

## Department for Environment, Food and Rural Affairs

### Summary of badger control monitoring during 2017

# Annex A1: Updating of minimum and maximum numbers during the cull.

## December 2017

In 2017, as in 2016, it became apparent from daily returns and field observations by Natural England and the Animal and Plant Health Agency (APHA), that there was a much wider range of badger abundance across the eleven new culling areas than suggested by the national sett survey: some badger cull companies were removing more badgers than expected and some were removing fewer despite equivalent amounts of effort by similarly trained contractors.

This necessitated updating of the minimum and maximum numbers as outlined in Defra's advice to Natural England (paras 27-31)<sup>1</sup>, as was the case in 2016.

The method to update the minimum and maximum numbers has been improved from last year to take into account data from the eight effective first year culls in 2015 and 2016<sup>2</sup>, rather than basing it on a single cull.

For an area who had put in sufficient effort, the minimum and maximum numbers were recalculated using a historical comparator formed by taking data from the previous effective culls and calculating the proportion of the day 42 cull total that was achieved on each day. This is then averaged across areas. This allows the prediction of the expected 42 day total from any given day. The minimum and maximum numbers are then set equidistant around the expected cull total.

In the eight previous effective first year culls, on average an area achieved 79% of their 42 day total by day 28 (75% for day 26). Sufficient effort is 112.7 units per 100 km<sup>2</sup> per night. This is calculated using the same methodology as last year other than using a trap:shooter ratio of 22:1. The ratio was updated from the 12:1 ratio used in 2016 to take into account the results from the seven new areas that started culling in 2016. Area specific adjustments: The updated minimum and maximum numbers in four areas<sup>3</sup> were then further increased by 10% as an additional precautionary measure given the relative abundance of badgers reported in those areas.

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<sup>1</sup> <https://www.gov.uk/government/publications/advice-to-natural-england-on-setting-minimum-and-maximum-numbers-of-badgers-to-be-controlled-in-2016>

<sup>2</sup> In 2015 this was Area 3-Dorset, in 2016 this was Areas 4-10 inclusive.

<sup>3</sup> Areas 11, 12, 16 and 19.

The data used to calculate the minimum and maximum numbers and the resulting updated numbers are presented in Table 1.

**Table 1 Data for updating of minimum and maximum numbers in Areas 11 to 21**

Area	Date of updating	Day	Effort*	Badgers culled to date	Updated Minimum number	Updated maximum number
Area 11-Cheshire	Oct 13 <sup>th</sup>	28	207.7	529	588	798
Area 12-Devon	Oct 13 <sup>th</sup>	26	173.8	1323	1547	2099
Area 13-Devon	Oct 13 <sup>th</sup>	28	149.0	954	1060	1439
Area 14-Devon	Oct 13 <sup>th</sup>	28	172.0	544	604	820
Area 15-Devon	Oct 13 <sup>th</sup>	28	203.8	620	689	935
Area 16-Dorset	Oct 13 <sup>th</sup>	28	149.5	2414	2682	3640
Area 17-Somerset	Oct 13 <sup>th</sup>	28	166.4	785	872	1184
Area 18-Somerset	Oct 13 <sup>th</sup>	28	185.4	352	391	531
Area 19-Wiltshire	Oct 13 <sup>th</sup>	28	142.8	1544	1716	2328
Area 20-Wiltshire	Oct 13 <sup>th</sup>	28	131.6	777	863	1172
Area 21-Wiltshire	Oct 13 <sup>th</sup>	28	150.1	912	1013	1375

\*All areas expended over 112.7 effort units per 100km<sup>2</sup> per night and thus were deemed to have deployed sufficient effort



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