



WHAT IS LIKELY TO BE DRIVING THE DISEASE?	
CATTLE BROUGHT IN:	This is a relatively closed herd which rears its own replacements and buys in bulls occasionally (2009, 2013 and 2014) since the breakdown began in ****. The last animal purchased was a bull on 16/05/2014, disclosed as a reactor in the last TB test (15 November 2016). Bulls are considered as high risk animals within a herd and may have contributed to the spread of the infection. No movements of milking cows have been allowed into the herd in the recent history. The farmer intended to request a license for buying milking cows due to the low numbers, and a farm visit was carried out on 26/7/16 for assessing this potential request. However, due to the inability to protect the purchased cattle from the local cattle the request was rejected. This is unlikely to be driving the disease at the moment.
TB SITUATION IN THE SURROUNDING AREA:	The herd is located in a High TB (endemic) area where TB has been present since the early 1990s. Between 2008 and 2012 almost 50% of herds had one or more breakdowns with a high rate of recurrence (40%). Genotype is ****, being predominant in the area and contributing to around 80% of breakdowns. Whilst there are currently no contiguous breakdowns there are some herds under restrictions near-by (none locally to the east). The likelihood of direct spread from other herds is considered negligible.
INTRA-HERD MOVEMENTS AND SEPARATION:	All the cattle groups are kept in the same location; therefore the movement of animals between locations is not a factor within this herd.
EVIDENCE OF POSSIBLE UNDISCLOSED INFECTION:	The results of the two whole herd gamma tests and the identification of some anergic animals provide evidence for undisclosed infection within the herd. In the first gamma test (January 2014) 57 reactors (18.4%) with 1 VL were

	disclosed. In the following test, in July 2016, 27 animals (13.6%) were disclosed as gamma reactors being 3 animals VLs. In both cases, the reactors were not identified by skin testing and this is driving the disease.
EVIDENCE OF BADGER ACTIVITY:	Two badger activity surveys, which were carried out by APHA in 2014 and 2016, identified significant badger activity. In September 2014, high activity was recorded at pasture and also at one water trough. In November 2016, 3 out of 9 cameras set up near the buildings recorded high activity near the secure silo bin, slurry pit and one of the cattle sheds. No activity was recorded near the previously raised water troughs. Badger setts and latrines are located close to the farm buildings. All this evidence leads to the opinion that badger activity is driving the disease onto the farm.
DISEASE STATUS OF BADGERS IN THE SURROUNDING AREA:	The presumptive prevalence of badgers infected with TB in the high incidence area East Wales is 25 %, based on a survey of badgers found dead. However, only two badgers within 5 km were reported to the badger found dead survey (none of them positives). Despite this, badgers cannot be ruled out as a possible cause of driving the disease.
BIOSECURITY ARRANGEMENTS:	Following the results of badger surveys, the biosecurity was improved by better storage of calf feed, raising water troughs and mineral licks and maintaining fences to prevent cattle accessing areas of pasture with known badger activity. A local vaccination project (half funded by a grant and half by the farmer) was carried out from March to December 2015. The buildings are generally open and there has been little biosecurity improvement around the buildings and maize clamp and this is considered to be driving the disease.
C&D STANDARDS AND COMPLIANCE:	There is very good compliance with dedicated isolation facilities and complying with numerous VINs, VRNs and C&D requirements.