



## APHA Briefing Note 14/16

# Provision of bTB herd reports to new breakdowns in the High Risk and Edge Area of England

### Purpose

1. To inform Official Veterinarians (OVs) that APHA will start issuing bovine TB farm level reports routinely to new bTB incidents in the High Risk and Edge Area of England from 1 August 2016.
2. The report presents a collated view of historical data held by APHA and the Rural Payments Agency (RPA) pertaining to the herd. It is intended to aid the herd owner in understanding the causes of bTB in their herd, and assess the potential for changes to their husbandry practices to mitigate future risk.
3. Herd owners will be encouraged to share the report with their Private Veterinary Surgeon and engage their support and advice. This will be a private commercial arrangement between the herd owner and their PVS.
4. An example of the report format and guidance notes on the content are attached.

### Background

5. The report is provided in line with the Secretary of State's commitment to share more data with industry, and in response to specific demands for more detailed information on bTB breakdowns. We will be seeking to build upon this in future by expanding both the content and the availability of the data.
6. APHA conducts detailed disease investigations on bTB breakdowns for the purposes of gathering epidemiological information to understand the epidemic and to directly intervene where necessary. Most herds in the Low Risk Area and the Edge Area are offered a visit from a Veterinary Officer. In the High Risk Area, not all incidents are subject to a full investigation. New breakdowns are prioritised according to their severity and public health risk, and a random proportion are selected to provide an appropriate sample of epidemiological data.

7. The data we provide in these reports is intended to supplement and support the herd owner's efforts to tackle the bTB problem, regardless of whether they are subject to a full disease investigation or not.

#### **For further information**

- TB Information Hub: [www.TBhub.co.uk](http://www.TBhub.co.uk)
- Information bTB (ibTB), a free to access interactive mapping tool showing the location of bovine tuberculosis (bTB) outbreaks in England and Wales over the last 5 years: <http://www.ibtb.co.uk/>
- Descriptive reports on bTB statistics in the low risk areas and edge areas of England: <https://www.gov.uk/government/publications/bovine-tb-epidemiology-reports-2015>

**Issued:** 28 July 2016



# Annex 1 - Farm Level bTB Report

CPH **xx/xxx/xxxx**

## Introduction:

This document summarises bovine TB (bTb) information pertaining to your herd held by Animal & Plant Health Agency (APHA), Rural Payments Agency (RPA), Rural Payments Wales (RPW) and the Cattle Tracing System (CTS), as of the extraction date given below. This will help you in conjunction with your private vet to understand the following:

- the level of bTB risk to your herd;
- the impact any bTb incident has had on your herd in the past;
- the impact and effect of patterns of cattle movement on your herd;
- the reasons for the pattern of bTB incidence in your herd, or its absence; and,
- the level of risk posed by any bTb infection detected in the local area.

The first part of the document details information APHA, RPA and RPW hold including any bTB breakdowns, should your herd have been affected with a TB Breakdown in the past. The second part of the document contains CTS information on the movements of cattle on to your holding in the past five years.

Included on the final page is a map of your current holding based on the information RPA/RPW holds on your business. This depicts the recent (2011 to 2015) genotypes of the *Mycobacterium bovis* causing breakdowns around the land your business occupies.

Please contact the relevant organisation if you believe any of the information is inaccurate.

Any new bTB breakdown in your herd is likely to be the result of one or more of the following four factors:

- **Infection from wildlife sources.** Measures to keep cattle separate from wildlife, particularly badgers is always advisable, but it is particularly true if your holding is in the High Risk Area (HRA) of England or in a high TB incidence area of the Edge or Wales.

- **Residual infection from a previous breakdown.** While the tests used are the best available, they are not 100% sensitive and infection can be left in the herd even when a breakdown is closed and the restrictions have been lifted. Scientific research suggests that this may be the case in more than 20% of bTB breakdowns, leading to recurrence of infection at a later date.
- **New cattle brought into your herd can bring in new infection.** In the low risk area of England (North, East and South East) and low incidence areas of Wales virtually all cases of bTB are 'imported' with cattle purchased from the annually tested areas. This is the case even when we pre-movement test those cattle, as some infected animals are missed by the test. This transmission of disease obviously occurs with movements within the HRA and Edge areas as well, but it is just more difficult to assess this as the strain of bTB involved is often local so it is not usually possible to differentiate between infection from purchased stock, from wildlife (see above), or from nose to nose contact with neighbouring cattle (see below).
- **Nose to nose contact with neighbouring cattle is likely to cause bTB transmission into your herd.** This can happen through casual contact where fencing/field separation is not adequate or when cattle from two herds mix due to breakdown in fencing/separation. bTB is primarily transmitted by the respiratory route; stressed animals mixing with unknown stock are particularly prone to aerosol spread, even if only one of the animals in the group is infected.

## **Part 1: Your herd and its bTB history**

bTB Extraction Date: **DD-MMM-YYYY**

The first table simply shows how your herd is depicted in our database, giving it CPH and CPHH numbers, herd type and herd size reported at the last bTB test, if applicable (below).

<b>Herd Information</b>			
<b>CPH</b>	<b>CPHH</b>	<b>Herd Type</b>	<b>Herd Size</b>
xx/xxx/xxxx	xx/xxx/xxxx/xx	(Code)	(Number)

<b>Herd Genotype Homeranges</b>		
<b>CPHH</b>		
xxxxxxxxxxx	e.g. 10:a	e.g. 17:a

Herd size has been consistently and positively associated with the probability of a bTB incident or breakdown; the number of contacts and hence the probability of transmission increases with the number of animals in an epidemiological group. The performance of the skin test also increases with size of group tested.

There is a distinct diversity of *M.bovis* in GB, and specific genotypes of the bacterium are geographically localised. The concept of 'homeranges' has been developed to define these areas. A 5km square is considered to be part of a genotype homerange if there have been three different breakdowns of that genotype, in at least two holdings, within a 5 year period. Each 5km square is then given a 10km buffer to generate a homerange map. The homerange genotype is the genotype that is most likely to occur in a particular area if the transmission route is local cattle movements, or contiguous contact with infected cattle or badgers. Different genotypes' homeranges do overlap in some areas.

The second table below shows all the bTB breakdowns (if any) your herd has suffered in the past 10 years. The disclosing test is the test type that revealed the initial breakdown. "Total taken" refers to all reactors, inconclusive reactors (IRs), dangerous contacts (DCs) and slaughterhouse cases that were taken out of the herd during a breakdown. The "Genotype" column shows the specific genetic strain of *M. bovis* responsible for the breakdown, if known.

Below is a table showing your bTB breakdown history in chronological order by herd. Breakdown history is an important predictor of your risk of having bTB in your farm in future so it is critical to understand patterns of risk and behaviour that have contributed to past breakdowns. The "Animals taken for bTB control purposes" table summarises the animals that were taken from your herd for bTB control purposes during each breakdown. This information will help to assess the impact the breakdowns have had, and consider whether there are particularly 'at risk' groups or animals within your herd, as ear tag numbers and age are included. "Reason" in this table shows the reason for which the particular animal was taken.

N.B. the IFN test is the interferon-gamma test.

<b>bTB Breakdown and Reactor History</b>											
<b>Herd</b>	<b>Duration (Days)</b>	<b>Start Date</b>	<b>End Date</b>	<b>Skin Tests</b>	<b>IFN Tests</b>	<b>Disclosing Test</b>	<b>Reactors</b>	<b>Total Taken</b>	<b>IRs Taken</b>	<b>DCs Taken</b>	<b>Genotypes</b>

**Animals taken for bTB control purposes**

R – Reactor  
 SL - Slaughterhouse case  
 DC - Dangerous Contact  
 IR - Inconclusive Reactor

## Testing History for the last 5 Years

The table below, "Test history", is a comprehensive list of all the bTB tests that have been carried out in your herd in the past five years.

Test History							
CPHH	Test Date	Test Type	Number of Cattle Tested	Result	IRs for Retest	Animals taken as reactors	Taken
<u>xx/xxx/xxxx/xx</u>							
xx/xxx/xxxx/xx	DD-MMM-YYYY	(Code)	Number	Clear/IR/R			

Test History							
CPHH	Test Date	Test Type	Number of Cattle Tested	Result	IRs for Retest	Animals taken as reactors	Taken



## Part 2: Cattle movements into your herd in the past five years

Movement Data Extraction Date: **DD-MMM-YYYY**

This part of the document gives you detailed information of cattle that have moved into your herd in the past five years from the extraction date.

The first table, "Movement from County/PTI", shows how many cattle coming into your herd originated from each county listed. In brackets, after each county name, is the surveillance testing interval of the parish at the time of purchase (note: two and three-yearly testing intervals no longer operate), giving a crude indication of bTB risk: annually and two-yearly tested counties are/were high risk counties; three and four-yearly tested counties are/were low risk counties. Some counties may appear more than once, as you have purchased stock originating from them when the county had a different testing interval.

Research shows that herds buying in from high incidence areas are more likely to experience a bTB breakdown. This data shows you how many higher risk movements into your herd have taken place in the past five years.

N.B. movements of imported cattle are included but with no testing frequency or risk category.

Movement from County/PTI	2014
GLOUCESTERSHIRE (Yearly)	(Number)

### Movements from CPH with a Breakdown (OTF-S or OTF-W) in 3 Years prior to the movement

Below is a list of the number of movements of cattle on to your farm, coming from premises that had had a bTB breakdown (confirmed or unconfirmed) in the three years before the movement. Herds that have had a breakdown recently are more likely to harbour infected animals than those that have not had breakdowns for many years.

Year	Number of Movements
YYYY	(Number)

### Animal Movements by Age Range

This table demonstrates the type of cattle that you bring into your herd and may help you to identify bTB risk, particularly if you can identify the groups where reactor animals were found. For example, the question should be asked whether Reactors were associated with groups that primarily receive purchased stock?

Purchased cattle may increase the risk of bringing bTB into your herd, particularly if they originate from the Higher Risk areas of England and Wales and/or from a herd with a previous history of bTB. Breeding stock are the riskiest class of animals you can purchase, because they are likely to spend a long period on your farm and have close contact with other cattle, for example the stock bull or suckler calves.

Year	< 42 Days	42 Days to 15 Months	15 to 30 Months	30 to 60 Months	Over 60 Months
YYYY	Number	Number	Number	Number	Number

## Annex 2 - bTb Herd Level Reports: guidance notes for Official Veterinarians

1. Centrally generated bTB Farm Level Reports containing bTB data specific to individual cattle holdings are provided for all new breakdowns in the High Risk and Edge Areas of England.
2. Tailored Farm Level Reports provide a useful summary of the recent bTB history and movement of cattle onto the holding. It is composed from data already held, but is collated into a document in order to facilitate the analysis and provision of advice to the herd owner.
3. Other publically available data sources include:
  - **IBTB** (Information bTB) – this shows the location of bTB breakdowns in England and Wales over the last 5 years. [www.ibtb.co.uk](http://www.ibtb.co.uk)
  - The **TB Hub** – a source of general information, advice and guidance. [www.tbhub.co.uk](http://www.tbhub.co.uk)
  - The **GOV.UK APHA web page** - news items, statistics and publications are available. [www.gov.uk/apha](http://www.gov.uk/apha).
4. The bTb Farm Level Report comprises the following sections:
  - a). Introduction** - an explanatory introduction of its contents including a summary of important risk factors for a new bTB breakdown; this was primarily written for use by individual farmers - hence the somewhat simplistic tone of the text which may not be as relevant for Veterinarians.
  - b). Part 1** - a bespoke summary of the holding's bTB history including:
    - information on herd type and size and the genotype home range for the area in which the herd is located, along with explanatory text;
    - a summary of any bTB breakdowns experienced within the previous ten years (if applicable) including length of breakdown, type of disclosing test and any *M.bovis* genotypes identified (where known);

- numbers, individual identifications and ages of all cattle removed for bTB control purposes;
- details of all bTB tests undertaken in the herd within the previous five years - cattle numbers/test type and result etc.

This data will be useful when considering:

- potential recurrence of disease;
- whether residual infection is a significant risk to this herd
- whether there are discrete affected groups within the herd, and whether this could give any indication of risk pathways?
- whether any unexpected genotypes have been disclosed: i.e. is purchased infection likely?

**c). Part 2 – Cattle movements into the herd** - information on numbers, ages and source counties of all cattle moved onto the holding in the previous five years, including the testing interval for the source counties at the time of movement and numbers of cattle sourced from herds that have a history of a bTB breakdown within the previous three years.

This data will be useful to:

- assess the likelihood of purchased infection – this is more likely if most/many cattle are purchased
- understand the dynamics of the herd itself, for example are most replacements homebred? Is this a flying herd?

- consider the age at which most cattle are purchased as a risk factor: younger animals are less likely to be infected. This may be a management practice that could be altered.
  
- help educate the farmer about their purchasing habits: it should be highlighted if they are buying from higher risk sources, for example annually testing herds and/or herds that have suffered recent TB breakdowns
  
- assess the overall numbers being purchased, and establish whether the farmer is aware how many/few cattle they have moved on in the past 5 years?

d). **TB breakdown map** - included on the final page is a map showing the geographical location of the holding and geographical data that is held by RPA (i.e. an outline of owned and/or rented land that is registered against that CPH with RPA). Please note that because of this, the map may not reflect the exact boundaries of the farm if Single Farm Payment subsidy is not currently claimed. Due to other factors such as rented grazing it also may not be truly representative of the land actually grazed by the cattle herd. It is included as a start point for a discussion about the location.

This map also indicates the location of other recent breakdowns within the area surrounding the holding of interest, along with details of any genotype(s) isolated from them (if available). This information can give an indication of the incidence, weight of disease and identified *M.bovis* genotype(s) present within the localised area around the breakdown under consideration. This can help in considering the risk of locally acquired versus imported disease.

5. Please also note that each Report is generated by a new breakdown and is a one-time 'snapshot' of data at the start of the breakdown. Updated versions during the life of an incident are not available at this time.