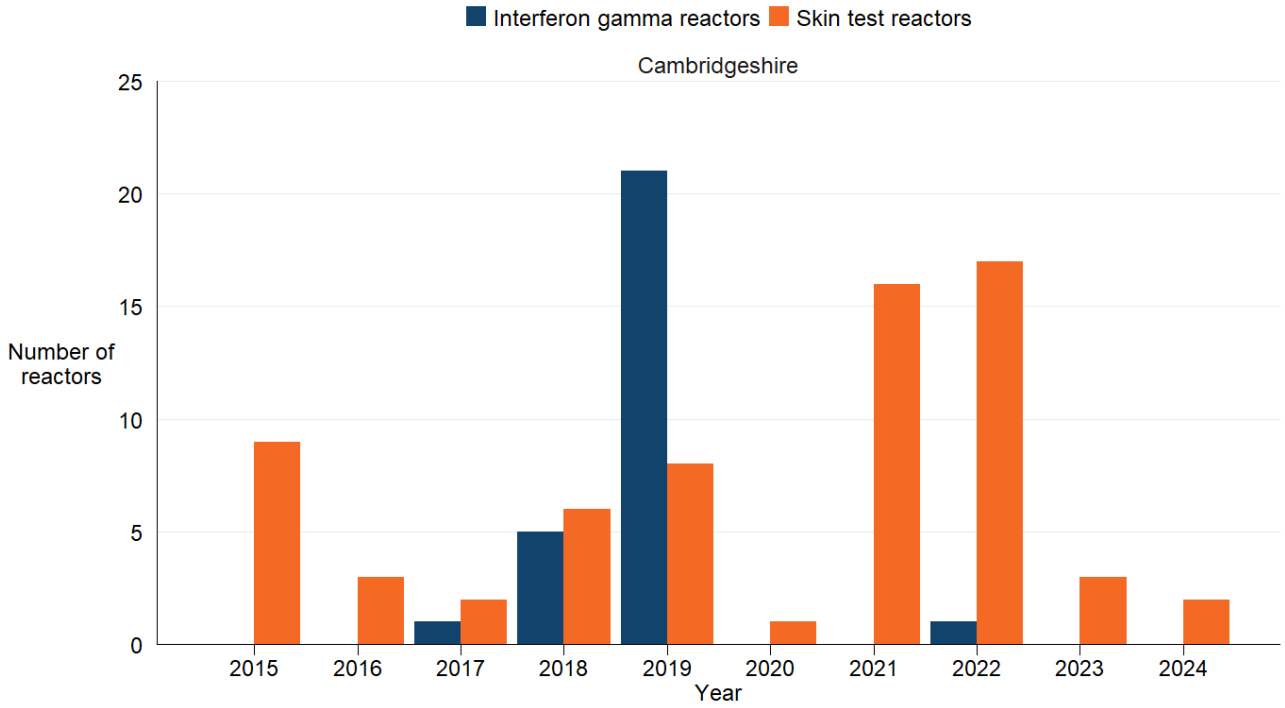


Figure 4b: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Cambridgeshire from 2015 to 2024.

In Essex the number of skin and IFN-γ reactors were comparatively higher, varying between 1 and 35, and 0 and 32, respectively (Figure 4c).

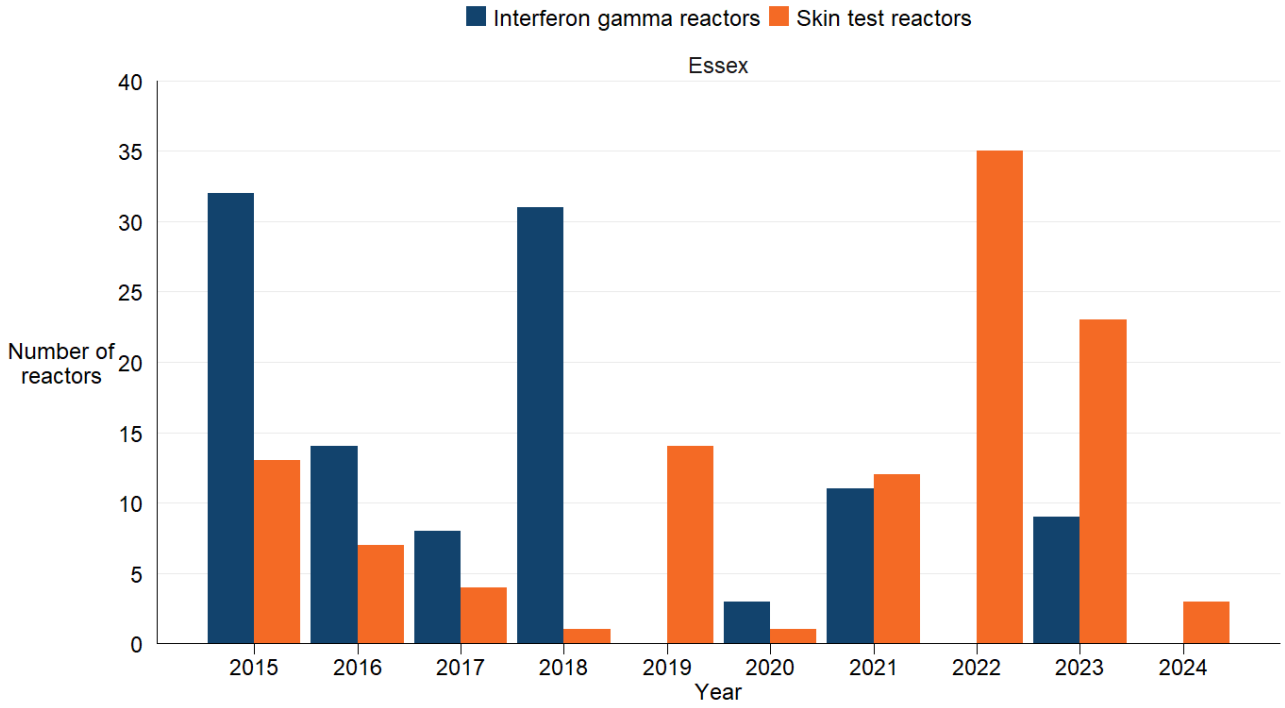


Figure 4c: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Essex from 2015 to 2024.

Greater London has had 8 skin test reactors removed (1 in 2015, 2019 and 2020, 2 in 2022 and 3 in 2018), compared to 0 IFN-γ test positive animals over the last 10 years (Figure 4d).

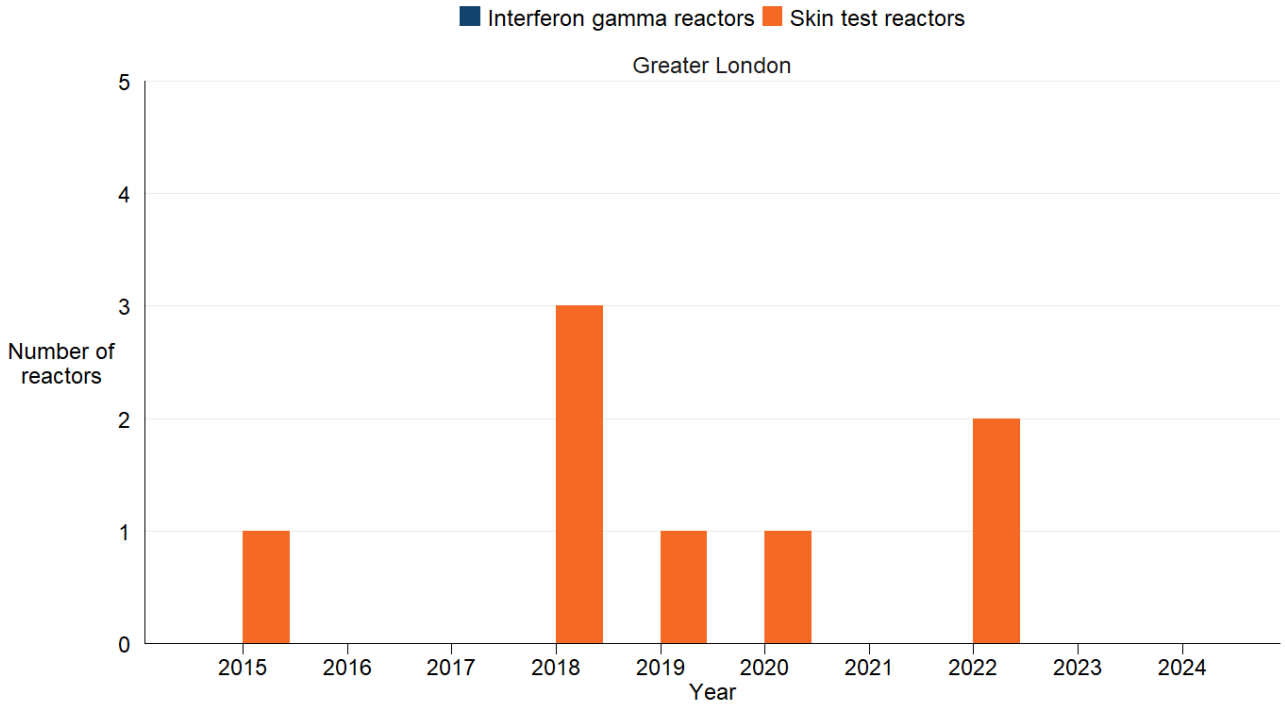


Figure 4d: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Greater London from 2015 to 2024.

In Hertfordshire, the number of skin test reactors has fluctuated between 0 in 2016 and a high of 24 in 2021 (Figure 4e). In comparison, IFN-γ test positive animals has varied more widely, with 0 animals removed in 2015, 2016, 2020 or 2023, and a high of 48 removed in 2019. In 2024 there were 10 IFN-γ test positive animals removed.

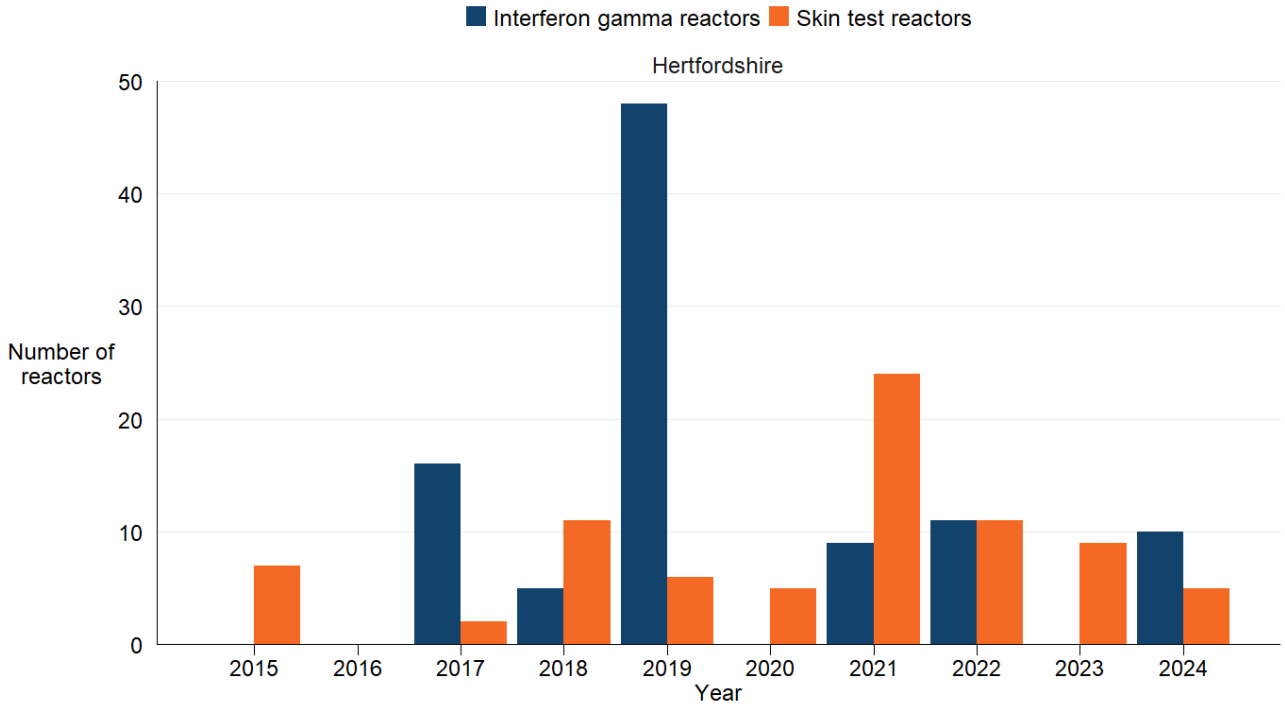


Figure 4e: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Hertfordshire from 2015 to 2024.

In the Isle of Wight very few skin (5) or IFN-γ (1) reactors have been removed over the last 5 years (Figure 4f). However, between 2017 to 2019 there were between 16 and 70 IFN-γ test positive animals removed, which was a large increase compared to 0 removed in 2015 and 2016. Skin test reactors have remained relatively stable over the same period, varying between 1 and 11 removed per year between 2015 and 2020.

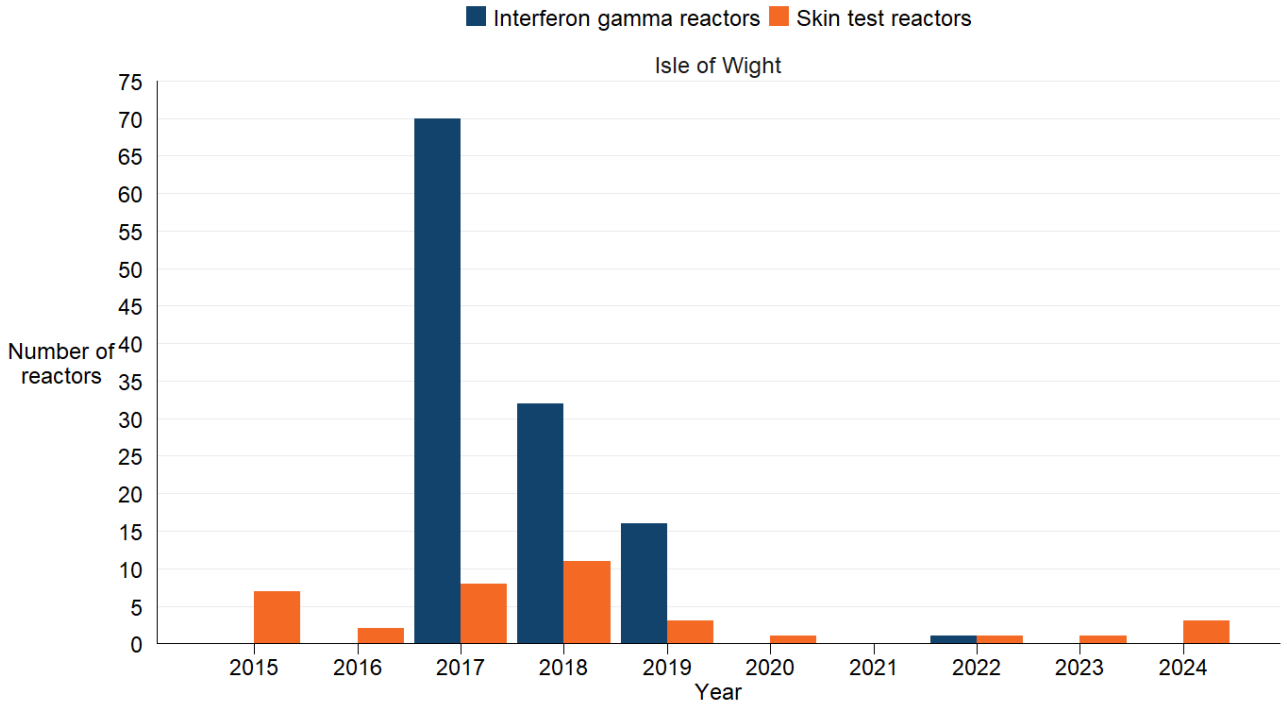


Figure 4f: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Isle of Wight from 2015 to 2024.

In 2024, one skin test reactor was removed from a herd in Kent, the lowest number since 2017 (Figure 4g). Over the last decade the number has fluctuated between 1 and 18. IFN-γ test positive animals have varied more widely, with 32 removed in 2018, compared to 1 in 2024. No IFN-γ test positive animals were removed between 2015 and 2017, or in 2021 and 2023.

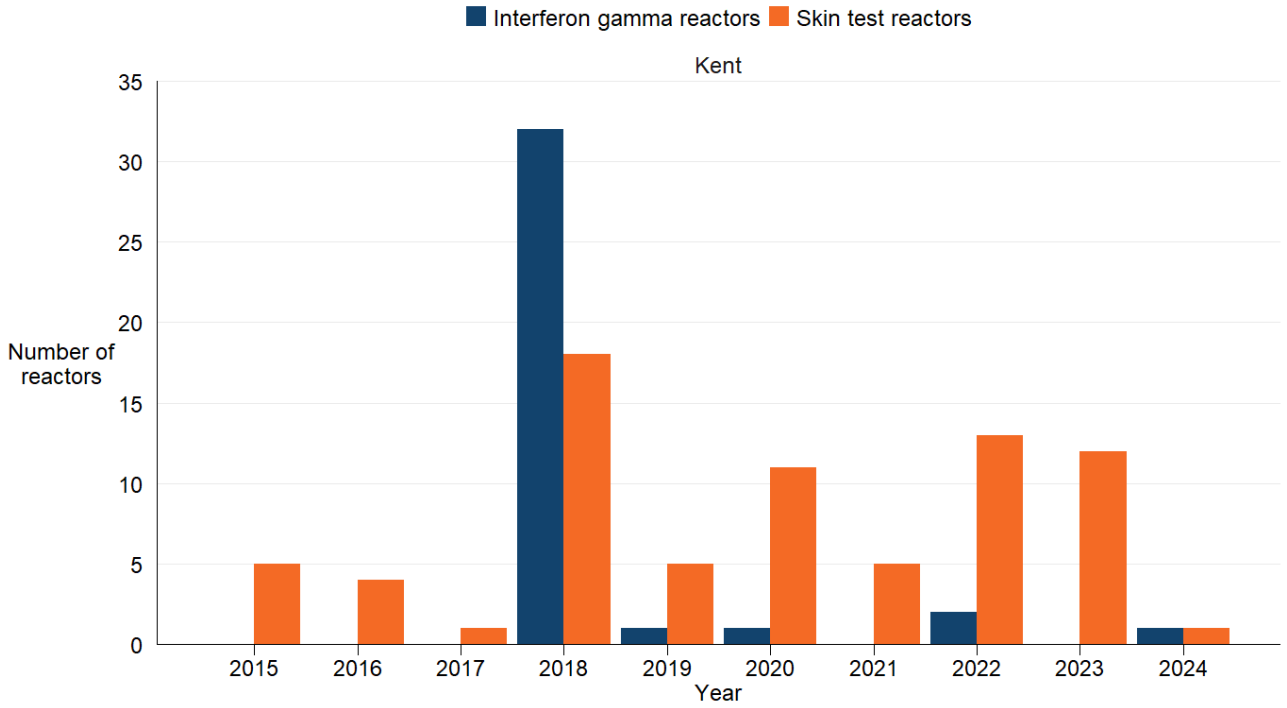


Figure 4g: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Kent from 2015 to 2024.

Between 2021 and 2024 the number of skin test reactors removed from herds in Norfolk has remained relatively stable, between 1 in 2024 and 2 per year in 2021 to 2023 (Figure 4h). Previously, the number has been higher, varying between 7 and 18 from 2015 to 2020. Seven IFN-γ test positive animals were removed from herds in 2024, a decrease from 16 in 2023, but an increase compared to 0 in 2021 and 2022. Between 2015 and 2020 numbers ranged between 1 and 9.

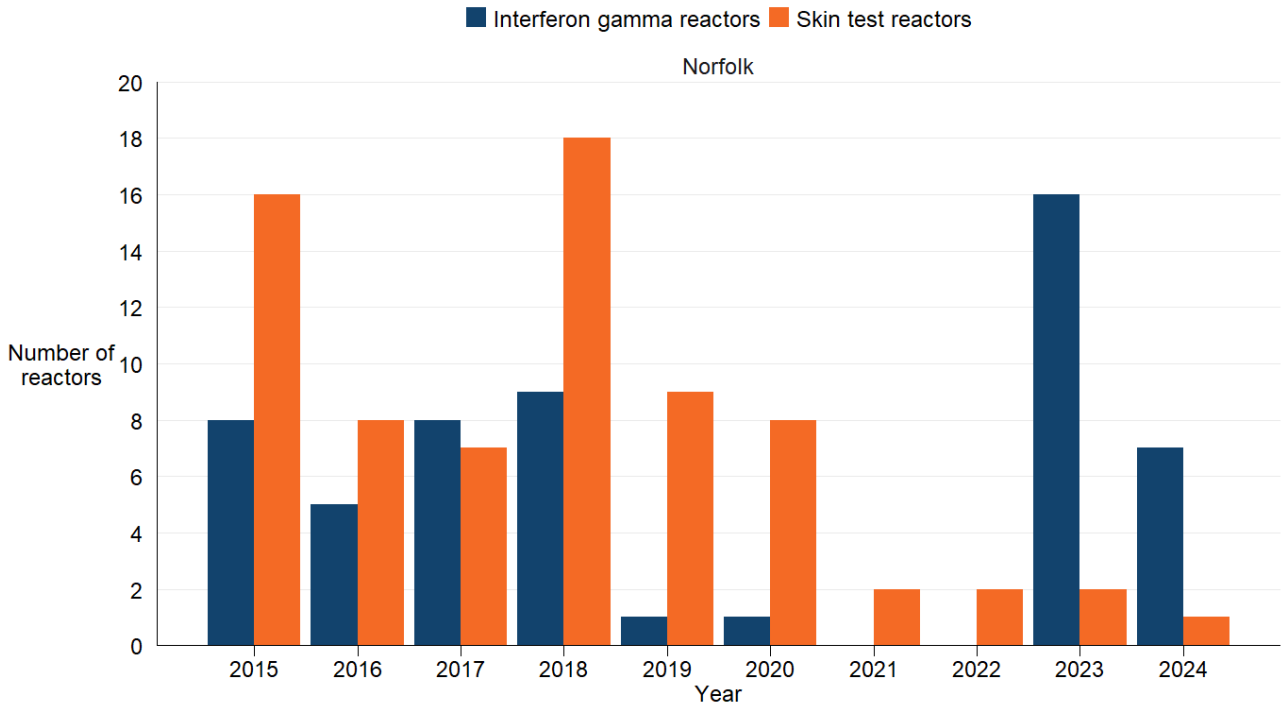


Figure 4h: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Norfolk from 2015 to 2024.

In Suffolk, the number of skin test reactors removed from herds over the last 10 years has remained low, at between 1 in 2024 and a high of 10 in 2017 (Figure 4i). A total of 45 IFN-γ test positive animals were removed over the last decade (4 in 2016, 25 in 2017, 3 in 2019, and 13 in 2021).

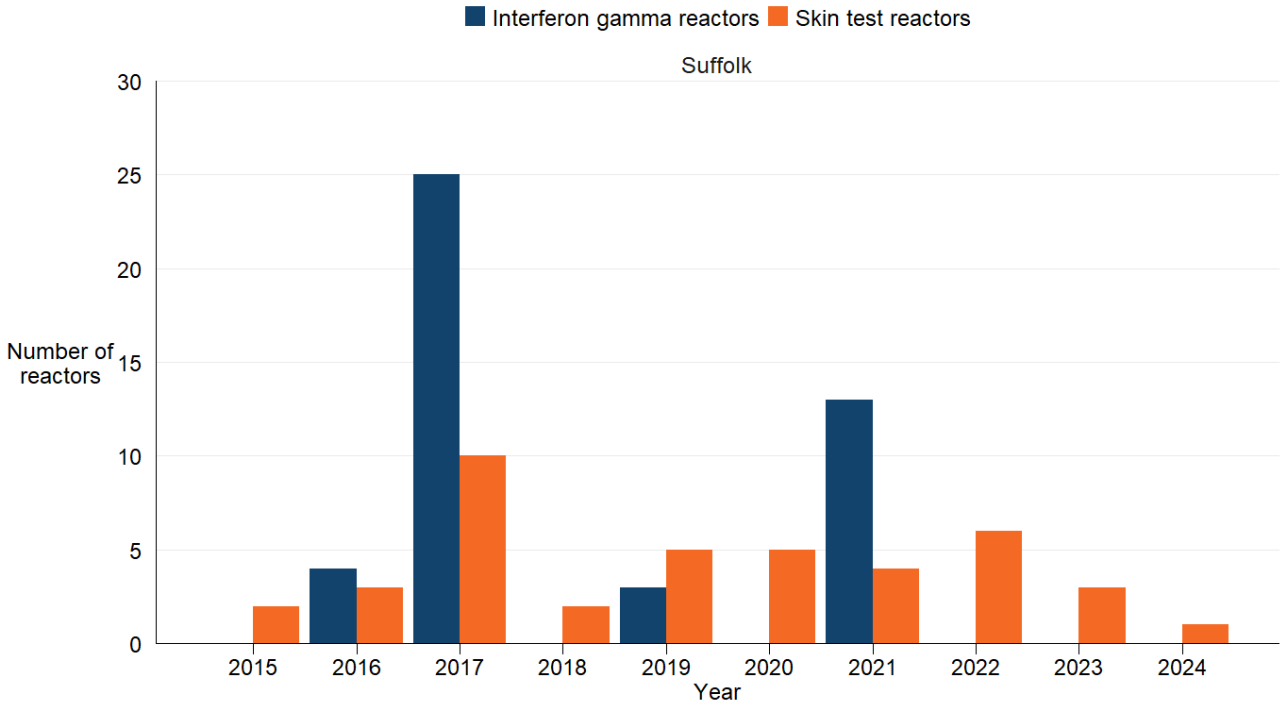


Figure 4i: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Suffolk from 2015 to 2024.

Surrey had a higher number of skin test reactors removed per year over the last 10 years, varying between 0 in 2021 and a high of 32 in 2023 (Figure 4j). The number of IFN-γ test positive animals removed peaked at 28 in 2016, with between 0 and 17 removed per year between 2017 and 2024.

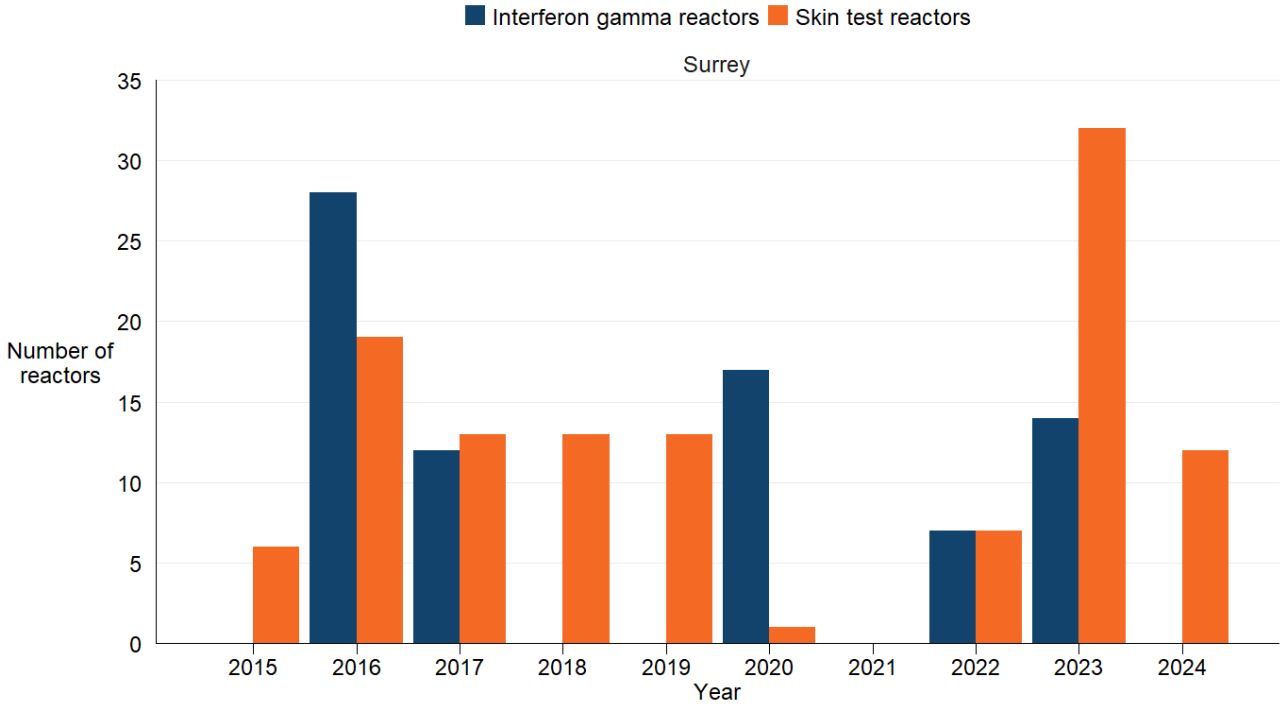


Figure 4j: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in Surrey from 2015 to 2024.

West Sussex experienced the highest number of IFN-γ test positive animals removed of all the South East counties, with 127 in 2017 and 87 in 2018 (Figure 4k). Since then, numbers have been lower, varying between 0 and 47. The number of skin test reactors has also fluctuated over the last 10 years, between a high of 73 in 2015 and a low of 7 in 2021.

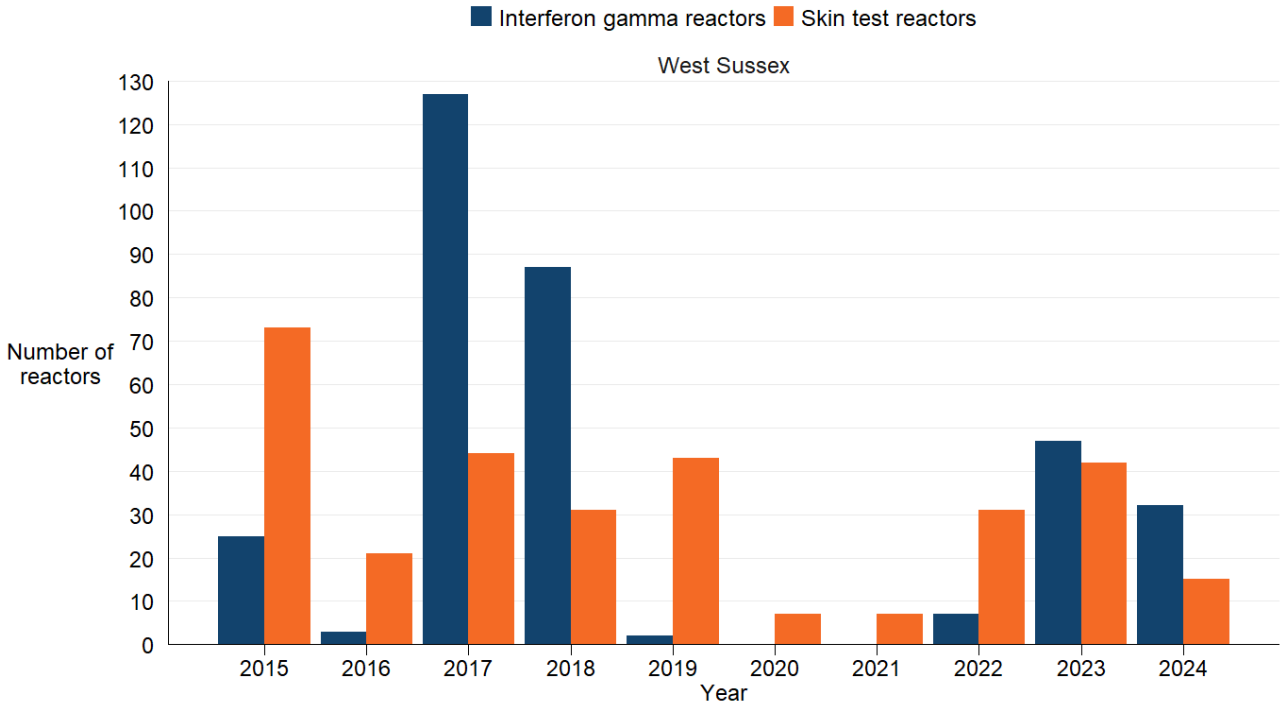


Figure 4k: Number of skin test reactors and IFN-γ test positive cattle removed by APHA for TB control reasons in West Sussex from 2015 to 2024.

Recurrent TB incidents

Three-year recurrence

The South East region had the fourth lowest overall percentage of recurrent herd incidents in 2024 (4 incidents, 17%) of all the LRA counties and subregions, exceeded by Lincolnshire (44%), Cumbria (21%) and the North West (20%), and higher than Yorkshire and Humberside (16%), North East (0%) and Isles of Scilly (0%). The overall percentage of recurrent herd incidents for the LRA was 21%.

Within the South East region, 3 of the 17 herds with a new OTF-S incident in 2024, and 1 of the 6 with an OTF-W incident in 2024, had experienced another TB incident within the previous 3 years (Figures 5a to 5j). Those recurrent herd incidents occurred in 3 counties: Essex (1 OTF-S), Hertfordshire (1 OTF-W) and Surrey (2 OTF-S).

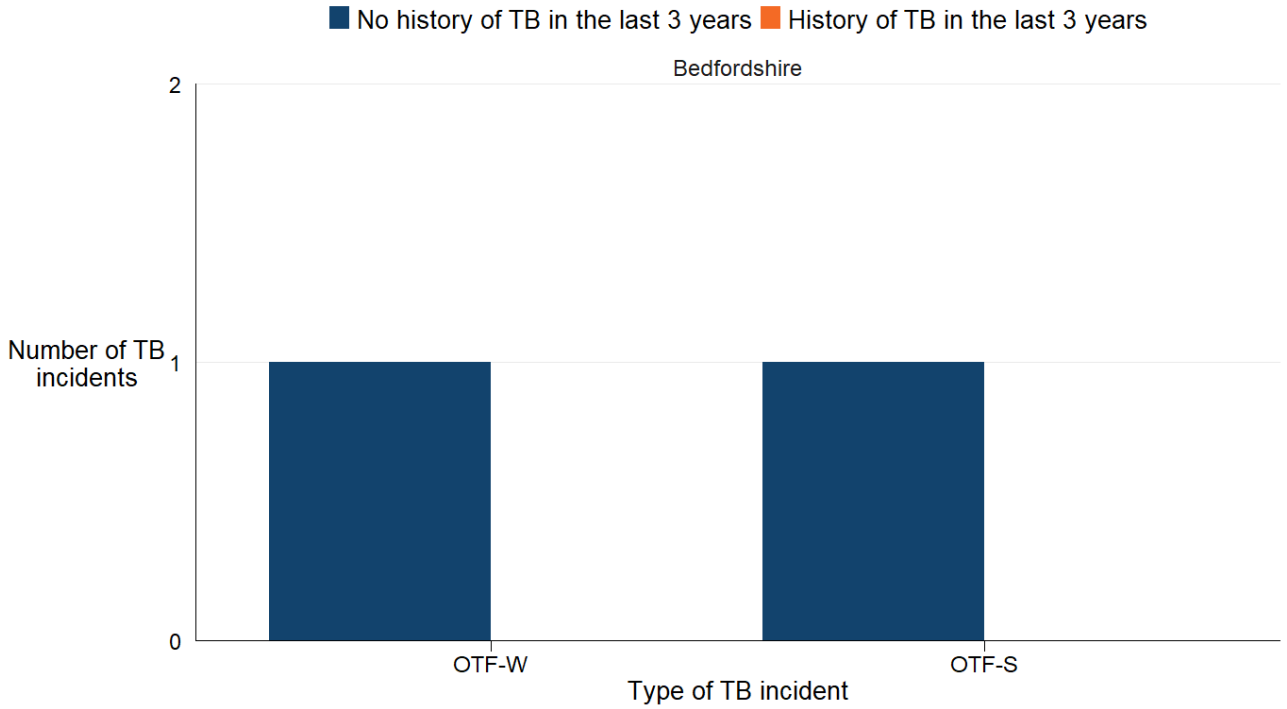


Figure 5a: Number of herds with a TB incident (by OTF-W and OTF-S) in Bedfordshire in 2024, with and without a history of any TB incident in the previous 3 years of the disclosing test.

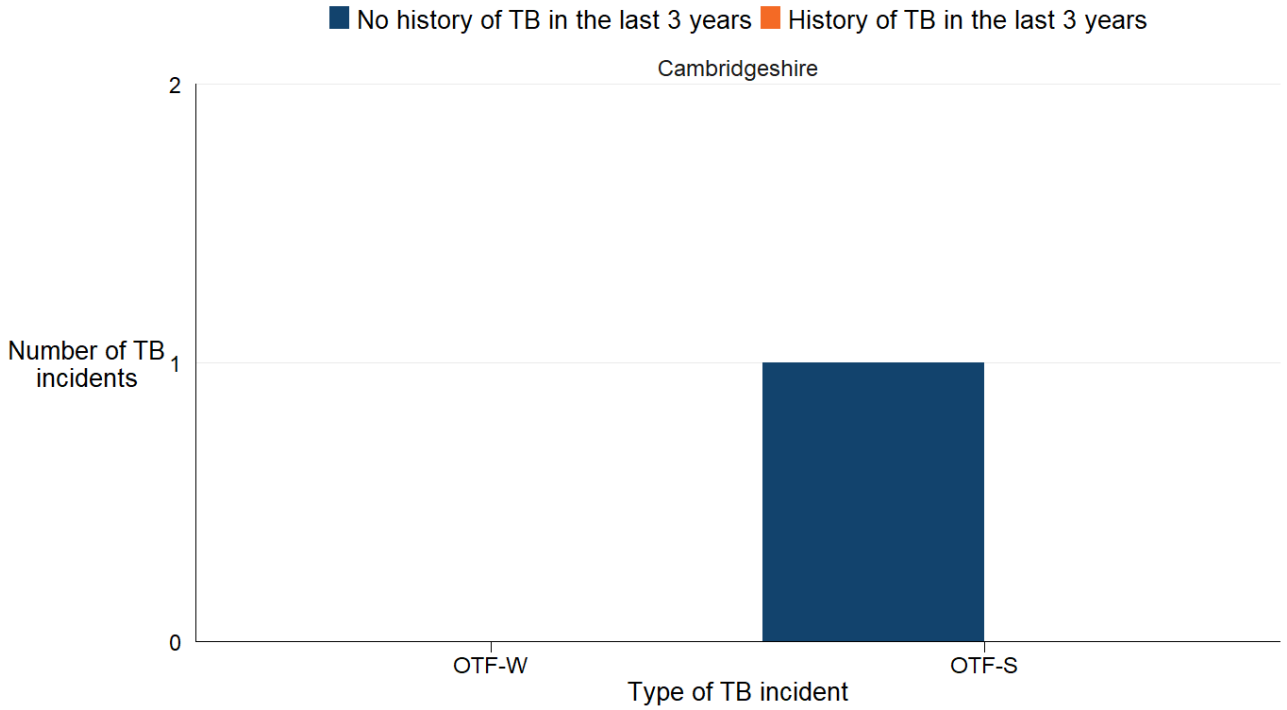


Figure 5b: Number of herds with a TB incident (by OTF-W and OTF-S) in Cambridgeshire in 2024, with and without a history of any TB incident in the previous 3 years of the disclosing test.

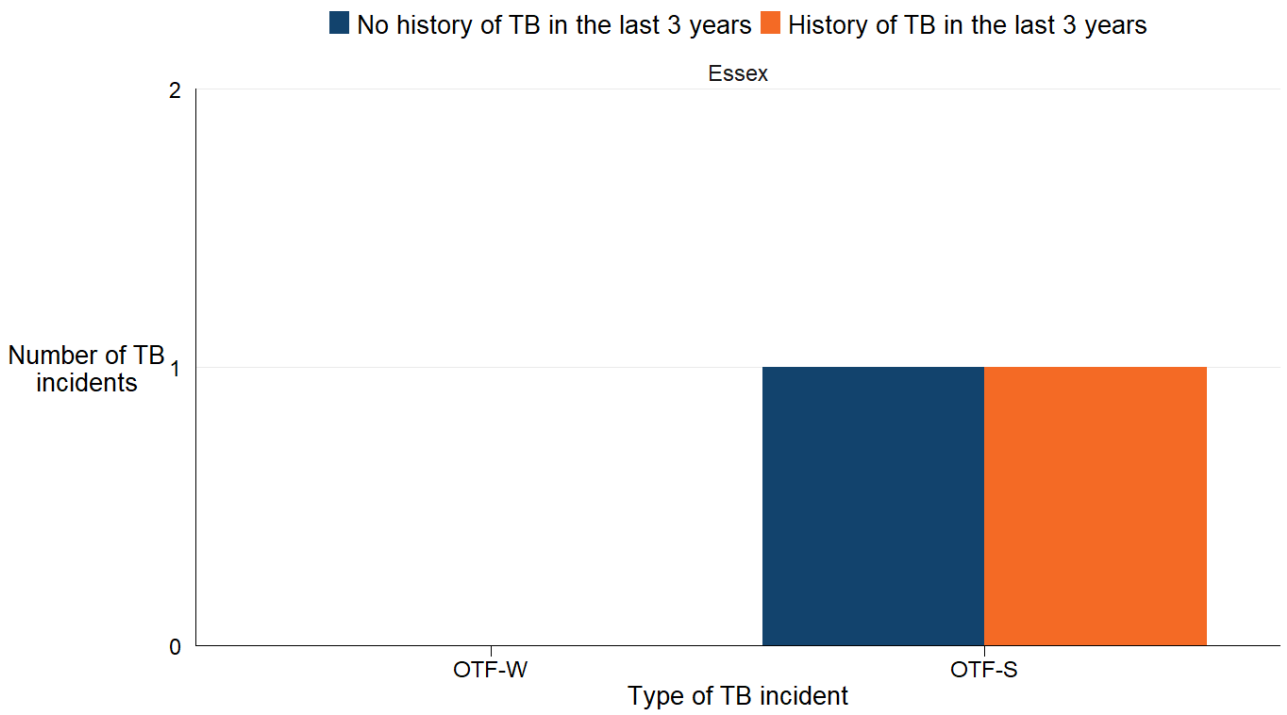


Figure 5c: Number of herds with a TB incident (by OTF-W and OTF-S) in Essex in 2024, with and without a history of any TB incident in the previous 3 years of the disclosing test.

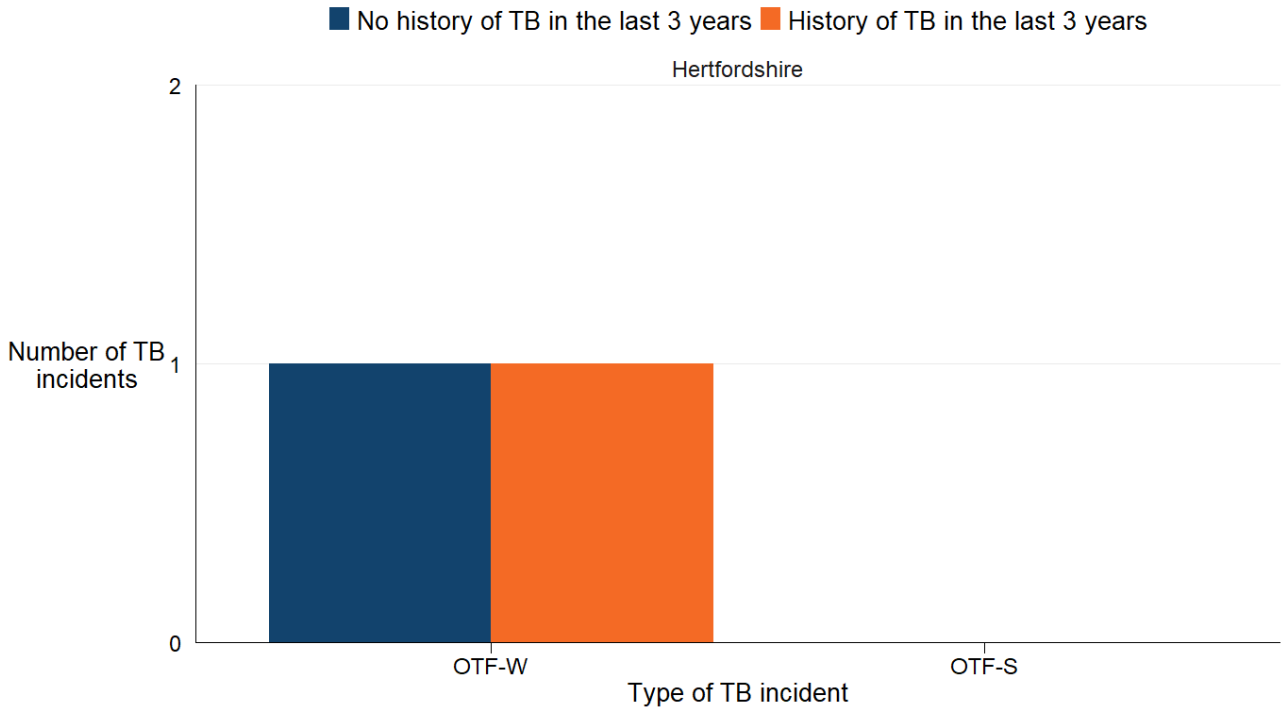


Figure 5d: Number of herds with a TB incident (by OTF-W and OTF-S) in Hertfordshire in 2024, with and without a history of any TB incident in the previous 3 years of the disclosing test.

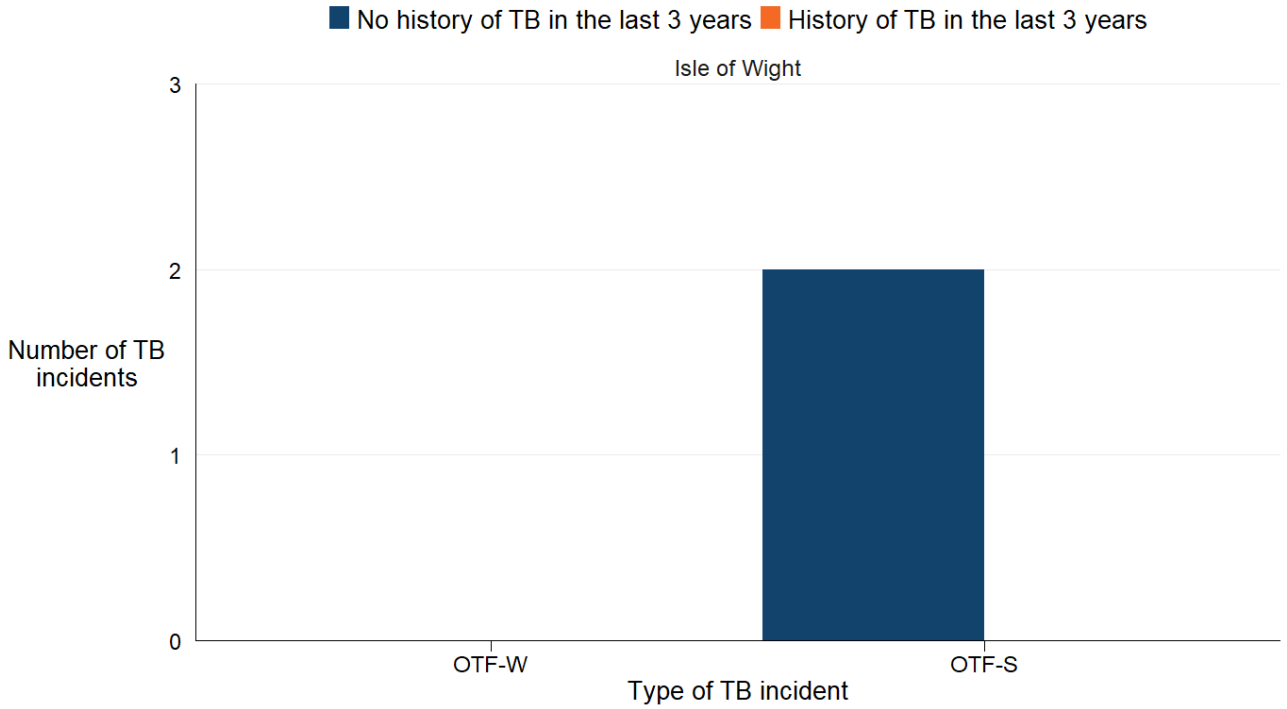


Figure 5e: Number of herds with a TB incident (by OTF-W and OTF-S) in Isle of Wight in 2024, with and without a history of any TB incident in the previous 3 years of the disclosing test.

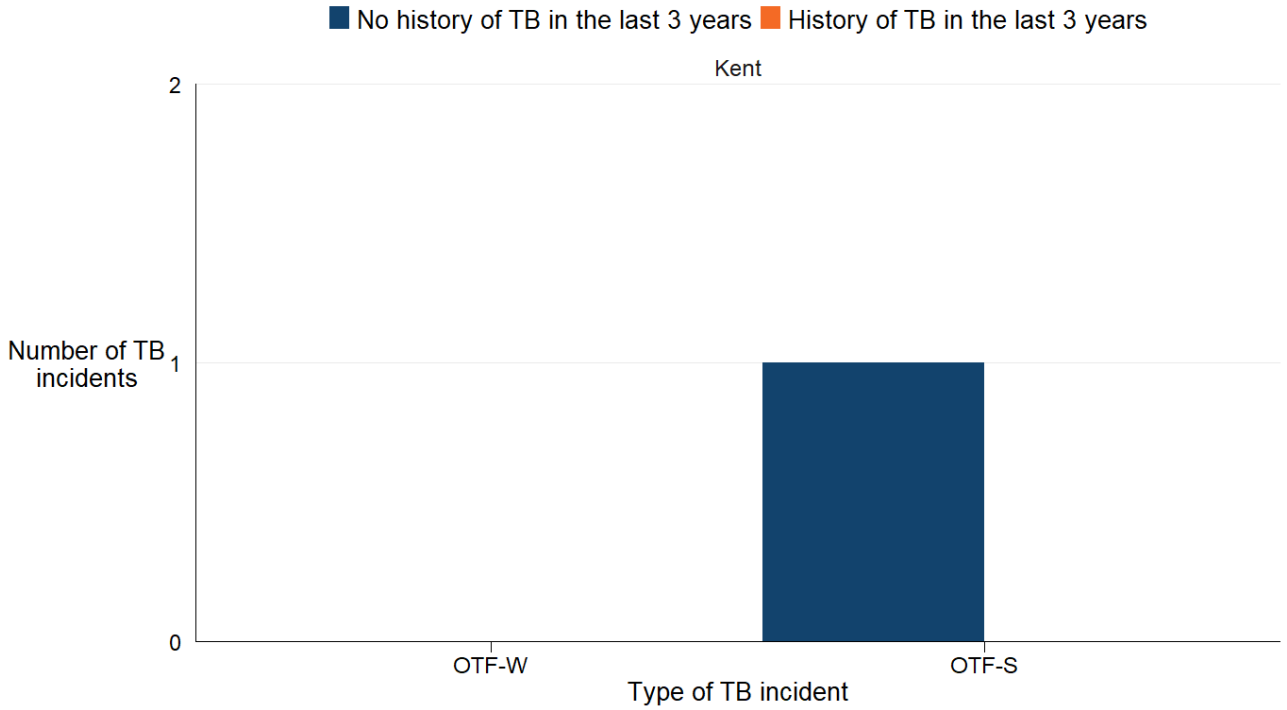


Figure 5f: Number of herds with a TB incident (by OTF-W and OTF-S) in Kent in 2024, with and without a history of any TB incident in the previous 3 years of the disclosing test.

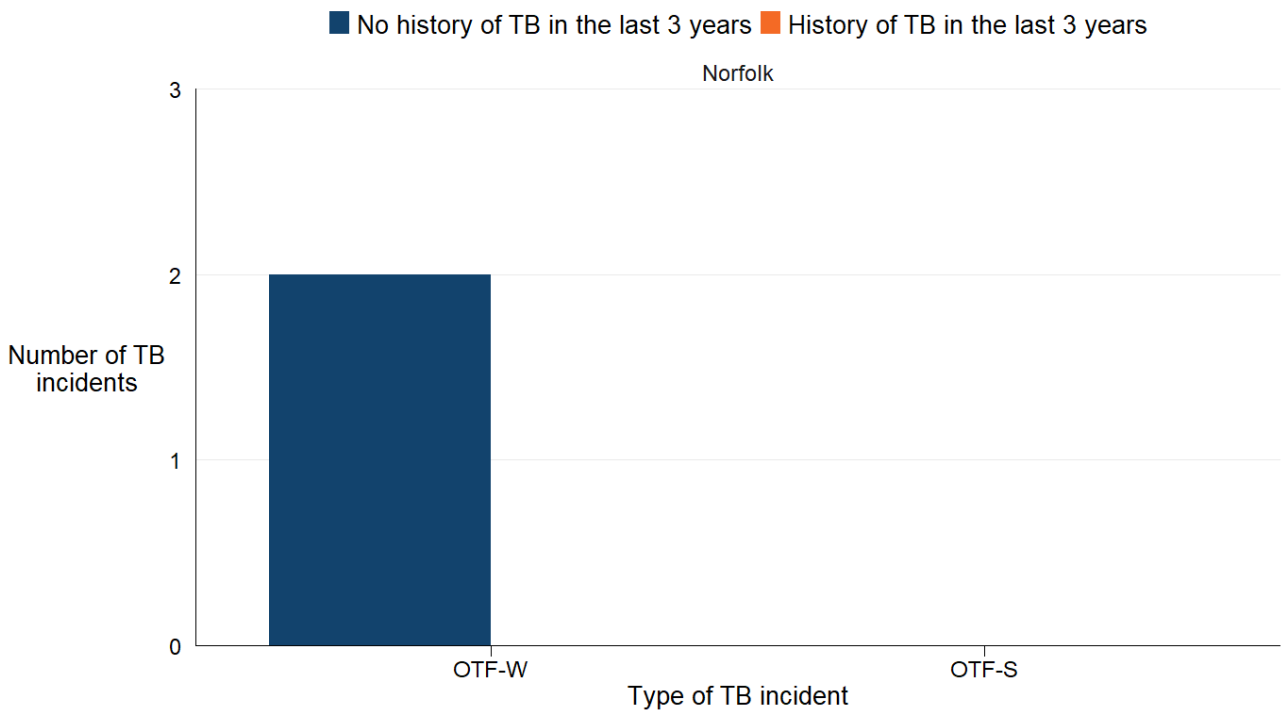


Figure 5g: Number of herds with a TB incident (by OTF-W and OTF-S) in Norfolk in 2024, with and without a history of any TB incident in the previous 3 years of the disclosing test.

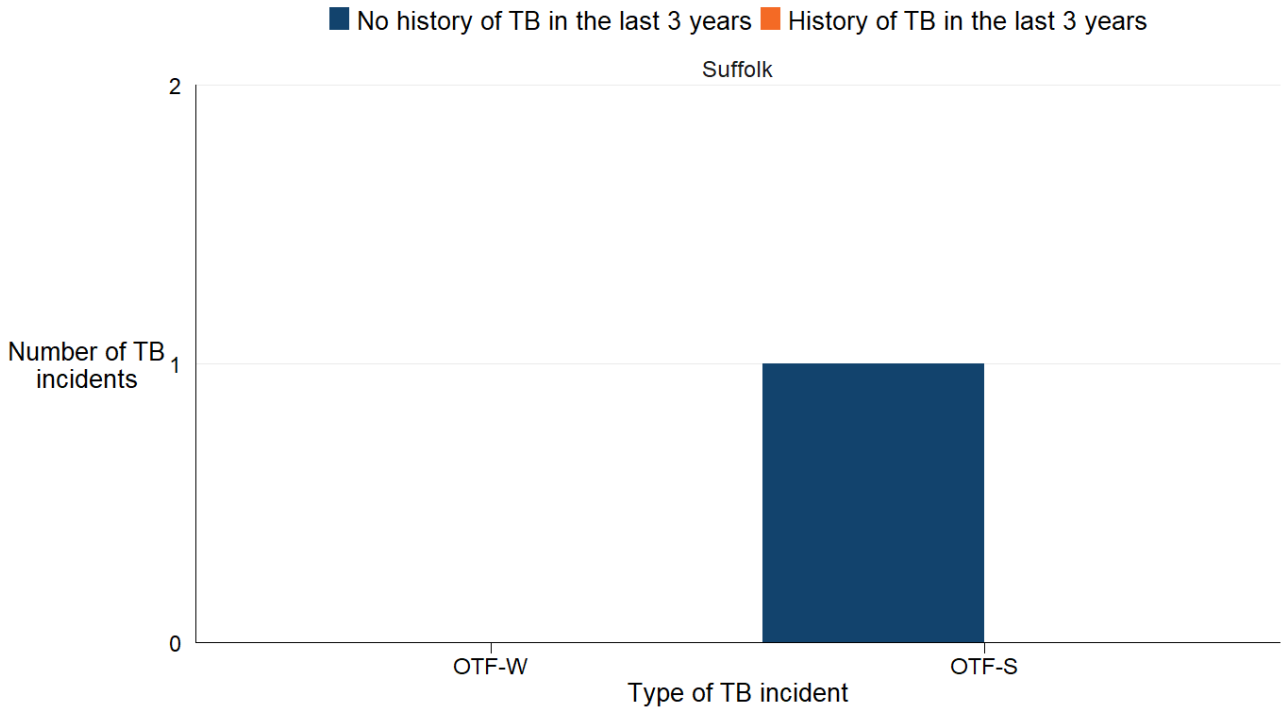


Figure 5h: Number of herds with a TB incident (by OTF-W and OTF-S) in Suffolk in 2024, with and without a history of any TB incident in the previous 3 years of the disclosing test.

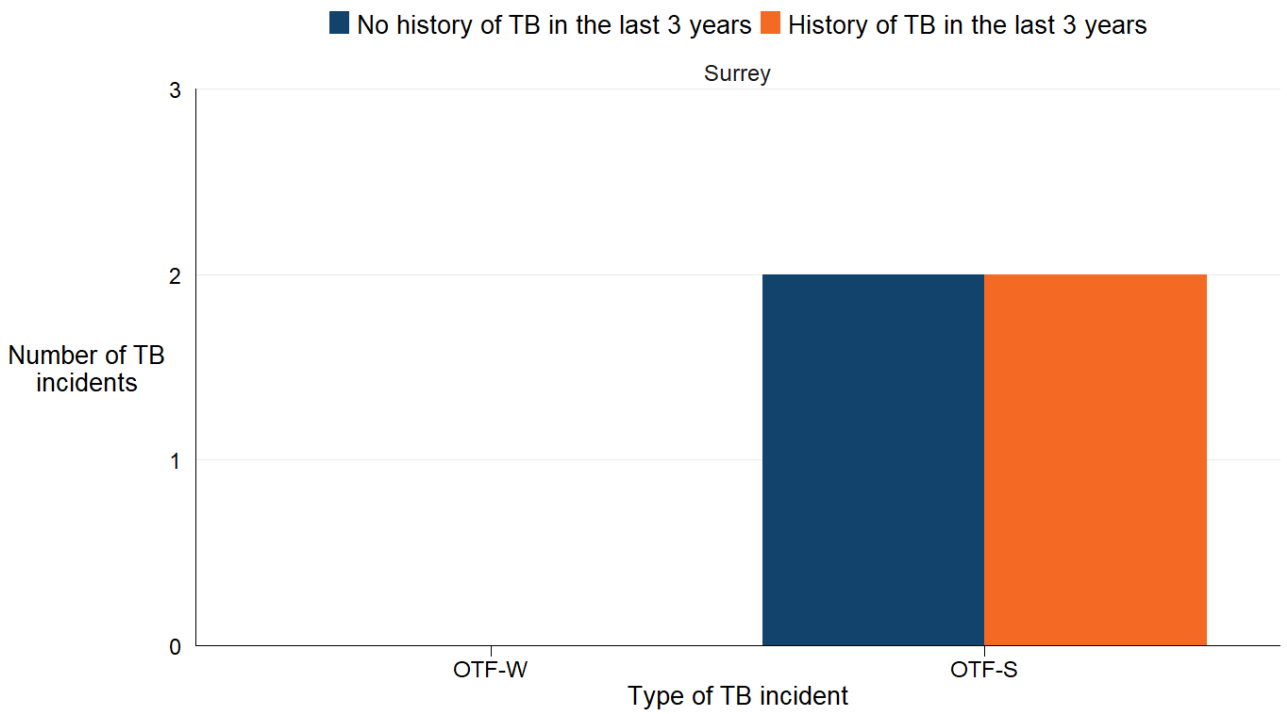


Figure 5i: Number of herds with a TB incident (by OTF-W and OTF-S) in Surrey in 2024, with and without a history of any TB incident in the previous 3 years of the disclosing test.

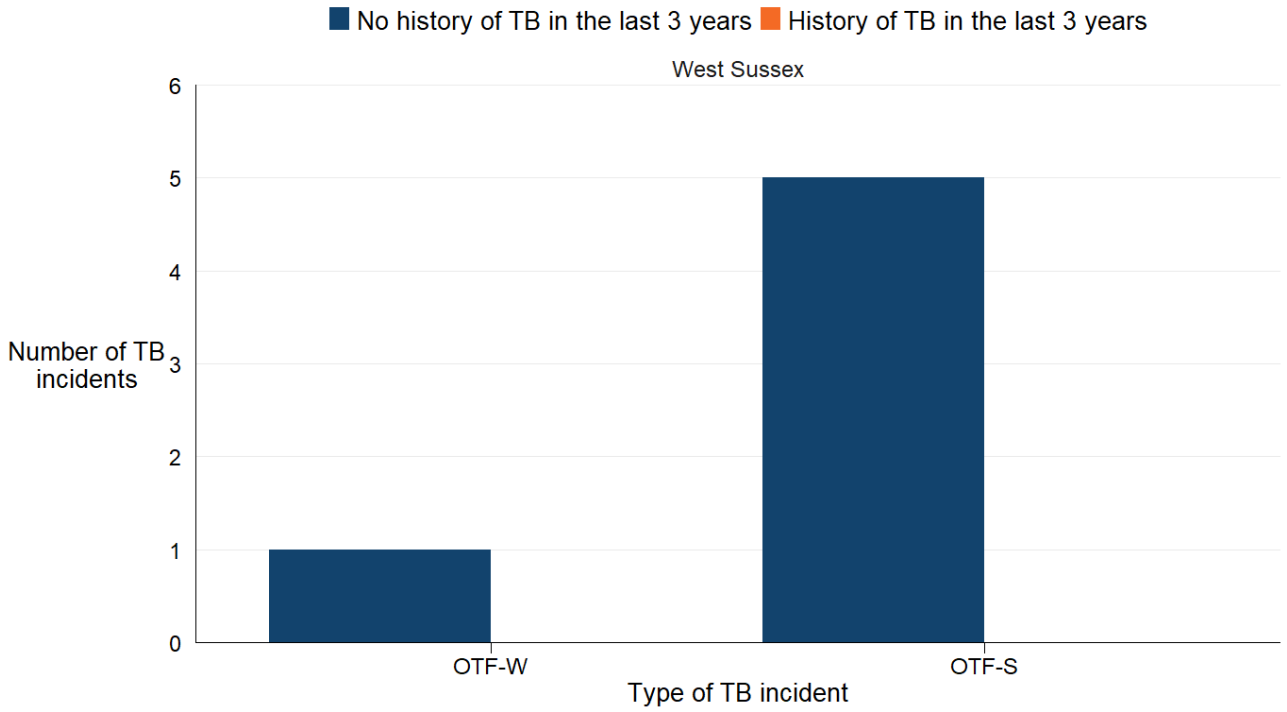


Figure 5j: Number of herds with a TB incident (by OTF-W and OTF-S) in West Sussex in 2024, with and without a history of any TB incident in the previous 3 years of the disclosing test.

Unusual TB incidents

In the South East, there were no unusual TB incidents reported in 2024.

TB incidents in other species

There is no statutory routine TB surveillance of non-bovine species, apart from Post-Mortem Examination (PME) of animals slaughtered for human consumption, or carcases submitted to veterinary laboratories for diagnostic investigation. Targeted TB testing takes place in non-bovine herds under TB movement restrictions due to laboratory-confirmed incidents of M. bovis infection, and in specific herds of camelids, goats and captive deer at an elevated risk of infection. Enhanced voluntary wildlife surveillance takes place in LRA hotspots, but not within the Edge Area. Outside of these initiatives, farmers and deer stalkers are able to submit wild deer carcases for private TB testing and the results of these findings are reported below.

There were no incidents of TB reported in non-bovine species in the South East in 2024.

Geographical distribution of TB incidents

As in previous years, new TB incidents in 2024 were spread across the South East of England (Figure 6). Incidents were generally disclosed in areas of a higher cattle density.

One of the 2 OTF-W incidents that occurred in Norfolk involved a cattle farm south of Norwich and was associated with Whole Genome Sequencing (WGS) clade B3-11 of M. bovis. No OTF-W incidents of clade B3-11 had been reported in this area previously. The location of the affected farm was outside the homerange for this clade which generally spans Shropshire, Staffordshire, Cheshire and Derbyshire, in addition to an area of northern Wales.

There were 2 OTF-W incidents caused by infection with WGS clade B6-85 in the South East region in 2024. One occurred in south-east Norfolk, bordering Suffolk. The other occurred in west Hertfordshire. Historically, most TB incidents caused by infection of cattle with this clade have occurred in its homerange in the Southwest peninsula (High Risk Area), mainly Devon and Somerset. In 2022, 2 TB incidents were identified as B6-85: one in central Kent, and the other on the northern border of West Sussex. In 2023, another TB incident identified as B6-85 occurred on the western border of West Sussex.

Three OTF-W incidents identified as caused by clade B6-62 were detected in the south and west of the region in 2024. One incident occurred in the east of Bedfordshire, an area where no TB incidents of clade B6-62 had been previously detected. A second incident caused by this clade was detected near the town of Tring in west Hertfordshire, inside Hotspot 30 (HS30). This TB hotspot was established in 2023, during which time there were a small cluster of 3 OTF-W incidents in this area, 2 of which were identified as clade B6-62 infections. The third OTF-W incident associated with clade B6-62 in 2024 was located east of Steyning in West Sussex. This was part of a cluster of incidents in the area, with a

further 4 OTF-S incidents also detected. Another OTF-S incident not considered part of this cluster of incidents occurred in West Sussex, further east towards the border with East Sussex.

In Surrey, 4 OTF-S incidents occurred, of which 3 were in the centre and south of the county. One was located close to the border with Hampshire.

The only 2 OTF-S incidents detected in Essex occurred on farms in the south of the county, one of which was along the border with Greater London. The OTF-S incident in Cambridgeshire affected a farm located in the west of the county.

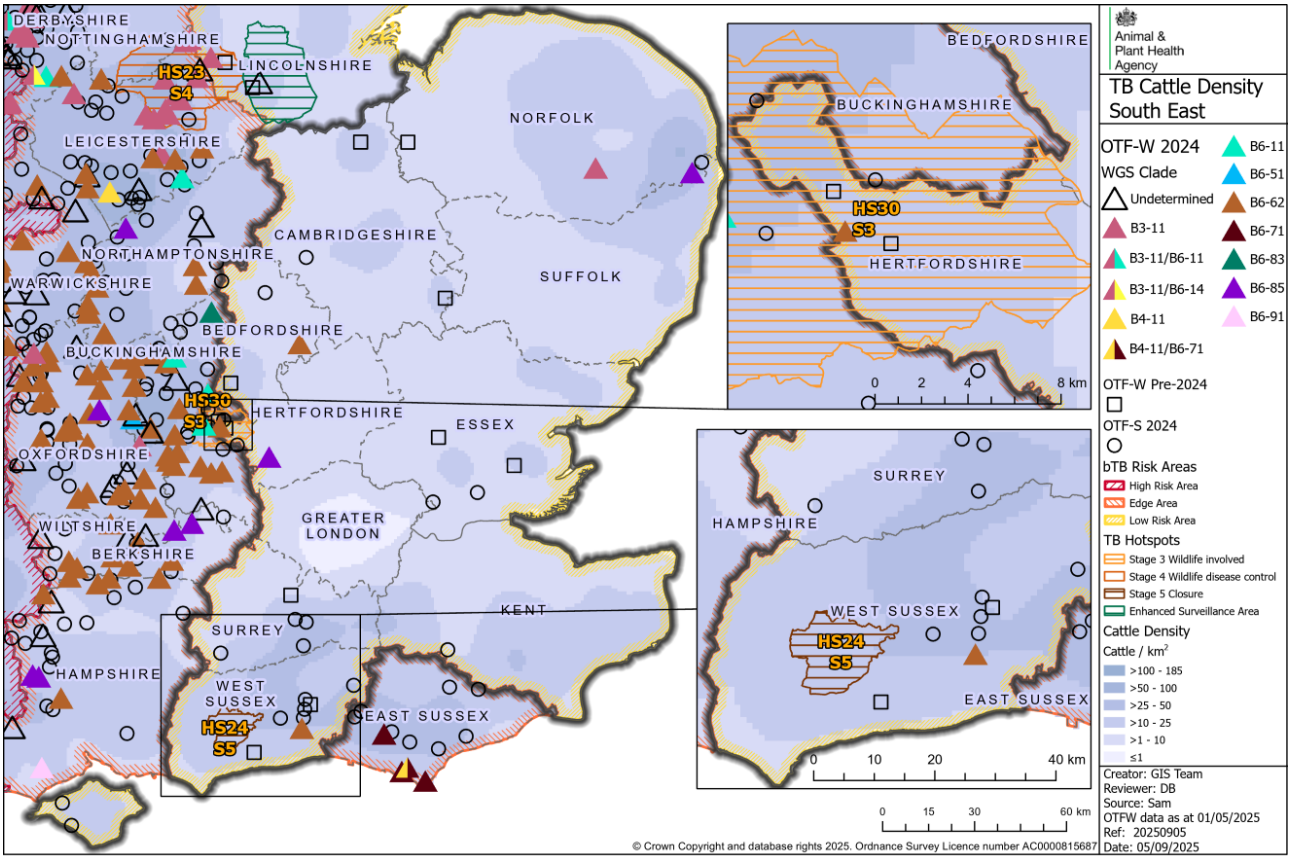


Figure 6: Location of cattle holdings in the South East region of the LRA of England and adjoining areas with new TB incidents (OTF-W and OTF-S) in 2024, and cattle incident holdings with OTF-W incidents still ongoing at the beginning of 2024, overlaid on a cattle density map.

Figure 6 description: A map of the South East region of the LRA of England and adjoining areas showing the cattle density, the geographical location of cattle holdings with new TB incidents (OTF-W and OTF-S) in 2024, and cattle incident holdings with OTF-W incidents still ongoing at the beginning of 2024. Dark blue areas represent a higher cattle density and light blue represent lower a cattle density. New OTF-W incidents detected in 2024 are shown as triangles and colour-coded based on the WGS clade that was detected in the incident. Dark pink represents clade B3-11, purple represents clade B6-85, brown represents clade B6-62, yellow represents B6-14, dark yellow represents B4-11, maroon represents B6-71, light green represents B6-11, blue represents B6-51, maroon represents B6-71, dark green represents B6-83, purple represents B6-85 and light pink represents B6-91. Transparent triangles represent incidents where the WGS clade was undetermined, and it was not possible to obtain WGS information or it was pending. OTF-S incidents in

2024 are shown as circles. Cattle incident holdings with OTF-W incidents still ongoing at the beginning of 2024 are shown as squares. The colour of the hotspot, along with the suffixes S3, S4 and S5, indicates the stage of controls in place in 2024: light orange is stage 3 (S3 is wildlife involved), dark orange is stage 4 (S4 is wildlife disease control), and brown is stage 5 (S5 is closure). Enhanced Surveillance Areas are shown with green hashed lines. The location of new TB incidents is described in the main text.

As shown in Figure 7 and Appendix 3, Table 5, OTF-W incidents in the South East region of the LRA were attributed to a range of likely sources of infection. In previous years, most incidents were likely caused by introductions of undetected, infected cattle, labelled as a ‘purchased’ sources. However, in 2024 only 2 incidents were likely caused by purchased cattle, one of which was also attributed to contact with local infected cattle. Exposure to infected wildlife (badgers) was the most likely source of infection across the South East in 2024, with a weighted contribution of 32%. This was closely followed by other or unknown sources (29%).

In 1 of the 2 new OTF-W incidents in Hertfordshire (HS30), introduction of undetected, infected cattle and exposure to infected wildlife were considered equally likely main sources of infection.

A second OTF-W incident in Hertfordshire had an unknown cause. The incident occurred near HS30, however the WGS clade isolated from cattle removed from the affected farm was B6-85, which is not closely related to clade B6-62 found within the hotspot. Phylogenetically, the closest isolates to B6-85 found in this case have been seen on the western edge of the region, close to the Oxfordshire border. The herd in question had no history of purchases from high-risk farms and little evidence of residual cattle infection, the cause was therefore deemed as unknown.

The single OTF-W incident reported in West Sussex in 2024 was also of an unknown origin. As culture of mycobacteria was unsuccessful, no genotype information was available. Possible causes include fomites or other infected cattle, however opportunities for these risk pathways were minimal in this case and an unknown cause was attributed to the incident.

One of the 2 OTF-W incidents identified in Norfolk in 2024 was attributed to the purchase of undetected, infected cattle. The other OTF-W incident in Norfolk did not have a Disease Report Form (DRF) investigation completed.

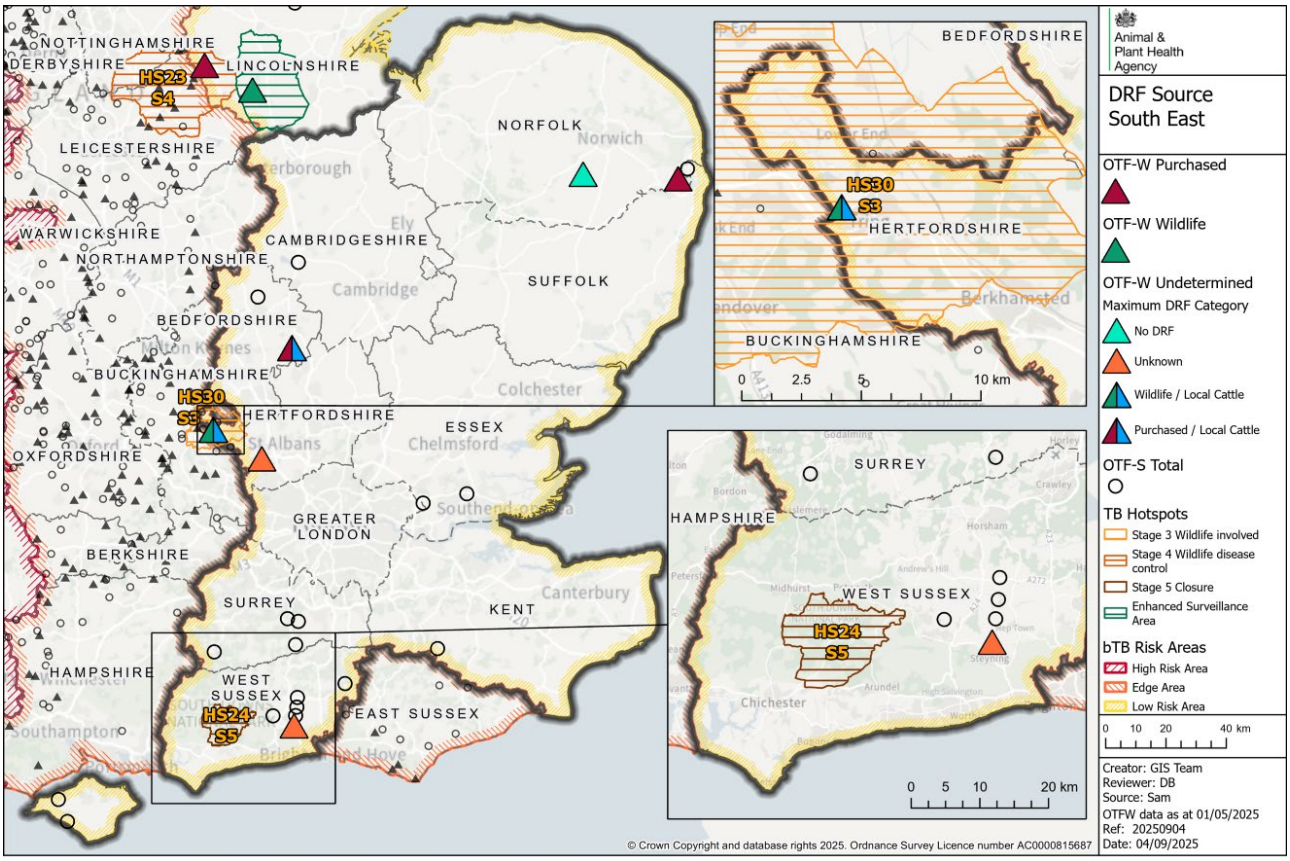


Figure 7: Map of the source of infection pathway recorded with the highest level of certainty for OTF-W incidents, and the location of OTF-S incidents in the South East region of the LRA of England and adjoining areas which started in 2024.

Figure 7 description: A map of the South East region of the LRA of England and adjoining areas showing the geographical location of cattle holdings with new OTF-W incidents in 2024 and the most likely source of infection. OTF-W incidents are shown as triangles in different colours which represent the source of infection with the highest level of certainty. Blue represents local cattle, brown represents purchased cattle, green represents wildlife, light green represents no DRF undertaken, and orange represents unknown. Unknown sources of infection reference where there is insufficient evidence to attribute the source of infection to a particular risk pathway, alternatively multiple risk pathways may be plausible, and the investigating veterinary officer may be unable to discern the most likely source. Local cattle refer to residual infection and contiguous cattle risk pathways. Purchased refers to cattle movement risk pathways. Wildlife refers to both badger and other wildlife risk pathways. Undetermined refers to incidents where a likely source of infection could not be ascertained. New OTF-S incidents in 2024 are shown as circles. The geographical location of TB hotspots is shown with hashed lines. The colour of the hotspot, along with the suffixes S3, S4 and S5, indicates the stage of controls in place in 2024: light orange is stage 3 (S3 is wildlife involved), dark orange is stage 4 (S4 is wildlife disease control), and brown is stage 5 (S5 is closure). Enhanced Surveillance Areas are shown with green hashed lines.

Radial surveillance zones that were active or completed around OTF-W incidents in the South East of England between 2020 and 2024 are represented in Figure 8. This indicates areas where OTF-W TB incidents have been repeatedly reported in recent years.

Three new active radial zones were set up in 2024 (one in Norfolk, one in Hertfordshire and one in West Sussex), and a fourth one was pending initiation in the east of Bedfordshire at the time of compiling this report.

There was a cluster of radial zones active within West Sussex, in the vicinity of Hotspot 24, which was closed in early 2024. Whilst 4 radial zones were activated in this county in 2023, only one was activated in 2024, which was further east towards the boundary with East Sussex.

A radial zone was also active in 2024 within Hotspot 30 (HS30), which is 1 of 3 radial zones activated in this area since 2022. These zones have areas of overlap and indicate an ongoing area of concern in this region.

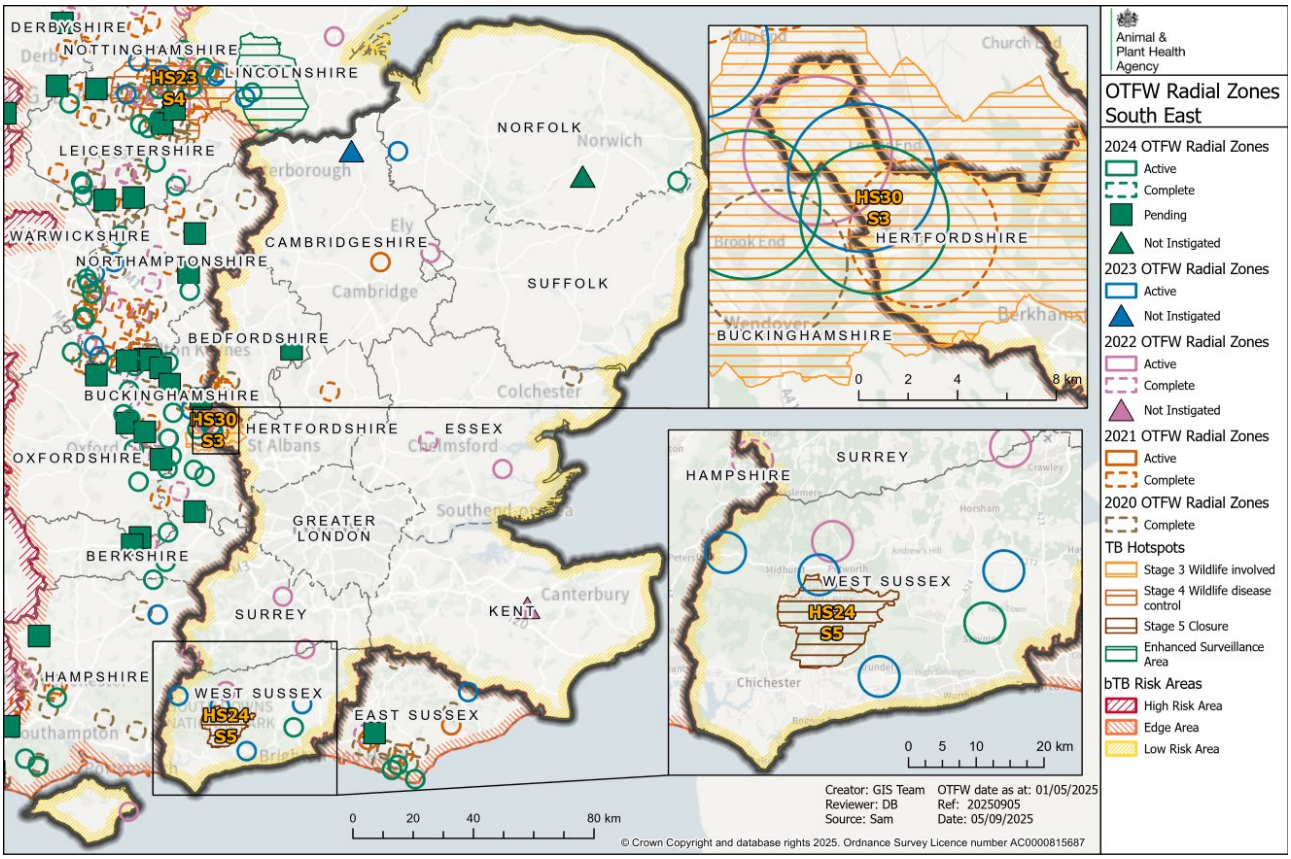


Figure 8: Hotspot areas and radial surveillance zones around OTF-W incidents that were active, completed or not instigated in the South East region of the LRA of England and adjoining areas during 2024, by year of initiation.

Figure 8 description: A map of the South East region of the LRA of England and adjoining areas showing the geographical location of hotspots and radial surveillance zones around OTF-W incidents in 2024. The active radial zones are shown as solid line circles, completed radial zones are shown as dotted line circles, and radial zones that were not instigated are shown as triangles. The colour of the circles represents the year in which the radial zone was instigated: 2024 is green, 2023 is blue, 2022 is pink, 2021 is orange and 2020 is brown. The geographical location of TB hotspots is shown with hashed lines. The colour of the hotspot, along with the suffixes S3, S4 and S5, indicates the stage of controls in place in 2024: light orange is stage 3 (S3 is wildlife involved), dark orange is stage 4 (S4 is wildlife disease control), and brown is stage 5 (S5 is closure). Enhanced Surveillance Areas are shown with green hashed lines.

TB hotspots

There were 2 hotspots active in the South East of England at some point during 2024, Hotspot 24 (HS24) and Hotspot 30 (HS30).

The total number of incidents reported in the TB hotspots in this report does not include slaughterhouse cases of TB that proved negative on PCR testing and/or bacteriological culture. The number of incidents presented in this section may not reflect those shown on the maps in these reports. Incidents shown on the maps are located at the centre of their County Parish Holding number (CPH). Incidents reported in this section include any holdings with land inside of the hotspot boundary.

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

Hotspots were previously referred to as ‘potential’ or ‘confirmed,’ depending upon identification, or not, of infection in wildlife populations. This has now changed, and hotspots are managed in ‘stages’ covering cattle, and where relevant, wildlife.

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

APHA is continuing to collect and test for TB in ‘found dead’ badger and wild deer carcases within hotspots that are reported via the ‘web report’ form or to the Defra Rural Services Helpline (03000 200 301) for collection.

Hotspot 24

This hotspot was launched in 2018 in the western half of West Sussex. Historical reviews of WGS phylogeny data were carried out in previous years to ensure that the ongoing hotspot area was not closed prematurely. There was no evidence of wildlife mediated disease spread, although there was a lack of wildlife surveillance in the hotspot. There were no further TB incidents in cattle herds within HS24 in 2023 or early 2024, and therefore HS24 was formally closed in March 2024.

Hotspot 30

HS30 was established in early 2023 around the town of Tring in Hertfordshire and straddles west Hertfordshire (LRA) and East Buckinghamshire (Edge Area) (Figure 6). In 2024, there was one new OTF-W incident associated with clade B6-62. Further information on HS30 can be found in the South East of England (Low Risk Area) year end report 2023.

Between 2020 and 2024, a total of 15 OTF-S (1 to 7 per year) incidents and 12 OTF-W incidents (1 to 4 per year) have been disclosed within the HS30 area (Figure 10).

In 2024, there was only one OTF-W incident in the Hertfordshire section of this hotspot, and 0 OTF-S incidents. Since 2020 there have been 5 OTF-S incidents, 2 in 2020 and 1 per year between 2021 and 2023. Additionally, there have been 8 OTF-W incidents, 1 in 2020 and 2022, 2 in 2021, 3 in 2023, and 1 in 2024.

In the Buckinghamshire section of HS30, there was 1 OTF-S incident each year between 2020 and 2022, 0 in 2023, and 7 in 2024. There was also 1 OTF-W incident in both 2020 and 2023 and 2 in 2024.

Within the hotspot there is a programme of submission of 'found dead' wildlife carcases as part of ongoing surveillance in this area. Of the 8 found-dead badger carcases collected, none were positive for M. bovis in 2024.

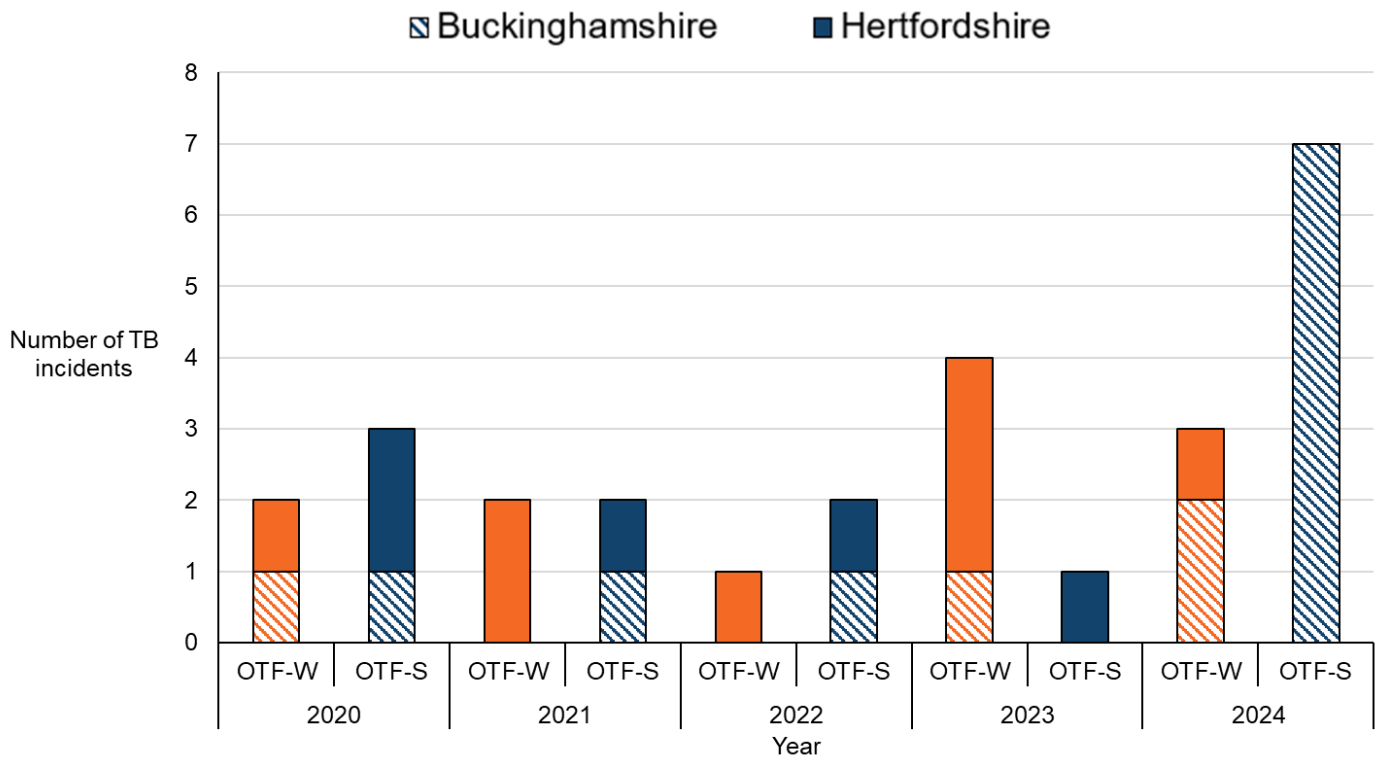


Figure 10: Annual number of new TB incidents in HS30, from 2020 to 2024. Incidents in Buckinghamshire are in bars with diagonal stripes and incidents in Hertfordshire are in solid bars. OTF-W incidents are shown as orange bars and OTF-S incidents as blue bars.

Main risk pathways and key drivers for TB infection

Evidence collected during APHA veterinary investigations into the source of infection within herds was used to inform this understanding. In 2024, 16 (70%) of new TB incidents in the South East region of the LRA of England 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 2024.

It can be challenging to retrospectively establish the route of infection for a TB incident herd. Ideally this investigation includes a thorough on-farm investigation and scrutiny of routinely collected data, such as cattle movement records, and the results of WGS where available. Up to 3 hazards and risk pathways were selected for each incident investigated.

Each of these potential sources were given a score that reflects the likelihood of that pathway being the true one, based on the available evidence.

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 2024.

The key drivers of the TB epidemic in the South East section of the LRA of England during 2024 were considered to be:

- exposure to infected badgers
- movement of cattle with undetected infection
- exposure to other wildlife

For the first time in the South East of England, exposure to potentially infected badgers was the main risk pathway of infection for cattle herds in 2024, resulting in a weighted contribution of 31.8% (Appendix 3, Table 5). The movement of undetected, infected cattle accounted for 18.0% of weighted risk pathways in 2024, which historically has contributed the highest proportion of most likely infection pathways in the South East.

Exposure to wildlife excluding badgers (11.5%), residual cattle infection (5.0%) and exposure to fomites (3.3%) were also selected as potential source risk pathways in 2024.

There was some degree of uncertainty around the source of incidents in 2024, with other or unknown infection sources having a weighted contribution of 28.7%. This category is added to those incidents in which there was high uncertainty around the selected pathways.

Forward look

Current surveillance and incident management measures are keeping the incidence of TB under control. Overall, disease incidence remains low within the South East region of the LRA, with a reduction of 44% in new TB incidents seen in 2024 compared to the previous year. The recommendation would be to continue utilising all control measures currently available to facilitate this downward trend. Another crucial recommendation is to encourage herd biosecurity awareness through communication with veterinary providers and farming industry associations.

For the first time in this part of the LRA, exposure to potentially infected badgers was the main risk pathway for infection of cattle herds in 2024, resulting in a weighted contribution of 31.8%. Despite this finding, there is still a lack of evidence to support wildlife reservoir of M. bovis infection within the region, outside of HS30. This finding may be due to the overall reduction in disease incidents being attributed to risk pathways associated with purchased cattle. The trend does, however, indicate the importance that wildlife related risk pathways may play in TB incidence within the South East region of the LRA over the coming years.

Ongoing areas of concern in this region include the area around Leighton Buzzard in Bedfordshire, where historically several incidents of B6-11 have occurred, as well as the area around Tring in the west of Hertfordshire where HS30 is located. These areas of concern should be closely monitored for further incidents of TB and trends mapped using

WGS data. Increasing wildlife surveillance within radial zones and areas of interest would support this.

If the above recommendations are actioned, and areas of concern within the region carefully monitored, the trend towards a reduction in TB incidents within the South East of the LRA may continue. This will increase the potential for achieving OTF status for the region by 2038.

Appendix 1: cattle industry demographics

Table 1: Number of cattle herds by size category in the South East of England as of 31 December 2024 (RADAR data on number of holdings in the report year)

Size of herds	Number of herds in Bedfordshire	Number of herds in Cambridgeshire	Number of herds in Essex
Undetermined	0	5	6
1 to 50	75	143	202
51 to 100	30	44	40
101 to 200	12	33	30
201 to 350	6	11	18
351 to 500	0	6	4
Greater than 501	3	8	7
Total number of herds	126	250	307
Mean herd size	84	95	82
Median herd size	38	30	22

Size of herds	Number of herds in Greater London	Number of herds in Hertfordshire	Number of herds in Isle of Wight
Undetermined	1	0	2
1 to 50	38	113	52
51 to 100	6	32	21
101 to 200	4	16	22
201 to 350	1	8	7
351 to 500	0	1	2
Greater than 501	0	2	0
Total number of herds	50	172	106
Mean herd size	34	59	77
Median herd size	10	24	44

Size of herds	Number of herds in Kent	Number of herds in Norfolk	Number of herds in Suffolk
Undetermined	6	11	5
1 to 50	324	438	245
51 to 100	82	115	66
101 to 200	60	86	50
201 to 350	30	43	16
351 to 500	16	14	9
Greater than 501	19	24	12
Total number of herds	537	731	403
Mean herd size	93	92	78
Median herd size	29	30	25

Size of herds	Number of herds in Surrey	Number of herds in West Sussex
Undetermined	1	4
1 to 50	179	185
51 to 100	25	59
101 to 200	33	55
201 to 350	17	22
351 to 500	10	17
Greater than 501	11	13
Total number of herds	276	355
Mean herd size	96	110
Median herd size	22	44

Table 2: Number (and percentage of total) of animals by breed purpose in the South East of England as of 31 December 2024 (Sam data showing the number of herds flagged as active at the end of the report year)

Breed purpose	Number (and percentage of total) cattle in Bedfordshire	Number (and percentage of total) cattle in Cambridgeshire	Number (and percentage of total) cattle in Essex
Beef	8,244 (77%)	19,245 (81%)	21,269 (84%)
Dairy	2,060 (19%)	3,900 (16%)	3,075 (12%)
Dual purpose	305 (2%)	557 (2%)	968 (3%)
Unknown	3(0%)	2 (0.01%)	6 (0.02%)
Total	10,612	23,704	25,318

Breed purpose	Number (and percentage of total) cattle in Greater London	Number (and percentage of total) cattle in Hertfordshire	Number (and percentage of total) cattle in Isle of Wight
Beef	1,133 (66%)	8,274 (81%)	7,123 (87%)
Dairy	271 (15%)	1,539 (15%)	924 (11%)
Dual purpose	299 (17%)	330 (3%)	111 (1%)
Unknown	(0%)	2 (0.02%)	(0%)
Total	1,703	10,145	8,158

Breed purpose	Number (and percentage of total) cattle in Kent	Number (and percentage of total) cattle in Norfolk	Number (and percentage of total) cattle in Suffolk
Beef	33,172 (66%)	53,517 (79%)	24,063 (76%)
Dairy	15,626 (31%)	10,359 (15%)	4,316 (13%)
Dual purpose	1,017 (2%)	3,026 (4%)	3,092 (9%)
Unknown	6 (0.01%)	8 (0.01%)	2 (0.01%)
Total	49,821	66,910	31,473

Breed purpose	Number (and percentage of total) cattle in Surrey	Number (and percentage of total) cattle in West Sussex
Beef	18,900 (71%)	23,608 (60%)
Dairy	6,176 (23%)	14,261 (36%)
Dual purpose	1,400 (5%)	1,345 (3%)
Unknown	5 (0.02%)	0 (0%)
Total	26,481	39,214

Appendix 2: summary of headline cattle TB statistics

Table 3: Herd-level summary statistics for TB in cattle in the South East of England between 2022 and 2024 (SAM data)

Herd-level statistics	Bedfordshire	Cambridge	Essex	Greater London
(a) Total number of cattle herds live on Sam at the end of the reporting period	163	346	398	75
(b) Total number of cattle herds subject to annual TB testing (or more frequent) at the end of the reporting period (any reason)	9	10	29	10
(c) Total number of whole herd skin tests carried out at any time in the period	39	66	98	16
(d) Total number of OTF cattle herds having TB whole-herd tests during the period for any reason	31	64	91	16
(e) Total number of OTF cattle herds at the end of the report period (herds not under any type of TB movement restrictions	159	333	392	71
(f) Total number of cattle herds that were not under restrictions due to an ongoing TB incident at the end of the report period	160	343	396	75
(g.1) Total number of new OTF-S TB incidents detected in cattle herds during the report period	1	1	2	0
(g.2) Total number of new OTF-W TB incidents detected in cattle herds during the report period	1	0	0	0

Herd-level statistics	Bedfordshire	Cambridge	Essex	Greater London
(g.3) Total number of new TB incidents (OTF-W and OTF-S) detected in cattle herds during the report period	2	1	2	0
(h.1) Of the new OTF-W herd incidents, how many occurred in a holding affected by another OTF-W incident in the previous 3 years?	0	0	0	0
(h.2) Of the new OTF-W herd incidents, how many could be considered secondary to a primary incident based on current evidence?	0	0	0	0
(h.3) Of the new OTF-W herd incidents, how many were triggered by skin test reactors or twice-inconclusive reactors (2xIRs) at routine herd tests?	0	0	0	0
(h.4) 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, check tests)?	0	0	0	0
(h.5) Of the new OTF-W herd incidents, how many were first detected through routine slaughterhouse TB surveillance?	1	0	0	0
(i.1) Number of new OTF-S incidents revealed by enhanced TB surveillance (radial testing) conducted around those OTF-W herds	0	0	0	0

Herd-level statistics	Bedfordshire	Cambridge	Essex	Greater London
(i.2) Number of new OTF-W incidents revealed by enhanced TB surveillance (radial testing) conducted around those OTF-W herds	0	0	0	0
(j) Number of OTF-W herds still open at the end of the period (including any ongoing OTF-W incidents that began in a previous reporting period)	2	2	0	0
(k) Number of OTF-W herds still open at the end of the period that were on a finishing unit	0	2	0	0
(l) New laboratory-confirmed incidents of M. bovis infection in non-bovine domestic species or captive deer detected during the report period (indicate host species involved)	0	0	0	0

Herd-level statistics	Hertfordshire	Isle of Wight	Kent	Norfolk
(a) Total number of cattle herds live on Sam at the end of the reporting period	224	130	656	931
(b) Total number of cattle herds subject to annual TB testing (or more frequent) at the end of the reporting period (any reason)	28	2	39	57
(c) Total number of whole herd skin tests carried out at any time in the period	75	37	167	217
(d) Total number of OTF cattle herds having TB whole-herd tests during the period for any reason	62	33	159	201

Herd-level statistics	Hertfordshire	Isle of Wight	Kent	Norfolk
(e) Total number of OTF cattle herds at the end of the report period (herds not under any type of TB movement restrictions	219	130	645	913
(f) Total number of cattle herds that were not under restrictions due to an ongoing TB incident at the end of the report period	223	130	655	931
(g.1) Total number of new OTF-S TB incidents detected in cattle herds during the report period	0	2	1	0
(g.2) Total number of new OTF-W TB incidents detected in cattle herds during the report period	2	0	0	2
(g.3) Total number of new TB incidents (OTF-W and OTF-S) detected in cattle herds during the report period	2	2	1	2
(h.1) Of the new OTF-W herd incidents, how many occurred in a holding affected by another OTF-W incident in the previous 3 years?	1	0	0	0
(h.2) Of the new OTF-W herd incidents, how many could be considered secondary to a primary incident based on current evidence?	0	0	0	0
(h.3) Of the new OTF-W herd incidents, how many were triggered by skin test reactors or twice-inconclusive reactors (2xIRs) at routine herd tests?	0	0	0	0

Herd-level statistics	Hertfordshire	Isle of Wight	Kent	Norfolk
(h.4) 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, check tests)?	1	0	0	1
(h.5) Of the new OTF-W herd incidents, how many were first detected through routine slaughterhouse TB surveillance?	1	0	0	1
(i.1) Number of new OTF-S incidents revealed by enhanced TB surveillance (radial testing) conducted around those OTF-W herds	0	0	0	0
(i.2) Number of new OTF-W incidents revealed by enhanced TB surveillance (radial testing) conducted around those OTF-W herds	0	0	0	0
(j) Number of OTF-W herds still open at the end of the period (including any ongoing OTF-W incidents that began in a previous reporting period)	1	0	0	0
(k) Number of OTF-W herds still open at the end of the period that were on a finishing unit	0	0	0	0
(l) New laboratory-confirmed incidents of M. bovis infection in non-bovine domestic species or captive deer detected during the report period (indicate host species involved)	0	0	0	0

Herd-level statistics	Suffolk	Surrey	West Sussex
(a) Total number of cattle herds live on Sam at the end of the reporting period	508	344	447
(b) Total number of cattle herds subject to annual TB testing (or more frequent) at the end of the reporting period (any reason)	13	34	106
(c) Total number of whole herd skin tests carried out at any time in the period	107	119	210
(d) Total number of OTF cattle herds having TB whole-herd tests during the period for any reason	102	104	168
(e) Total number of OTF cattle herds at the end of the report period (herds not under any type of TB movement restrictions	499	332	429
(f) Total number of cattle herds that were not under restrictions due to an ongoing TB incident at the end of the report period	507	342	444
(g.1) Total number of new OTF-S TB incidents detected in cattle herds during the report period	1	4	5
(g.2) Total number of new OTF-W TB incidents detected in cattle herds during the report period	0	0	1
(g.3) Total number of new TB incidents (OTF-W and OTF-S) detected in cattle herds during the report period	1	4	6
(h.1) Of the new OTF-W herd incidents, how many occurred in a holding affected by another OTF-W incident in the previous 3 years?	0	0	0

Herd-level statistics	Suffolk	Surrey	West Sussex
(h.2) Of the new OTF-W herd incidents, how many could be considered secondary to a primary incident based on current evidence?	0	0	0
(h.3) Of the new OTF-W herd incidents, how many were triggered by skin test reactors or twice-inconclusive reactors (2xIRs) at routine herd tests?	0	0	1
(h.4) 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, check tests)?	0	0	0
(h.5) Of the new OTF-W herd incidents, how many were first detected through routine slaughterhouse TB surveillance?	0	0	0
(i.1) Number of new OTF-S incidents revealed by enhanced TB surveillance (radial testing) conducted around those OTF-W herds	1	0	3
(i.2) Number of new OTF-W incidents revealed by enhanced TB surveillance (radial testing) conducted around those OTF-W herds	0	0	0
(j) Number of OTF-W herds still open at the end of the period (including any ongoing OTF-W incidents that began in a previous reporting period)	0	0	0

Herd-level statistics	Suffolk	Surrey	West Sussex
(k) Number of OTF-W herds still open at the end of the period that were on a finishing unit	0	0	0
(l) New laboratory-confirmed incidents of M. bovis infection in non-bovine domestic species or captive deer detected during the report period (indicate host species involved)	0	0	0

Table 4: Animal-level summary statistics for TB in cattle in the South East of England between 2022 and 2024

Animal-level statistics (cattle)	Bedfordshire	Cambridgeshire	Essex	Greater London
(a) Total number of cattle tested with tuberculin skin tests or additional IFN-γ blood tests in the period (animal tests)	6,802	7,187	7,037	229
(b.1) Reactors detected by tuberculin skin tests during the year	1	2	3	0
(b.2) Reactors detected by additional IFN-γ blood tests (skin-test negative or IR animals) during the year	2	0	0	0
(c) Reactors detected during year per incidents disclosed during year	1.5	2.0	1.5	0.0
(d) Reactors per 1,000 animal tests	0.4	0.3	0.4	0.0
(e.1) Additional animals slaughtered during the year for TB control reasons (dangerous contacts, including any first time IRs)	0	0	0	0

Animal-level statistics (cattle)	Bedfordshire	Cambridgeshire	Essex	Greater London
(e.2) Additional animals slaughtered during the year for TB control reasons (private slaughters)	0	0	0	0
(f) Slaughterhouse (SLH) cases (tuberculous carcases) reported by the Food Standards Agency (FSA) during routine meat inspection	2	5	2	0
(g) SLH cases confirmed by M. bovis PCR testing or bacteriological culture	2	3	0	0

Animal-level statistics (cattle)	Hertfordshire	Isle of Wight	Kent	Norfolk
(a) Total number of cattle tested with tuberculin skin tests or additional IFN-γ blood tests in the period (animal tests)	6,521	4,022	10,346	19,194
(b.1) Reactors detected by tuberculin skin tests during the year	5	3	1	1
(b.2) Reactors detected by additional IFN-γ blood tests (skin-test negative or IR animals) during the year	10	0	1	7
(c) Reactors detected during year per incidents disclosed during year	7.5	1.5	2.0	4.0
(d) Reactors per 1,000 animal tests	2.3	0.8	0.2	0.4
(e.1) Additional animals slaughtered during the year for TB control reasons (dangerous contacts, including any first time IRs)	0	0	0	0

Animal-level statistics (cattle)	Hertfordshire	Isle of Wight	Kent	Norfolk
(e.2) Additional animals slaughtered during the year for TB control reasons (private slaughters)	0	0	0	0
(f) Slaughterhouse (SLH) cases (tuberculous carcases) reported by the Food Standards Agency (FSA) during routine meat inspection	1	4	2	3
(g) SLH cases confirmed by M. bovis PCR testing or bacteriological culture	1	0	0	1

Animal-level statistics (cattle)	Suffolk	Surrey	West Sussex
(a) Total number of cattle tested with tuberculin skin tests or additional IFN-γ blood tests in the period (animal tests)	9,271	17,717	31,314
(b.1) Reactors detected by tuberculin skin tests during the year	1	12	15
(b.2) Reactors detected by additional IFN-γ blood tests (skin-test negative or IR animals) during the year	0	0	32
(c) Reactors detected during year per incidents disclosed during year	1.0	3.0	7.8
(d) Reactors per 1,000 animal tests	0.1	0.7	1.5
(e.1) Additional animals slaughtered during the year for TB control reasons (dangerous contacts, including any first time IRs)	0	0	3

Animal-level statistics (cattle)	Suffolk	Surrey	West Sussex
(e.2) Additional animals slaughtered during the year for TB control reasons (private slaughters)	0	2	0
(f) Slaughterhouse (SLH) cases (tuberculous carcases) reported by the Food Standards Agency (FSA) during routine meat inspection	1	1	2
(g) SLH cases confirmed by M. bovis PCR testing or bacteriological culture	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 in the table above.

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.

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

In 2024, 16 out of 23 (70%) new TB incidents in the South East of England 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 2024.

Each TB incident 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 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 2024.

Table 5: Suspected sources of M. bovis infection for the 16 incidents with a preliminary or a final veterinary assessment in the South East of England, in 2024

Source of infection	Possible (1)	Likely (4)	Most likely (6)	Definite (8)	Weighted contribution
Badgers	2	7	5	0	31.8%
Cattle movements	5	3	0	1	18.0%
Contiguous	0	0	0	0	0.0%
Residual cattle infection	0	2	0	0	5.0%
Domestic animals	1	0	0	0	0.9%
Non-specific reactor	1	0	0	0	0.9%
Fomites	4	0	0	0	3.3%
Other wildlife	5	1	2	0	11.5%
Other or unknown source	5	0	0	0	28.7%

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.

Data Protection:

For information on how we handle personal data visit www.gov.uk and search Animal and Plant Health Agency Personal Information Charter.

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