

Eastern Moors Partnership



Eastern Moors & Burbage Ring Ouzel Survey 2019

**With additional monitoring of the wider
Eastern Edges population**

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*Uplands of the future
for people and wildlife*

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1 Introduction

1.1 Overview

The survey is intended to provide ongoing monitoring of the Ring Ouzel *Turdus torquatus* population of the Eastern Moors & Burbage, for the Eastern Moors Partnership (EMP).

This report also considers the wider population of the Eastern Edges, principally including Bamford and Stanage edges to the north. Additional funding provided by the Peak District National Park Authority (PDNPA) for monitoring and training volunteers at Stanage North Lees enabled further data to be collected and this has been assessed alongside the EMP survey data.

A breeding Ring Ouzel survey of the wider Eastern Edges was carried out in 2016, providing a baseline survey for the area (Leyland, K., 2016).

1.2 The Ring Ouzel

The Ring Ouzel is a migrant summer visitor to the UK and is an upland specialist species. Its preferred habitat is typically rocky moorland, where it tends to breed on crags or steep gullies.

The Ring Ouzel is of significant conservation concern in the UK due to severe breeding population declines, and moderate breeding range decline, over the last 25 years (Birds of Conservation Concern 4, Eaton *et al.*, 2015).

1.3 Baseline Survey (2016)

The 2016 survey covered an area roughly comprising the Mosdale Estate south of the A57 (Bamford and Stanage North), the North Lees Estate (Stanage), Burbage/Hathersage/Houndkirk Moors (collectively “Burbage”) and the Eastern Moors.

The survey methodology was developed using the “Standardisation of Ring Ouzel Recording” document produced by the Ring Ouzel Study Group, and following discussion with Innes Sim and RSPB staff. Survey visits were carried out approximately every two weeks (six visits in total), with timings such that visits would allow for future comparison with a less intensive survey regime.

Full details can be found in the Eastern Moors Partnership report “Eastern Edges Ring Ouzel Survey 2016”.

The relevant data from this survey has been extracted in order to provide a comparison with the 2019 survey results, and also last year’s 2018 survey results.

1.4 Working with Climbers and Walkers

The Peak District Eastern Edges Ring Ouzel population is characterised by its close association with areas also frequented by people, often pursuing recreational outdoor activities such as walking and climbing. This has led to significant concerns about disturbance, and informal arrangements to alert visitors to the presence of Ring Ouzel nests so they can avoid disturbing them.

Since 2017, a group of volunteers, initially recruited through the British Mountaineering Council (BMC) (via the local Peak Area meetings) and latterly also comprising members of Sheffield Bird Study Group and other interested locals, has helped with nest monitoring and nest finding across the area.

This has enabled active nests to be monitored and signed appropriately across a wide area, and actively engaged members of local outdoor recreation and conservation groups with Ring Ouzel conservation.

2 Survey Methodology

2.1 Survey Area

The areas surveyed (Figure 1) have been chosen to correspond with those surveyed during 2016, and were to cover the majority of likely Ring Ouzel territories across the Eastern Moors and Burbage. The survey is not intended to provide exhaustive coverage. The survey will allow a continuous monitoring of the majority of the Ring Ouzel population with a minimum of staff/volunteer time – and provide a basis for ongoing population monitoring.

2.2 Survey Method

The full methodology is detailed in Appendix A. The general method is to walk transects spaced around 200m apart through the area to be surveyed, following features of likely Ring Ouzel habitat, and record all activity on paper maps using standard BTO notation.

Fixed transect routes are used, following those used in the 2016 survey, in order to provide a relevant comparison.

The survey routes are detailed on maps in Appendix A (retained from 2018 report).

2.3 Data Analysis

On completion of the fieldwork, all data was digitised using QGIS. Territories were assessed using standard BTO categories to determine breeding evidence as possible, probable or confirmed breeding (see table in Appendix B).

Where nest finding work was also undertaken, breeding evidence was assessed independently of this work (i.e. only data from the transect survey results were taken into account).

Territory analysis was carried out on the combined dataset from all three survey visits overlaid on one map, using QGIS. Territories were identified by clusters of records containing at least one of the “probable” or “confirmed” breeding registrations (in the case of singing males, at least two registrations). Registrations of pairs/activity from different visits were considered to represent different territories (in the absence of other evidence) if they were greater than 200m apart.

3 Survey Results

3.1 Breeding Pairs

The survey results are presented in Table 1 below. The total number of breeding pairs is taken as the combined total of “probable breeding” and “confirmed breeding” records as determined by the analysis of the survey maps. Approximate territory locations are presented in Figure 2.

Table 1. Breeding Pairs by Survey

Year	Possible breeding (PO)	Probable breeding (PR)	Confirmed breeding (BR)	Total breeding (PR+BR)
2019	5	4	1	5
2018	8	5	4	9
2016	2	7	0	7

The survey indicates a marked decrease in breeding pairs since last year, though a significant number of “possible” territories remain. Further discussion of the results is presented in Section 6.

4 Additional Monitoring

4.1 Nest monitoring

Nest finding and monitoring was also carried out across the Eastern Moors with the help of a group of volunteers (see also further information in Sections 5.1 and 6.4). This work allows an increased number of territories and nesting attempts to be detected over the formal survey, though year-on-year comparisons are affected by levels of survey effort.

Table 2 shows the known territories located across the Eastern Moors and the outcomes as far as known. Nest outcomes across the Eastern Edges are also shown on Figure 3.

Table 2. Ring Ouzel territories & outcomes

Territory	Breeding	Outcome
Burbage North	Confirmed	ATW – 4 fledged. Burbage Bridge – feeding recently fledged juvs.
Burbage Oaks	Confirmed	Below oaks – 4 fledged.
Burbage South	Possible	Fledged juvs in area.
Burbage Quarry	Confirmed	2x failed attempts (predated). Fledged juvs later.
Houndkirk	Possible	Singing male present early season.
Carl Wark	Confirmed	Failed (predated)
Millstone	Possible	Sightings through season.
Higger East	Probable	Adult feeding fledged juv – not known where from.
White Edge Lodge*	Confirmed	Path – fledged 4. Gully – fledged? 4.
White Edge North	Confirmed	Fledged 1+.
White Edge South	Possible	Singing early season.
Curbar	Possible	Pair present early season.

* The “Path” nest for this pair was actually on Longshaw NT land, just outside the EMP boundary.

Table 3 shows the number of breeding pairs indicated by the nest monitoring work, and the figures for previous years as a comparison. As mentioned above, the nest monitoring effort increases the number of breeding pairs which can be confirmed. This is more likely to be a “true” representation of the number of pairs present, but due to differences in survey effort does not necessarily provide accurate year-to-year comparison.

Table 3. Breeding pairs from nest monitoring

Year	Possible breeding (PO)	Probable breeding (PR)	Confirmed breeding (BR)	Total breeding (PR+BR)
2019	4	1	6	7
2018	4	3	8	11
2017	2	2	10	12
2016	2	0	11	11
2015*	5	0	8	8

*Less intensive monitoring this year

These results echo those from the survey transects, indicating a large decrease compared to recent years. For those nests which were found and monitored, a record of the success, or stage of failure, of the nest, and the number of chicks fledged was recorded and is presented in Table 4.

Table 4. Nest success analysis

Year	Pairs	Nests	Clutches hatched	Broods fledged	Fledged young	Fledged young per successful nest	Fledged young per pair	Nests fledging young	Hatched nests fledging young
2019	6*	7**	5	4	13	3.25	2.17#	57 %	80 %
2018	5*	6**	5	5	19	3.83	3.8	83 %	100 %
2017	10	15	10	9	32	3.56	3.2	60 %	90 %
2016	10	17	11	9	31	3.44	3.1	53 %	82 %
2015	7	8***	7	6	21	3.5	3.0	75 %	86%

* Other pairs known to have bred but nests not found. ** Other nests fledged young but inaccessible. *** Two further nests likely to have fledged young, but not monitored. # Likely higher (see below)

At least two additional nests (including one additional pair) were almost certainly successful this year (but the nest was not found/monitored), and so the rather low figure for fledged young per pair may be closer to 3 than the reported figure.

The reduced sample size of the last two years makes it hard to draw significant conclusions from the results, however there is a sizeable decrease in fledged young per pair this year. Further discussion is presented in Section 6.

4.2 Signing and Disturbance

No nests on the Eastern Moors required any signs this year, with all those nests recorded away from climbing routes and other potential disturbance locations.

5 Other Areas

5.1 Nest Monitoring

Further nest monitoring and some survey work was carried out, predominantly by volunteers, to the north of the Eastern Moors area, which is discussed in the following section. This includes the major edges of Stanage and Bamford, and also the subsidiaries of Carhead Rocks and Callow Bank.

This area was also surveyed in 2016, although a full repeat survey has not been carried out. That survey found 19 probable or confirmed breeding pairs, and a majority of these territories were occupied in 2019, with 15 pairs confirmed breeding (two “missing” from each of Bamford and Stanage).

Table 5 shows the territories located, and the outcomes as far as is known. Nest outcomes across the Eastern Edges are also shown on Figure 3.

Table 5. Ring Ouzel territories & outcomes

Territory	Breeding	Outcome
Jarvis Clough	Confirmed	Outcome unknown.
Bamford North	Confirmed	Outcome unknown – 4 close to fledging 23/5.
Wrinkled Wall	Confirmed	Failed (disturbed?) egg stage.
Bamford Heather	Confirmed	Fledged 4.
Bamford Path	Confirmed	Fledged 3.
Big Pebbles	Confirmed	Fledged unknown number 2+
Blurter	Confirmed	Failed – Blurter (predated) Fledged – Beauty 4
High Neb	Confirmed	Failed – High Neb (predated) egg or young chick Failed – Avril (predated)
Broken Buttress	Confirmed	Fledged (4?)
Strangler	Confirmed	Failed – Strangler Failed – Wall End Slab
Balcony Buttress	Confirmed	Failed (predated)
Manchester Buttress	Confirmed	Fledged 5 1 st Fledged 3? 2nd
Overstones	Confirmed	Fledged 3
Carhead Rocks	Confirmed	Failed (predated)
Callow Bank	Confirmed	Outcome unknown.

Transect surveys were carried out at Stanage North, and three territories recorded as “probable” breeding by the survey were all confirmed by the nest finding work.

Table 6 shows the analysis of those nests which were found and monitored, and for which the outcome is known. The results are presented alongside the results given for the Eastern Moors area in Section 4.1 above.

Table 6. Nest success analysis

Year	Pairs	Nests	Clutches hatched	Broods fledged	Fledged young	Fledged young per successful nest	Fledged young per pair	Nests fledging young	Hatched nests fledging young
2019	12	16	10	8	25	3.13	2.08	50 %	80 %
EMP 2019	6	7	5	4	13	3.25	2.17	57 %	80 %

As with the EMP “fledged young per pair” figure, this may be a little higher when a couple of nests, either likely to have fledged or to have fledged more young than could be confirmed, are taken into account. It is, however, still likely to be lower than typical rates in recent years and compared with other areas.

These results suggest that the factors affecting fledging success are spread across the wider area, compared to the reduction in territory occupancy which is only apparent on the Eastern Moors/Burbage area. Further discussion is provided in Section 6.

5.2 Signing and Disturbance

Signs were erected for a total of 10 nests over the course of the season. Table 7, below, details those territories where signs were used. All territories are on Stanage Edge, with the exception of Wrinkled Wall (Bamford).

Table 7. Ring Ouzel territories where signs erected.

Territory	Outcome	Notes
Wrinkled Wall (Bamford)	Failed (abandoned) at egg stage – possible disturbance.	Eggs abandoned and popular spot.
Big Pebbles	Successfully fledged.	Single sign up from nest building stage.
Beauty	Successfully fledged.	Sign up for boulder problems – from chick stage only.
Avril	Failed – predated.	Signs up from incubation stage.
Broken Buttress	Successfully fledged.	Signs up from incubation stage.
Strangler	Failed – Strangler (1 st brood) Failed – Wall End Slab (2 nd brood).	Signs up from nest-building stage.
Balcony Buttress	Failed (predated).	Signs up from nest-building stage.
Manchester Buttress	Successfully fledged (1 st brood). Successfully fledged (2 nd brood).	Signs up from nest building stage (1 st) and incubating stage (2 nd). Very busy area.

The majority of signage comprised restrictions for climbing routes surrounding a nest, with the signs displayed below and around the relevant routes. The “Beauty” nest required only one sign to restrict two boulder problems (the nest was well below the edge), and the “Big Pebbles” nest had a single sign largely hidden to anyone except those who would arrive beneath the nest – this is a generally quiet spot, unlikely to be disturbed in most cases and thus falling into the category of visible signs attracting attention rather than preventing disturbance.

Restrictions were, as far as can be ascertained, largely well respected – with only one case where disturbance was suspected to have caused a nest failure (see also Section 6.3).

5.3 Other Records

National Trust Longshaw

In addition to the White Edge Lodge territory, which extended onto their land, Longshaw probably had a second pair of breeding ouzels, although the location remains unknown. On 15th June an adult was photographed by a member of the public feeding fledged young on rocks along the track between Wooden Pole and Longshaw Lodge. A visit was made on 18th June, and a male ouzel was observed carrying food repeatedly into an area of bracken, and calls of a juvenile were heard. All nearby rocks and small crags were checked for a used nest, however none was found. While the area contains potentially suitable nest sites, it is lacking in bilberry and other shrub cover, and thus is not ideal ouzel habitat. However the distance from other known territories (and the White Edge pairs were still on territory when these

birds were sighted) suggests the birds are most likely to have bred nearby, and thus represent an additional pair.

National Trust High Peak

Transect surveys carried out in the vicinity of Ashop Moor, Black Ashop Moor and Edale Moor, and adhoc records from the Moors for the Future MoorWILD app confirmed the presence of ouzels in these areas. In Ashop Clough, breeding was confirmed with one pair seen carrying food, and at least two further territories likely to be present. Other records are limited to individual sightings, including a number of records from Grindsbrook Clough.

6 Discussion

6.1 EMP Survey Results

The survey results show a marked decrease on last year's numbers, with only five probable or confirmed breeding pairs (down from nine in 2018) recorded across the Eastern Moors this year. This is also reflected in the nest monitoring results, which show a similar decrease from eleven to seven pairs.

The number of "possible" breeding records from the survey remained fairly high – in particular due to a number of territories with singing males early in the season, which did not appear to go on to be occupied by a breeding pair.

As with last year, there were a number of fledged juveniles recorded in areas later in the season which indicated that breeding may have occurred undetected – though movement of adults with known fledged juveniles cannot necessarily be ruled out.

This reduction in numbers was not reflected across nearby Stanage and Bamford edges, where the majority of traditional territories were occupied. One potential explanation for this is that ouzel numbers are down overall, but that Stanage and Bamford are the "first choice" territories, and fill up in preference to those further south. A snapshot of data from 2002, when an SBSG survey was carried out, found a combined total of 12 territories on Stanage and Bamford, with 6 territories in the Burbage area. The figures for this year give 14 territories on Stanage and Bamford, and 7 for the Burbage area. This suggests this may be a typical spread of territories in "low" ouzel years, and that the previous three years' records have represented a relative peak of ouzel numbers.

6.2 Overall Monitoring Results

Low fledged young per pair figures, compared to recent years, were recorded across the wider Eastern Edges area, with nest failures largely attributed to predation. Failures were however distributed across both managed grouse moor areas (where significant meso-predator control takes place) and areas with little predator control.

A potentially significant factor in the lower reproductive success this season may have been the unusually dry weather in April and May, with the Midlands and Northeast England receiving as little as 25% of average rainfall. Moorland ground was notably dry through this period, with moorland fires occurring across the Pennine region. This may have impacted the availability of earthworms and other invertebrates at a crucial time for Ring Ouzel breeding.

Adult birds needing to spend more time foraging, perhaps further away from the nest, would leave nests more vulnerable to predators. Reduced adult condition and lower provisioning

rates to chicks may also have contributed to lower than usual “fledged young per nest” figures.

With further regard to overall numbers, BTO Birdtrack data shows the Ring Ouzel reporting rate was 13% down on the historical average at the peak of migration arrivals this year, though only 5% down on last year. Peak counts were however were down around 50% on last year’s numbers, and at their lowest level for some years. It should be noted, however, that the second-lowest year for peak counts is 2016, which is a recent high point for Eastern Edges breeding numbers, so these figures should be treated with caution.

Anecdotally, female numbers may have been lower this year, with singing males in two or three Burbage territories noted early in the season, which then did not appear to be occupied. Groups comprising multiple males were also noted on a number of occasions later in the season, when birds would ordinarily be expected to be paired up and on-territory. Male and female arrival on migration is typically slightly staggered, so it may be that (un)favourable weather conditions on migration can affect the sexes differently.

6.3 Signing and Disturbance

Only one nest failure was attributed to possible human disturbance – at Wrinkled Wall, Bamford, where signs were erected at the nest-building stage. There is no direct evidence for this, however the nest was abandoned (eggs remaining inside) after a weekend of sunny weather. Abandoned nests without the eggs being predated are very unusual, and its location next to a popular pair of climbing routes points to this possible outcome.

Otherwise, restrictions were largely well-observed as usual, with the only other reports of incursions onto restricted routes coming at Stanage Popular End. The Manchester Buttress nest, for both broods, was situated amongst the busiest routes at Stanage. There were two or three reports of climbers on routes within the restriction during the second brood (although this was still successful). That both broods fledged (albeit only 3 chicks are known to have survived the second time) is testament to both the fantastic attitude of the vast majority of climbers visiting the area - and the tolerance of the birds to their still-busy surroundings.

6.4 Volunteer Nest Monitoring

This was the third year of significant volunteer involvement with the nest finding and monitoring work. Further recruitment via Sheffield Bird Study Group this year meant a group of around 20 volunteers to call upon during the season. Fifteen people attended one or both of two training sessions at the start of the season, and further in-the-field training was provided during April and May.

Around 12 volunteers were subsequently involved in regular monitoring through the main part of the season, with others making occasional visits when time allowed. Experienced volunteers in their second or third seasons of monitoring also helped significantly, and successfully, with nest finding this year.

Volunteers also provided additional help with transect surveys on Stanage and Eastern Moors, and also further afield, with additional surveys on the National Trust’s High Peak Estate.

Once again, the enthusiasm and dedication of the volunteers enabled monitoring to be carried out regularly, and over a wide area, which would otherwise not have been possible. The links within the climbing community in particular are now firmly established, and regular

posts on UKClimbing forums and other social media (by staff/volunteers/wider public) ensure that the nest protection work is widely known – and this is a crucial part of its effectiveness.

7 Further Work

This year's results prompt some consideration of the wider Eastern Edges Ring Ouzel population. While different land ownership and human-use across the different areas prompt differing levels of monitoring and nest protection work, these boundaries are of course not recognised by the ouzels themselves.

Further understanding of how Ring Ouzels move within and between the “separate” areas of the Eastern Edges (e.g. Stanage (PDNPA) and Burbage (EMP)) could help to determine whether, for example, a drop in occupied Burbage territories is symptomatic of a change within this specific area or a natural contracting of a larger contiguous population.

One potential source of such data would be a colour ringing scheme, where birds are fitted with unique combinations of rings in order to allow identification of individuals in the field. This is most practically done by ringing nestlings – and thus would also provide valuable information on survival and return rates of juvenile birds – one of the key factors in determining Ring Ouzel population changes.

A colour ringing scheme could operate alongside the existing nest monitoring and protection work. This would be beneficial in both directions – with the time-consuming nest finding work already being done to allow nestlings to be ringed, and colour ringed individuals allowing much easier tracking of pairs during the breeding season (allowing for some lag in birds returning to breed).

Though this would of course take a number of years to bear significant monitoring benefits (for enough returned, and therefore ringed, individuals to form part of the population), that is also a reason to consider starting such a scheme as soon as possible.

8 References

Eaton *et al.* (2015). Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man. *British Birds* 108: 708-746.

Leyland, K. (2016) *Eastern Edges Ring Ouzel Survey*. Eastern Moors Partnership.

Leyland, K. (2018) *Eastern Moors & Burbage Ring Ouzel Survey*. Eastern Moors Partnership.

Standardisation of Ring Ouzel Recording (2010). Ring Ouzel Study Group.

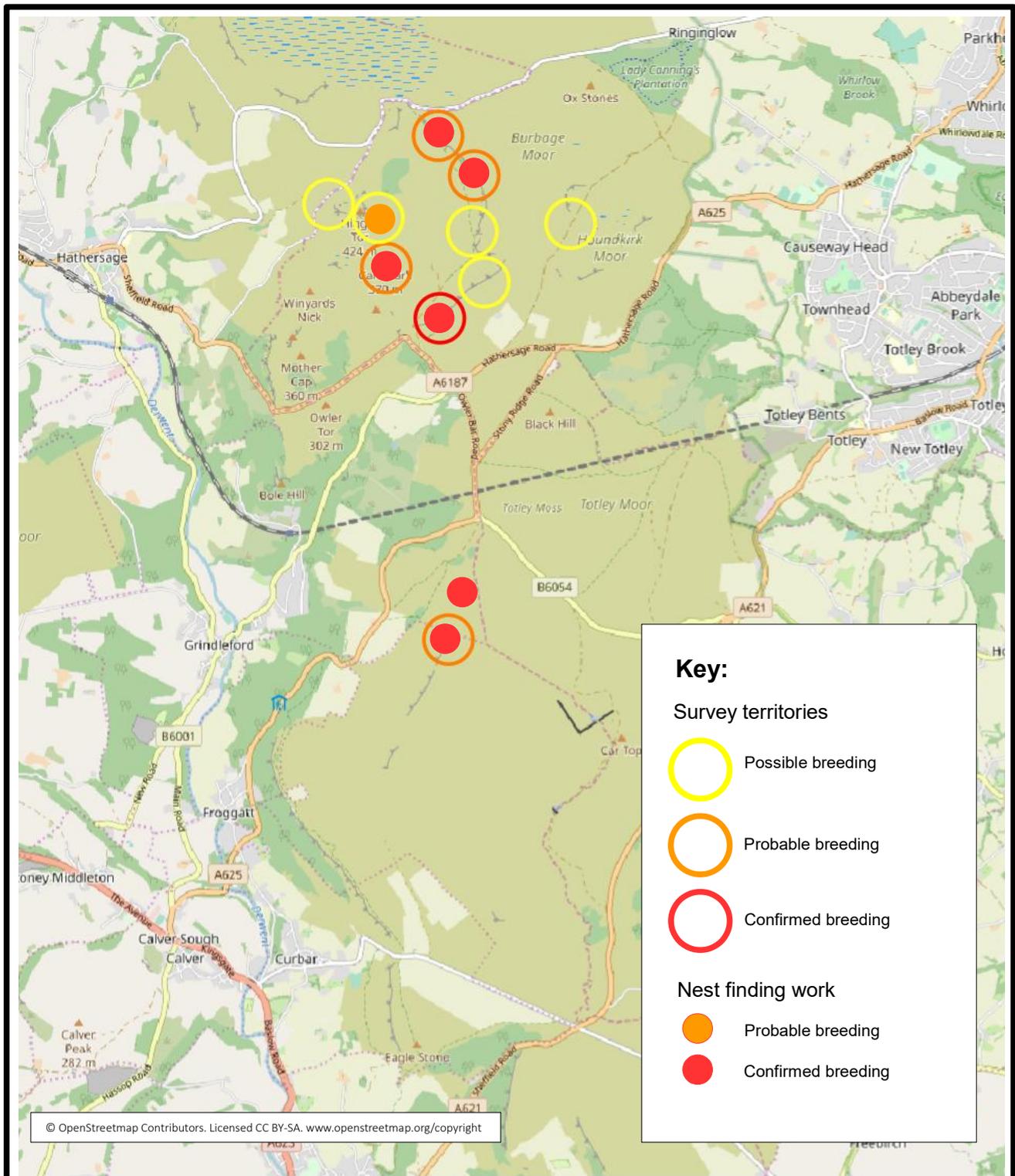


Figure 2. EMP Territories

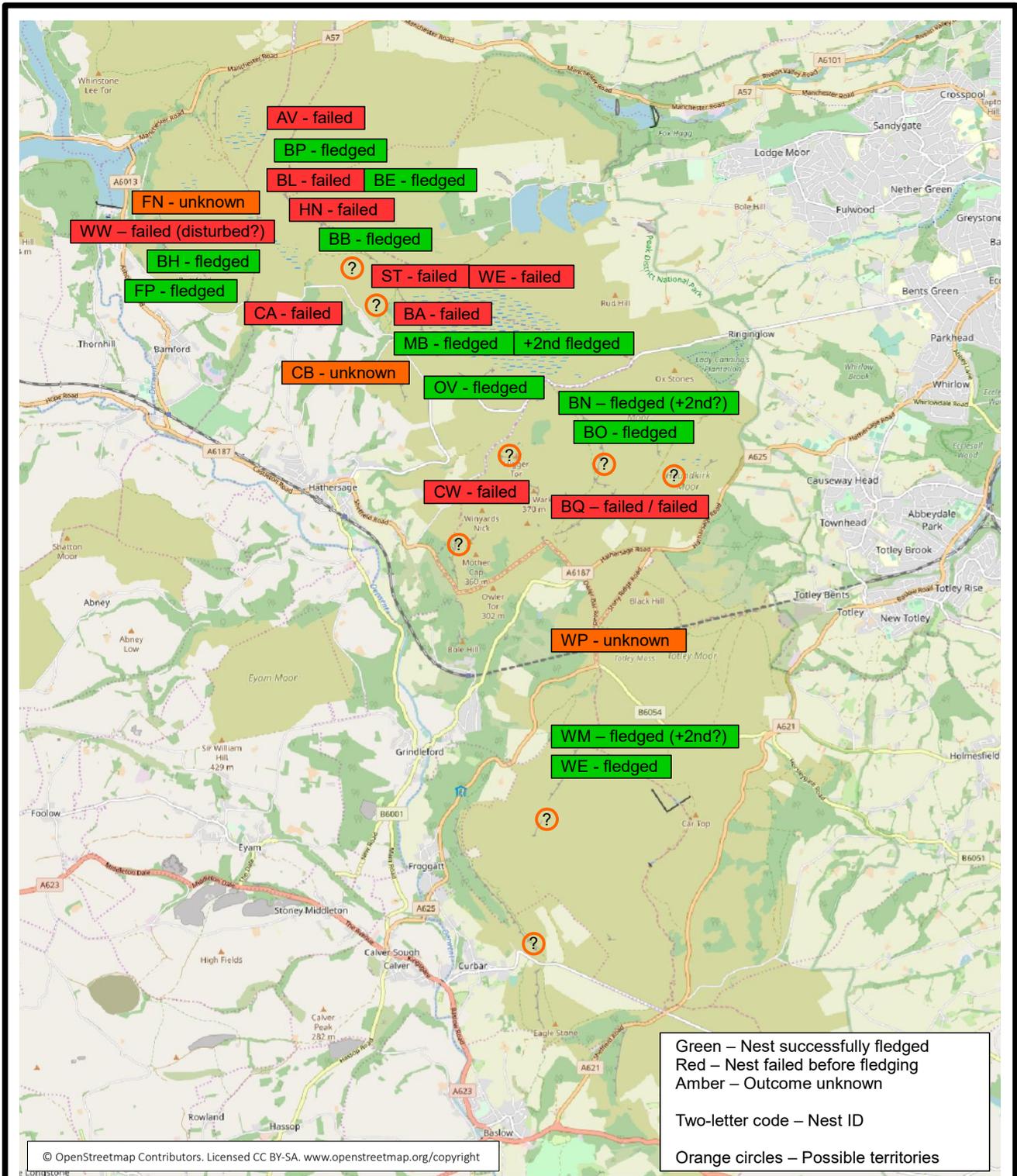


Figure 3. Eastern Edges - nest success / failure summary

Appendix A

Breeding Ring Ouzel Survey Methodology

This methodology has been developed using the “Standardisation of Ring Ouzel Recording” document produced by the Ring Ouzel Study Group, and following discussion with Innes Sim and RSPB staff. The method has mainly been adapted to be used without tape playback.

It was used in the 2016 Eastern Edges Breeding Ring Ouzel Survey, which aimed to provide a baseline population figure for the area.

Method

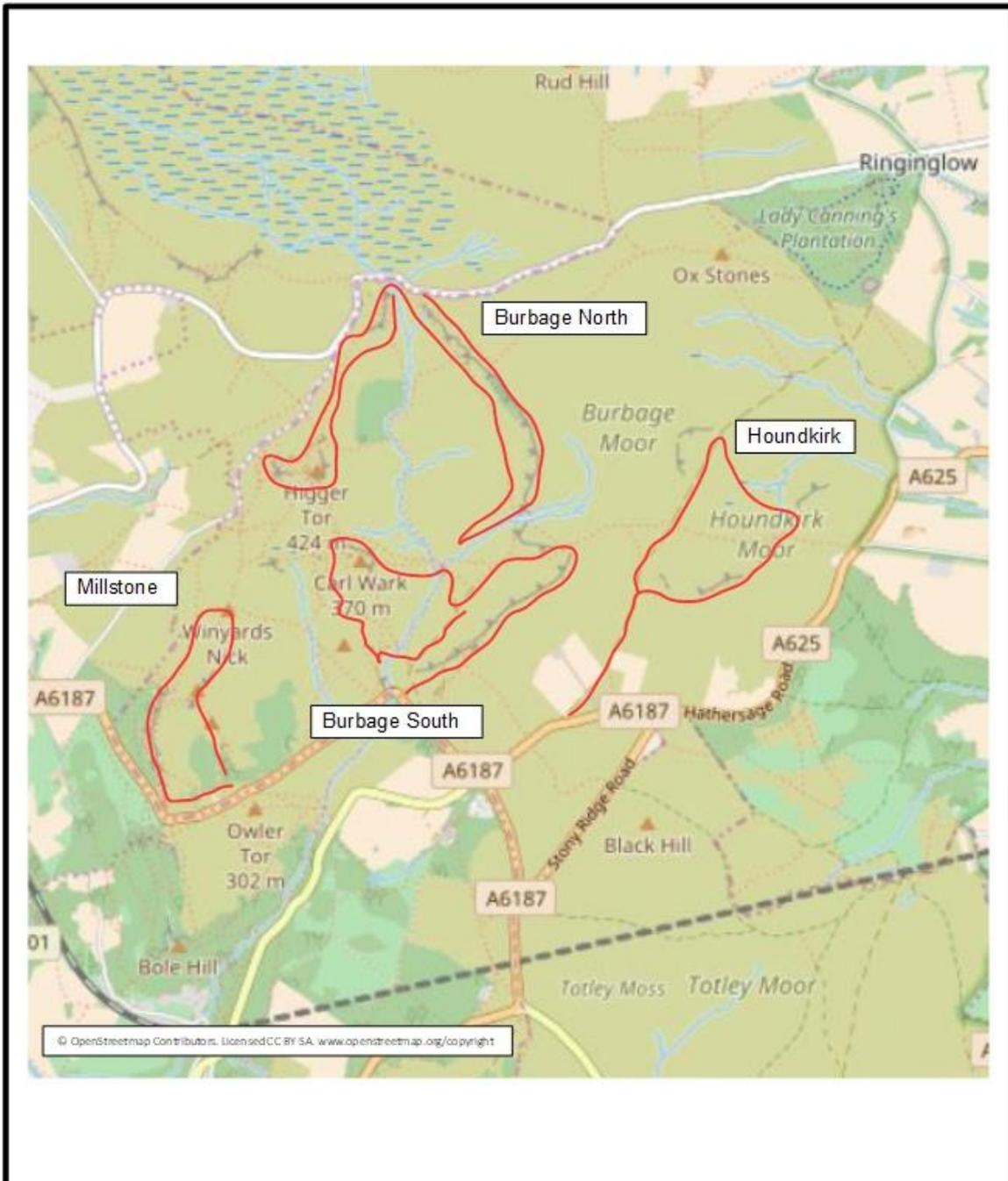
- Walk slowly along transects stopping at regular intervals (at least every 200m) and scan suitable grassy feeding areas and song perches for birds.
- Mark all sightings on maps using BTO symbols, preferably in red ink.
- Use dashed or solid lines to distinguish different/moving birds (simultaneous registrations are very useful).
- Where multiple birds are heard/sighted, take time to establish locations and numbers.
- Especially later in the season, take time to watch foraging birds (especially females) returning to likely nest sites.
- Visits should ideally be started within 1 hour of dawn, and completed by 11am.
- Visits should be at least one week apart.
- Visits should not be undertaken in excessively wet or windy weather.

Timing of visits

All visits should be timed to fit in the schedule as below. This will tie-in with the more intensive 2016 survey.

Month	Week	Visit	2016 Survey
April	1		Visit 1
April	2		
April	3	Visit 1	Visit 2
April	4		
May	1		Visit 3
May	2		
May	3	Visit 2	Visit 4
May	4		
June	1		Visit 5
June	2		
June	3	Visit 3	Visit 6
June	4		

Breeding Ring Ouzel Survey – Transect Routes



Appendix A – Transect Routes (1 of 2)

Breeding Ring Ouzel Survey 2018

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Appendix A – Transect Routes (2 of 2)

Breeding Ring Ouzel Survey 2018

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Appendix B

BTO Breeding Status Codes

Possible breeder

- H** Species observed in breeding season in suitable nesting **Habitat**
- S** Singing male present (or breeding calls heard) in breeding season in suitable breeding habitat

Probable breeding

- P** Pair observed in suitable nesting habitat in breeding season
- T** Permanent **Territory** presumed through registration of territorial behaviour (song etc) on at least two different days a week or more apart at the same place or many individuals on one day
- D** Courtship and **Display** (judged to be in or near potential breeding habitat)
- N** Visiting probable **Nest** site
- A** Agitated behaviour or anxiety calls from adults, suggesting probable presence of nest or young nearby
- I** Brood patch on adult examined in the hand, suggesting **Incubation**
- B** Nest **Building** or excavating nest-hole

Confirmed breeding

- DD** Distraction-**Display** or injury feigning
- UN** Used **Nest** or eggshells found (occupied or laid within period of survey)
- FL** Recently **F**Ledged young). Careful consideration should be given to the likely provenance of any fledged juvenile capable of significant geographical movement. Evidence of dependency on adults (e.g. feeding) is helpful. Be cautious, even if the record comes from suitable habitat.
- ON** Adults entering or leaving nest-site in circumstances indicating **O**ccupied **Nest** (including high nests or nest holes, the contents of which cannot be seen) or adults seen incubating
- FF** Adult carrying **F**aecal sac or **F**ood for young
- NE** Nest containing **E**ggs
- NY** Nest with **Y**oung seen or heard

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