

Eastern Moors Partnership



Eastern Edges Ring Ouzel Survey 2016

Updated V2

Kim Leyland

*Uplands of the future
for people and wildlife*

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NOTE: Section 4, Discussion, was updated from an early version of the report to include a comparison with results from a 2002 Ring Ouzel survey.

1 Introduction

1.1 Overview

The Eastern Moors Partnership (EMP) commissioned a Ring Ouzel study, comprising a breeding survey of the wider “Eastern Edges” area, and a detailed study of the Burbage Moors area (soon to form part of the Eastern Moors Estate). Co-ordination of the breeding survey (with a number of partners/volunteers), fieldwork and reporting was carried out by Kim Leyland, a freelance bird surveyor and ecologist.

1.2 The Ring Ouzel

The Ring Ouzel *Turdus torquatus* 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 Eastern Edges Survey

The Eastern Edges Breeding Ring Ouzel Survey is designed to provide a baseline estimate of the breeding Ring Ouzel population for a survey area roughly comprising the Mosdale Estate south of the A57, the North Lees Estate, Burbage/Hathersage/Houndkirk Moors (hereafter referred to as Burbage Moors) and the Eastern Moors Estate. See Section 2.2 and Figure 1 for more details on the survey area.

1.4 Burbage Moors Detailed Study

Intensive nest finding and monitoring work was also carried out on the Burbage Moors. Territories were identified, and nest attempts monitored, in order to establish breeding successes and failures. Where considered necessary, signs were erected at vulnerable nest locations in order to prevent disturbance by walkers and climbers, through liaison with the British Mountaineering Council (BMC). Similar work was also carried out by Bill and Flo Gordon on the Moscar and North Lees Estates.

The results of this study are presented in a separate Eastern Moors Partnership report “Burbage Moors Ring Ouzel Study 2016”.

1.5 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 them. This is largely undertaken by Bill Gordon of the North Lees Estate and volunteers from the British Mountaineering Council (BMC).

This work – usually involving placing signs around active nests – has continued this year and generally appears to be well-received amongst the climbing community and beneficial to the Ring Ouzels. Some further discussion is presented in Section 4.4 and a further report considering this work in more detail is planned for the near future.

2 The Eastern Edges Survey

2.1 Survey Design

The survey 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. Due to the already high potential for disturbance of this Ring Ouzel population, the method has been adapted to be used without tape playback.

2.2 Survey Area

Bamford and Stanage Edges and the Burbage Valley hold the traditional and best known Ring Ouzel populations of the area. They have been extensively monitored over the years by Bill and Flo Gordon, of the North Lees Estate, and more recently by the Eastern Moors Partnership.

While these were the primary areas to be targeted, recent breeding bird surveys on the Eastern Moors have indicated the presence of Ring Ouzels in more than one area of the estate.

The areas to be surveyed were determined by looking at previous Ring Ouzel sightings and breeding evidence, and based on areas of suitable habitat. Discussion was also held between Eastern Moors and North Lees Estate staff, and survey volunteers, regarding likely locations and habitat.

Coverage was generally focussed on the crags and rocky outcrops in the area, and their immediate surroundings, which provide typical nesting habitat. Figure 1 shows the location of the areas selected for the survey.

The Moors for the Future Partnership also provided Ring Ouzel sightings from their Community Science project, which enabled public sightings to potentially flag up any other areas where Ring Ouzels were present through the season.

2.3 Survey Method

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

Survey visits were carried out approximately every two weeks (six visits in total), with timings such that visits also corresponded to both a standard 2-visit schedule and an RSPB 3-visit upland bird survey schedule. This would allow for future comparison with a less intensive survey regime.

Surveys were carried out by Kim Leyland, John Mead of Eastern Moors Partnership, Bill and Flo Gordon (North Lees Estate) and Sheffield Bird Study Group (SBSG) volunteers.

2.4 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 six 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.

The intensive nest finding and monitoring work being undertaken alongside this survey, at Bamford, Stanage and Burbage, enabled a comparison to be made between the number of territories recorded on the survey, and the actual number of breeding pairs present.

3 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 Area

Survey Area	Possible breeding (PO)	Probable breeding (PR)	Confirmed breeding (BR)	Total breeding (PR+BR)
Bamford/Jarvis	1	2	5	7
Stanage Edge	1	4	6	10
Carhead Rocks	0	1	0	1
Callow Bank	0	0	1	1
White Stones	0	0	0	0
Burbage Moors	2	8	2	10
Eastern Moors	1	0	1	1
Baslow Edge	0	0	0	0
Wragg’s Quarry	1	0	0	0
TOTAL	7	15	15	30

The results indicate a population of between 30 – 37 breeding pairs of Ring Ouzel in the survey area. The actual number is considered likely to be at the lower end of this range, with the intensive monitoring work confirming at least 31 breeding pairs. Further discussion for each of the areas surveyed is presented in the following sections.

3.2 Bamford & Jarvis Clough

The survey indicates 7 – 8 territories, with the majority of these on Bamford Edge. Jarvis Clough held one territory and between here and Bamford Edge there was one confirmed territory. Concurrent nest finding work gave six confirmed breeding pairs, with a potential seventh (nest found but not conclusive whether an additional territory). One territory indicated by the survey was not confirmed by the nest finding work.

An additional territory on the boundary of the survey area, at the Cutthroat Bridge on the A57, was indicated by an out-of-survey observation of female feeding fledged young on 22nd May.

3.3 Stanage Edge

There are 10 – 11 territories along Stanage Edge, the longest of the gritstone edges in the area and also, probably, the most popular for climbers. The territories appear fairly evenly spaced along the approximately 5km long edge, though the northernmost two are further apart. The additional nest monitoring here confirmed 10 breeding pairs.

3.4 Carhead Rocks

A pair were recorded here on the first survey visit on 4th April and a male was recorded singing on the third survey visit from neighbouring Stanage, but there were no sightings on other survey visits.

Anecdotal evidence of a possible territory (including a potential nest site near an apparently popular “geocache” location) suggest this area may have held a nest this season (presumed unsuccessful) and is considered a likely potential site in the future.

3.5 Callow Bank

Despite no records on the first three survey visits, a nest was found on the 28th May containing three young about a week old. A pair with 2 fledged young were seen on 7th June and the empty nest indicated successful fledging.

3.6 White Stones

No Ring Ouzel sightings were recorded in this area during the survey.

3.7 Burbage Moors

The survey indicated 10 – 12 territories, with the majority in the main Burbage Valley area and outlying territories at Millstone and Houndkirk.

The intensive survey work carried out alongside supports this, with 11 confirmed territories across the area. A second possible territory for the Millstone area was not confirmed (possibly an early attempt cut short) and one confirmed territory was not definitively picked up by the survey.

3.8 Eastern Moors

No Ring Ouzel sightings were recorded on survey visits to White Edge, Birchen Edge (3 visits only) or Barbrook Valley (3 visits only).

One territory was recorded on Curbar Edge where a pair nested only to be predated when the chicks were around a week old. A pair and a second male bird were recorded on one survey visit. Anecdotal records from members of the public, and a second male recorded outside the survey visits, suggest the potential for a second pair.

On White Edge, birds were seen and heard briefly on occasions throughout the breeding season, but with no concrete evidence of a breeding attempt and no sightings during the survey visits. A pair has bred in this location in previous years and it remains a likely site for future breeding attempts.

3.9 Baslow Edge

Only one sighting during the surveys, when a male flew from the edge across to Curbar. Outside the formal surveys, birds were recorded on two occasions flying between Curbar Edge (where a territory was present) and Baslow Edge, including a male singing on Baslow Edge on one occasion. This may be an extension of the Curbar territory and is an indicator that Baslow may be suitable to hold a territory in the future.

3.10 Wragg's Quarry Area

A pair were noted here on the 12th and 13th April, but there were no further sightings for the remainder of the survey visits. A pair have bred (or attempted) here in the past and so it remains a potential site for future territories.

This area was only included within the survey at the last minute, following a volunteer offer to look at the area. It is likely that there is other suitable habitat in the Beeley Moor area which may benefit from being considered more fully for survey in the future.

4 Discussion

4.1 Survey Results

This is the first systematic survey of the Eastern Edges area targeted specifically at Ring Ouzel, however the main territory-holding areas (Bamford, Stanage and Burbage) were surveyed (specifically for Ring Ouzel) in 2002 (Atkin, J. & Falshaw, C., 2002). There have been other upland breeding bird surveys covering all or part of the survey area, but general methods are considered likely to under-record Ring Ouzel numbers.

4.2 Data Analysis

In order to get as accurate as possible a picture of Ring Ouzel numbers, a high frequency of surveys was employed in 2016 – 6 visits over a twelve-week period. For more general upland bird surveys a more typical frequency would be 3 visits over a similar period.

This makes comparison with previous surveys, and potentially less intensive future surveys, less simple. In order to overcome this, the survey visits were timed to correlate with a standard RSPB 3-visit, Brown & Shepherd style upland survey. This means the data can be “resampled” to only take into account sightings made on the 3 visits which correlate.

This is particularly useful for two reasons. Firstly, it allows the data from, for example, the Burbage and Eastern Moors areas, to be compared to previous surveys in 2010 and 2015. This will help to give an idea of how the increased survey effort has affected the numbers of breeding pairs recorded.

Secondly, it allows future surveys (where time and resources may be more limited) to use a less intensive monitoring schedule and still enable valid comparisons to be made.

4.3 Comparison with 2002 Survey

The 2002 survey employed a different survey method, using tape playback of Ring Ouzel song at 500m intervals in suitable habitat. This was conducted over four visits between March 25th and June 30th. This should still provide a reasonable basis for comparison, as it specifically targeted Ring Ouzel and the 2016 survey method is largely based on a similar methodology (with an increased density of transects used in preference to tape playback, as discussed in Section 2).

The areas covered broadly correspond with some of the areas covered in the 2016 survey, and the relevant results from 2016 have been divided up in to the same blocks in order to make a comparison, as detailed in Table 2 below.

Table 2. Breeding pairs (confirmed + probable) comparison 2002 and 2016

Area	2002 survey	2016 survey
Burbage Valley	2	6
Higger Tor & Carl Wark	4	3
Stanage Edge (North Lees)	7	6
Stanage Edge (North)	3	4
Bamford/Moscar	2	7
Total	18	26

The data indicate an overall increase in Ring Ouzel numbers, with Stanage Edge as a whole remaining constant and Burbage Valley and Bamford both showing more significant increases.

4.4 Population Change (Burbage Moors)

One area for which a reasonable spread of data is available is the Burbage Moors. Two previous surveys by the Eastern Moors Partnership (*Eastern Moors Breeding Bird Survey 2010* and *Breeding Bird Survey of the Eastern Moors 2015*) included this area, and the latter survey looked at data from earlier surveys in 1990 (Brown & Shepherd) and 2004 (Moors for the Future).

The most recent two surveys are directly comparable with each other, though there were some differences in methodology for the 1990 and 2004 surveys.

As discussed in Section 4.2, resampling the data for 2016, taking only the results of the three visits which correlate with the timings for the three visits in the 2010 and 2015 surveys, allows a better comparison to be made. A slightly different assessment of breeding evidence has also been used, to match with these surveys.

Table 3 summarises the numbers of pairs of Ring Ouzel recorded across the Burbage Moors in each of these surveys.

Table 3. Burbage Moors Previous Survey Data

Year	Burbage Moors - Ring Ouzel pairs
1990	2
2004	6
2010	4
2015	8
2016 (resampled)	9

The data indicate that Ring Ouzel numbers are stable compared to last year's survey, and indicate a positive change over a longer time period. The data above represent only isolated points in time (plus caveats over methodology), and no firm conclusion should be drawn about a significant increase in the Ring Ouzel population. Anecdotal reports, for example, include 9 singing males in the valley on one evening in 2005. The data in Section 4.3 for 2002 also gives 6 pairs for Burbage/Higger/Carl Wark, though did not include Houndkirk or Millstone.

The evidence does strongly suggest however, that Ring Ouzel are unlikely to be decreasing in the area, which is an important point to consider in light of the national trend.

4.5 Reducing Disturbance

More detailed discussion of the efforts to reduce nest disturbance by visitors to the area is presented in the “Burbage Moors – Ring Ouzel Study” report and also in a planned future report looking specifically at this issue.

In general this year, the method of previous years was continued. Nests were assessed on a case-by-case basis as to the likelihood of disturbance, and sign-posted as necessary.

Where birds nest directly in popular climbing routes, there is a clear case, and well established precedent, for restricting access to the route (and its neighbours) in order to reduce direct disturbance. For nests in less popular areas, and where signs might actually attract attention and therefore increase disturbance, the case is less clear-cut, and a balance must be struck.

In the Burbage area, disturbance was considered a likely factor in 2 (possibly 3) out of 8 nest failures (in each case due to proximity to a footpath, rather than climbing route). None of those three nests had been sign-posted. Of six nests which were sign-posted due to being considered at risk of disturbance (on either climbing routes or near footpaths), 5 were successful and one failed due to predation.

As the sample size is small, every nest is in a unique situation and individual birds respond differently to disturbance, it is difficult to provide a robust statistical assessment of the overall effectiveness of the sign-posting. In terms of both engaging with the public, and generally increasing awareness of Ring Ouzel conservation, it is undoubtedly a success – and is considered essential for those birds who choose to nest in the most vulnerable locations.

5 Further Work

5.1 Survey

The survey provides a baseline for future assessment of the Ring Ouzel population in the area, and has been designed to be repeatable either in full or in part. While population monitoring every year would provide some value, resources may be better focussed in other areas (see below) and surveys carried out every few years to monitor the population as a whole.

5.2 Nest Finding & Sign-posting

This is considered the most vital part of the work in this area, as it has a direct impact on the potential success of a significant proportion of Ring Ouzel breeding pairs. Consideration should be given to the most effective ways of continuing this work, in particular the strong partnership between the different organisations and volunteers involved.

6 References

Atkin J. & Falshaw C.P. (2002) A survey of Ring Ouzels *Turdus torquatus* at Stanage. In Wood, D. & Hill, R.D. (eds.) *Birds in the Sheffield Area 2002* pp155-160.

Eaton *et al.* (2014). 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. (2015) *Breeding Bird Survey of the Eastern Moors*. Eastern Moors Partnership.

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

Figures

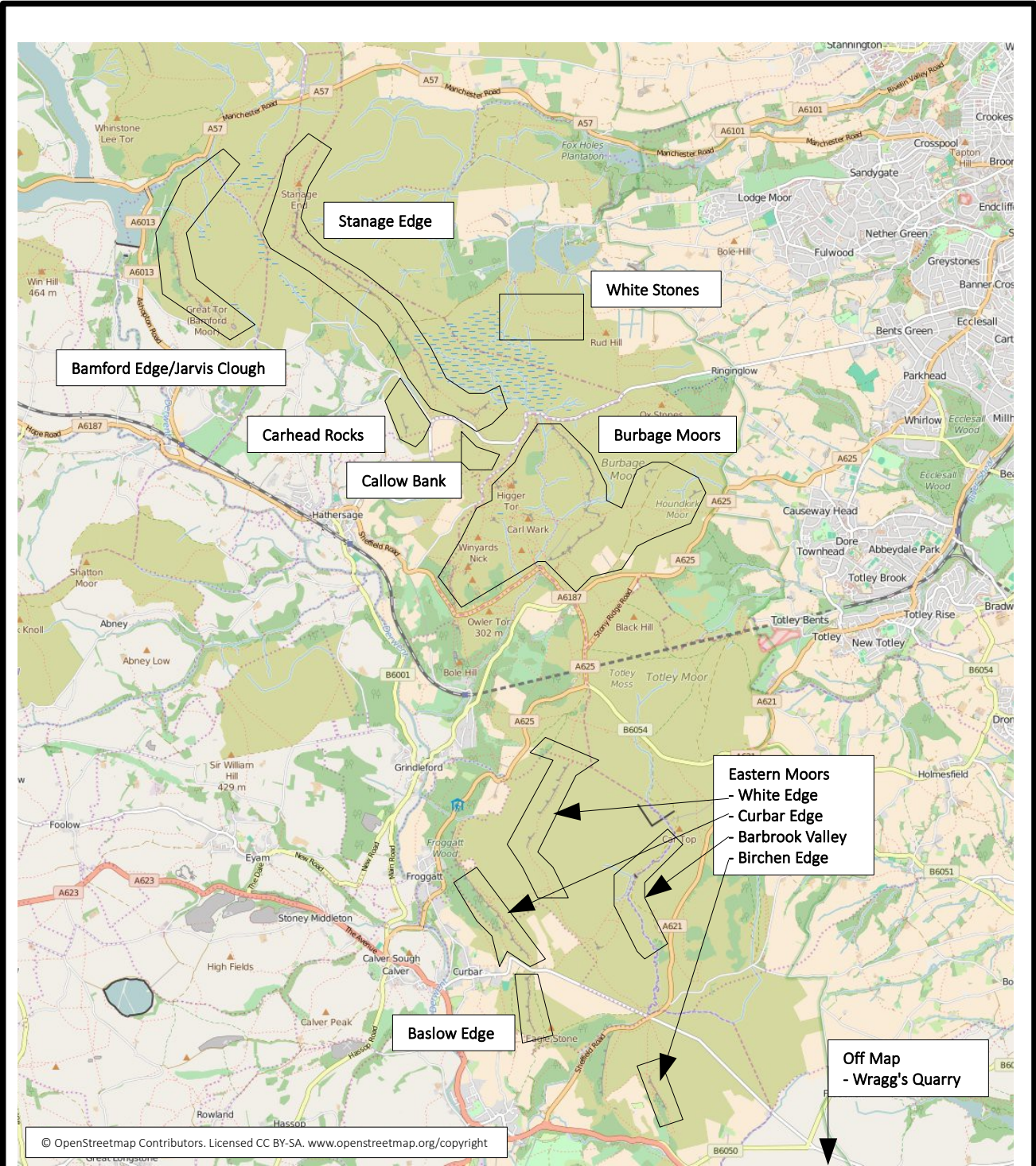


Figure 1. Survey Area Locations

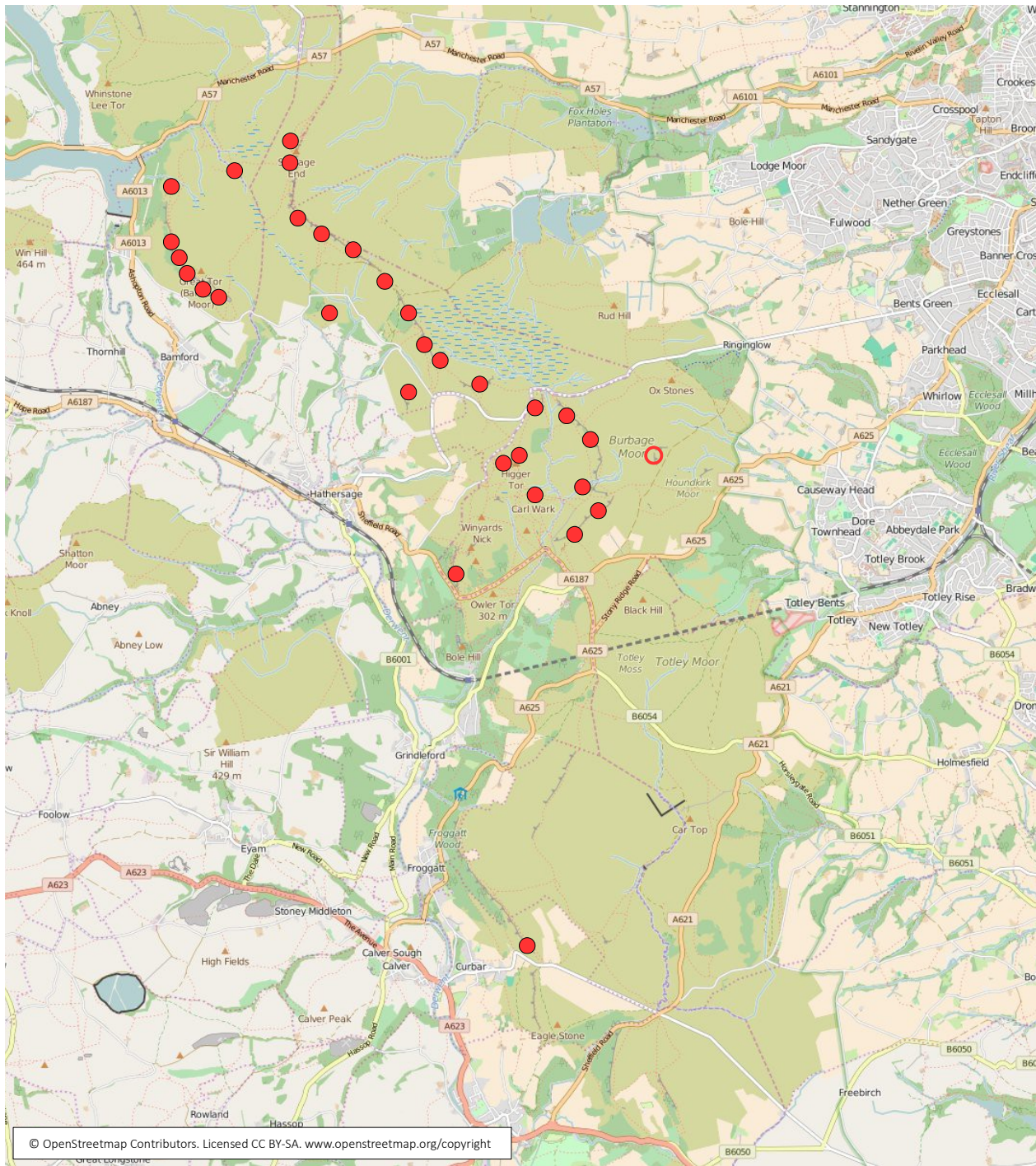


Figure 2. Territory Locations

- Territories by survey
- Missed by survey, but confirmed breeding

Appendices

Appendix A

Sheffield Moors Ring Ouzel Survey 2016 - 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.

Defining transect lines

Most sites have known/suspected territories and most are defined by the presence of a crag/rocky edge.

Primary transects should aim to follow these features with secondary and further transect lines added alongside as is necessary/practical to cover potential habitat.

Transects should be spaced approximately 200m apart, following contours where possible (this is also likely to be the most practical route in most cases).

On the first, or recce, visit, mark the transect line on a separate map and use this same route on each subsequent visit.

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 (see attached sheet), 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.

Number of visits/timing

Minimum requirement is 2 visits, as per “RSPB Standard” below (i.e. Visit 2 or 3 AND Visit 4 or 5 or 6).

Additional visits will improve detection and help locate early/late birds, re-lays and second broods.

For sites with no previous records where a full 6 visits are planned, if there have been no sightings on visits 1 – 3, it would be reasonable to skip two of visits 4,5,6 if time/resources are limited.

All visits should be timed to fit in the schedule as below. This will tie-in with intensive (6+ visit) surveying and nest finding (see also below) on Burbage and Stanage.

Month	Week	Dates	6+ Visit	3 visit	RSPB standard Ring Ouzel 2-visit
April	1	4 th – 17 th April	Visit 1		
April	2				
April	3	18 th April – 1 st May	Visit 2	Visit (1)	Visit 1 mid-April - mid-May
April	4				
May	1	2 nd – 15 th May	Visit 3		
May	2				
May	3	16 th – 29 th May	Visit 4	Visit (2)	Visit 2 mid-May - June
May	4				
June	1	30 th May – 12 th June	Visit 5		
June	2				
June	3	13 th – 26 th June	Visit 6	Visit (3)	
June	4				
July	1	Early July	(Visit 7)		
July	2				
July	3	Late July	(Visit 8)		
July	4				

Nest finding

If it is possible to locate nests without deviating significantly from the survey method, then do so, and report them asap to John Mead (john.mead@easternmoors.org.uk or 07736194690) as soon as possible.

Further nest monitoring/productivity surveys can then be considered on a case-by-case basis.

Signage

Where nest sites are in areas suspected to be at particular risk of disturbance, contact John Mead who will liaise with BMC/Bill/necessary parties regarding any signs to be put up.

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 **N**est (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** **N**est containing **E**ggs
- NY** **N**est with **Y**oung seen or heard

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