

Intensive Action Area (IAA) future policies

1. Purpose of Position Paper

The purpose of this paper is to inform the Bovine TB Eradication Programme Board of the outcome of a review of policy regarding the Intensive Action Area (IAA). The success of TB Eradication Programme has allowed Welsh Government to move to a regionalised strategy, emphasising on appropriate surveillance and control measures according to the disease status of the region. Many of the measures initially applied in the IAA have evolved to be used on a national basis.

It is therefore appropriate to consider the future policies for the IAA which now forms part of the High TB area West. An advisory paper will be presented to the Minister following consideration by the Programme board.

2. Background

The IAA is approximately 288km² and is primarily located in north Pembrokeshire but includes small parts of Ceredigion and Carmarthenshire.

The IAA was established in 2010 as an area where increased measures would be implemented to tackle all sources of bovine TB, in both domestic and wild animal species. At that time the IAA had the highest incidence rate in Wales. Although the IAA represented only 2% of the land area, the total amount of compensation paid to TB breakdown herds in 2011 was £1,747,764 and accounted for 13.7% of the total TB compensation paid for cattle slaughtered across Wales. The additional measures included:

- Additional cattle surveillance and controls
- Enhanced biosecurity measures
- Additional surveillance and controls for non bovines (goats and camelids)
- A project to vaccinate badgers.

3. Assessing the effect of the combined measures

Detailed annual assessments have been undertaken by the Animal and Plant Health Agency (APHA) to compare cattle herd TB incidence levels and other TB disease parameters within the area with historic trends and with a reference area where the disease picture is comparable. Any benefits observed in terms of a reduction in the number of TB breakdowns in cattle herds (or other TB disease parameters) need to be carefully considered as a result of the combination of disease control measures applied in the IAA. The last report examined the six years, 1st May 2010 to 30th April 2016. No further reports have been commissioned, however APHA Epidemiology Team have since provided an annual analysis of the disease picture in the IAA.

The latest analysis is for the period up to the end of March 2019.

- At the start there were 88 open cases in the IAA, in 325 herds (herd prevalence 27.1%) as at the end of March 2019 there were 38 restrictions in 269 live herds (14.1%), constituting a decrease between then and now of 48%.

- The comparable figures for the reference area are 142 open cases in 1250 herds (11.4%) at the beginning and 97 in an estimated 1130 herds (8.6%) at the end of Q1 2019, representing a 23% drop.

These are encouraging trends which support the notion that over time, the range of measures applied within the IAA has had a positive impact on disease trends.

The review considered whether the annual analysis along with the production of a detailed report should continue. OCVO has considered the benefit received and interest shown from the publication of the annual assessment against the cost. A great deal of resource and effort has been made by Welsh Government, APHA, local Official Vets and cattle farmers in the IAA to reduce the level of disease and it is important to continue to measure the effect. In discussions with APHA we view this to be achievable without having to produce the detailed annual reports

Recommendation - In discussions with the APHA Epidemiology Team, it is viewed that we should monitor the ongoing disease trends and this can be achieved by assessment of fewer TB parameters. It is recommended that OCVO continue to work with APHA on this basis.

4. Review of the IAA cattle surveillance and control measures

OCVO officials, in consultation with our delivery partners in APHA, have undertaken a review of the measures applied to cattle herds within the IAA.

Of the original enhanced measures originally applied to the IAA in May 2010, only the six monthly routine testing of herds, tracing of cattle from Officially TB Free Suspended (OTFS) breakdowns and the greater use of the gamma interferon test are still continuing. The other measures have mostly been replaced by new and stricter national policies. Please see the following table:

	Measure	Policy and Veterinary Advice
1	Testing cattle herds every six months.	Retain - Since their introduction the additional six monthly tests (IA6) have been responsible for disclosing an average of 24% of new breakdowns. In 2018 (up to Q3) over 40% of new breakdowns were identified with the six monthly test.
2	All breakdowns, require two clear herd tests before restrictions removed.	Replaced in November 2012 by the stricter national policy for OTF(S) and OTF(W) classification of TB breakdowns.
3	Trace cattle movements from all Officially TB Free Suspended (OTFS) breakdowns. (Nationally only animals from OTFW breakdowns are routinely traced and tested).	Remove – since 2015 less than 2.5 % of IAA breakdowns have remained OTFS from start to conclusion. It has not been possible to retrieve data from the APHA systems to assess the impact of this additional tracing activity, i.e. what proportion of animals traced have tested positive, however giving the very small number of herds affected there is now little benefit in retaining this measure.

4	All cattle movements into and out of the IAA have to be reported to BCMS and comply with pre-movement testing (PrMT) requirements.	Changes to PrMT requirements in the IAA were harmonised with rules implemented with the introduction of Interim Land Association Management (ILAM) agreements. Subsequently the national rules restricting livestock movements to within 10 miles of the main holding as part of the CPH review have been introduced.
5	Greater use of g-IFN (g-IFN testing)	Retain. It should be noted that the g-IFN as supporting diagnostic test is being used more frequently across Wales.
6	Undertake an annual biosecurity assessment to reduce the risk if introducing disease.	IAA specific biosecurity assessments were replaced with the national Cymorth support policy.
7	Non-bovine controls	Replaced with enhanced national policy of reactive testing.

Recommendation - It is recommended that 6 monthly testing is retained and we continue to maximise the use of the gamma interferon test.

5. IAA Badger Found Dead Survey

Since June 2012 the Welsh Government has undertaken a Badger Found Dead Survey (BFDS) in the IAA. The survey was required to provide information on the level of *M. bovis* infection in badgers in the area. Specific annual reports were produced by APHA up to April 2017. Badgers found dead within the IAA have continued to be collected as part of the all Wales survey, though numbers have substantially fallen off. A summary of the Badger found Dead results:

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Number collected and suitable for sampling	37	30	31	25	12	6	7
Number culture positive <i>M. bovis</i>	7 (19%)	2 (7%)	2 (6%)	1 (4%)	1 (8%)	2 (33%)	0 (0%)

The number of badgers examined was small in all years of this study and confidence intervals overlap. Therefore, it is not possible to determine if there has, or has not been a change in the true infection rate with field strains of *M. bovis* in badgers within the IAA during the study period.

Recommendation - It is recommended that we continue to collect badgers found dead in the IAA to monitor the level of *M. bovis* infection in badgers in the area as part of the all Wales survey.

6. Badger vaccination within the IAA

The badger vaccination project began in May 2012 and was carried out alongside the existing cattle measures. In line with advice and best practice at that time, a 5 year project similar to that delivered by APHA for the Badger Vaccine Deployment Project was initiated to deliver an effective badger vaccination policy in the IAA.

By November 2015, four years of vaccination had been completed. At that point we were made aware that the supply of the BadgerBCG vaccine had been interrupted due to production problems and there was a worldwide shortage of standard BCG vaccine used in humans. It was decided to suspend all badger vaccination policies until the supply was restored.

The table below summarises the delivery of the IAA badger vaccination project

Year	Vaccinated	Recaptures	Total	Cost
2012	1424	320	1744	£945K
2013	1352	500	1852	£926K
2014	1316	517	1833	£929K
2015	1118	432	1550	£922K
Total	5210	1769	6979	£3722K

To enable us to better understand the impact of suspending badger vaccination in the IAA in 2016, APHA was commissioned to model simulations of the effect of badger vaccination on bovine TB in badgers and cattle. (MA-P/RE/1052/16).

The overall conclusion of the model simulation was that without completing a fifth year, the four years' worth of effort already undertaken had achieved the greatest benefit in reducing badger TB prevalence in the IAA. Every additional year of continuous vaccination reduces badger prevalence further, although after the first four years the absolute benefit of each additional year of vaccination is less than in earlier years.

In order to obtain a more accurate estimate of the proportion of badgers vaccinated during the 4 years, APHA were commissioned to undertake a population and comparison assessment. Modelling based on the DNA results from collected badger hair samples at setts compared with those obtained from captured estimated that 70 - 85% of the total population could have received at least one vaccine dose by the end of a four year vaccination campaign, assuming a constant level of annual coverage consistent with that observed in 2015.

7. Fifth year of badger vaccination

Standard BCG vaccine (BCG Sofia manufactured by Intervax) became available in 2018 and has been used as part of the badger trap and test operations on persistent breakdown farms, where DPP trap side test negative badgers were vaccinated before release and in grant aided vaccination schemes. Welsh Government hold sufficient stocks of BCG Sofia to cover all vaccination operations planned for 2019. Badger specific BCG produced by A J Vaccines is available and is already being used by

Public Health England and Wales. Welsh Government in conjunction with Defra will be ordering the vaccine for 2020.

Although Welsh Government has retained some facilities and equipment procured for the IAA badger vaccination project, much of the project delivery structure has been decommissioned. The field staff employed on a seasonal basis was laid off in accordance with Government employment rules, equipment and vehicle hire contracts were prematurely ended and members of the management team are now employed outside of OCVO.

It should also be noted that as we are now four years on from the final year of vaccination, any beneficial effect from completing the fifth year may not be as simulated when the modelling was undertaken.

Options available to complete the fifth year are fairly restricted to either:

- A return to a government led project and put a delivery structure back in place including the employment of a seasonal field work force; or
- Contract out the work through a fair and open procurement tendering exercise.

Irrespective of which option is chosen, the cost of completing another year will now be well in the excess of £1M.

Recommendation - Based on these options, and considering the benefits already realised, the lapse of time since completion of the fourth year, lack of a delivery structure and current funding available, it is recommended that we do not return to complete a fifth year of badger vaccination.

It should be noted that a badger vaccination grant is available in Wales, including the IAA allowing successful applicants to receive up to 50% of the eligible costs.

8. Communications

No specific communications have been retained with the land owners, cattle keepers, veterinary practices and farming unions within the IAA since informing them of the suspension of the vaccination project. Welsh Government policies have evolved since that time and communications have focused on national policies following the introduction and establishment of regional control measures. It will be difficult to contact all the landowners, as the details of stakeholders, specifically private land owners who do not keep livestock have not been maintained.

Recommendation:

- As APHA hold records of current cattle keepers and it would be appropriate for APHA to inform them of the changes and the continued use of the six monthly surveillance test.
- Generally publicise these changes through the Welsh Government website.

9. Summary of recommendations

1. We continue to assess the disease picture in the IAA and report on progress using a simplified set of TB Parameters.
2. The additional six monthly surveillance test in the IAA and maximum use of the gamma interferon test are retained.
3. We continue to collect dead badgers within the IAA and include the results in the All Wales report.
4. We do not return to complete a fifth year of badger vaccination in the IAA.
5. We inform cattle keepers within the IAA of the changes and decision to continue with the additional 6 monthly surveillance testing of cattle herds.
6. Generally publicise these changes through the Welsh Government website.