

Red Grouse

on The Long Mynd

Survey and Population Estimate

2012



Estimating the Red Grouse Population on The Long Mynd 2012

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Strettons Area Community Wildlife Group

There are several Community Wildlife Groups in the Shropshire Hills Area of Outstanding Natural Beauty (AONB), including Strettons Area Community Wildlife Group, which was launched in February 2012.

The Groups

- Bring together people interested in wildlife
- Undertake survey work to establish the status of key bird and plant species and habitats
- Encourage and enhance local interest in wildlife
- Actively promote conservation.

More information can be found on the website, www.ShropsCWGs.co.uk SACWG helped promote this survey, and several members participated. The Group is organising the survey in 2013.

Funding for the development of Community Wildlife Groups has been secured from the “LEADER in the Shropshire Hills” programme, co-ordinated by the Shropshire Hills AONB Partnership with Defra as the Managing Authority. This support is gratefully acknowledged:-

“LEADER in the Shropshire Hills: Project part financed by the European Agricultural Fund for Rural Development 2007-2013: Europe investing in rural areas”.



Introduction

Systematic monitoring of the Red Grouse population was carried out by the National Trust, through dawn counts of calling territorial males in winter, for several years. Two dawn counts in the winter of 2009–10, coupled with casual records, indicated a minimum of 32 territories, but, adding observations of birds only seen or heard once, the estimated population was around 51. Three dawn counts in the winter of 2010–11, coupled with casual records, indicated a minimum of 40 territories, but, adding observations of birds only seen or heard once, the estimated population was around 59 (Caroline Uff, *pers.comm.*).

This method did not produce a sufficiently accurate population estimate for such a scarce species, or to assess the effectiveness of the Trust's heather management. It was therefore decided to pilot a new survey method in 2011. Personal observations over many years have found that male birds also display at dusk, and a project was undertaken to estimate the Red Grouse population by mapping such displays.

Efforts were made to recruit as many participants as possible. A leaflet describing what the project involved was prepared, and distributed to participants on the National Trust Bird Watching courses the previous year, and through the Shropshire Ornithological Society (Shrewsbury and Church Stretton Branch) Meetings, the SOS magazine ("The Buzzard") and website, the RSPB local members group, and the National Trust volunteers.

This project produced a population estimate of 60 – 63 territorial males. A full report was produced (*Red Grouse on The Long Mynd: Survey and Population Estimate 2011*. Smith 2011). The project was considered a success, and was repeated in 2012.

Again, efforts were made to recruit as many participants as possible. The new Strettons Area Community Wildlife Group helped organise the project in 2012. The 2012 publicity leaflet is attached as Appendix 1.

Everyone who offered to help with the project was invited to a briefing on Thursday 22nd March 2012. A PowerPoint presentation was made, explaining the objectives of the project, and what to look for and record. A video of displaying Grouse was shown.

A draft Project Brief was presented at the meeting, updating the 2011 briefing in the light of the survey maps received. In the light of questions and discussion this was revised further, and the final version was supplied to all participants. It is attached as Appendix 2.

Methodology

Sixty Watch Points, selected to give a good field of view of a large part of the survey area, were identified, and marked on enlarged copies of 1-10,000 Ordnance Survey maps. There were 12 more Watch Points than in 2011. Some were added because some of the original 48 did not have an all-round field of view, and others because the heather management map included in the 2011 report suggested that some new areas on the edge of the range might be coming into suitable condition.

Survey maps were a larger scale than in 2011, because last years maps did not provide enough space to record all observations in areas of high grouse density or activity. There were nine survey maps altogether, and these are used as background to present the Project results (see pages 4 - 12). The 60 Watch Points are marked on these maps.

The 2012 survey started two weeks earlier than last year's because more Grouse were observed on the earlier survey dates in 2011.

Each participant was allocated a Watch Point, and given a copy of the relevant Survey map, printed on an A4 sheet, together with a fieldwork recording sheet. Almost all Watch Points were covered on at least three evenings.

The fieldwork recording sheet is attached as Appendix 3. Participants were asked to record on the map all Grouse seen or heard, together with a number for each observation. The display flight of a territorial male often provokes a response from an immediate neighbour, often another display flight to the edge of the territory. There were several instances of two birds landing close together at the edge of their respective territories. On other occasions several birds were seen and heard concurrently, or nearly so. These are the most helpful observations in determining the boundary between territories, and participants were particularly asked to record all such events.

The time of the observation was entered on the fieldwork recording sheet, together with a description of what had been observed. The times were recorded to allow cross referencing of the same observation from adjacent Watch Points. The symbols used on the map were described in the project briefing, and they are also set out on the fieldwork recording sheet.

Participants were also requested to summarise their observations, with their own assessment of how many different territorial males they had observed.

Observations

The Project organised 68 volunteers who recorded the birds seen or heard from the 60 different Watch Points on six separate evenings. It was originally intended to record every Thursday between 29 March and 3 May. However, ice and snow made the road impassable on 5 April, so the count that evening was cancelled, and replaced with a count on 10 May.

Fieldwork recordings were made from all except 10 of the Watch Points on three separate dates (two Watch Points were visited only once), 23 were visited on four dates and six on more than four dates, as listed in Appendix 4. It was intended to cover all Watch Points at least three times, but some observers did not return survey maps, or did not report that they had not carried out surveys at their allocated Watch Points, so it was believed that surveys had been carried out at particular Watch Points when they had not been.

A total of 204 result sheets (153 maps with observations, plus 51 nil returns) were returned for analysis. These maps included a total of 816 different observations of Red Grouse (some of which were concurrent observations of two or more birds). The Observations are summarised in Table 1. A full breakdown is attached in Appendix 5.

Table 1. Summary of Records

Watch Points	March	April			May		Totals		
	29	12	19	26	3	10	Counts	Records	Average
Counts	40	39	34	31	36	24	204		
Records	241	232	103	53	142	45		816	
No Grouse	8	4	7	16	4	12	51		
Average	6.0	5.9	3.0	1.7	3.9	1.9			4.0

Analysis

All observations were transcribed onto master maps, using a different colour for each date.

For all parts of the area except one these were A3 blow-up versions of the A4 survey maps. On Pole Bank (part of Map 4) the number of observations was so large that a double sized blow-up was used. A sample map, showing all the observations used for analysis, is shown in Appendix 6. It shows the dashed lines between birds observed concurrently, and these dashed lines are highlighted. There are 10 such maps used altogether.

The analysis was carried out using the territorial mapping method (*Bird Census Techniques* Bibby et al 2006). This method uses concurrent observations of different birds exhibiting territorial behaviour (display flight, aggression or song). The territory boundary passes between the positions of the males recorded concurrently. Similar observations on different dates identify the different sides of each territory, so that clusters of observations can be grouped into a territory.

Care was taken when transcribing the observations on the survey maps onto the Master Map to join each observation of two or more birds together with dashed lines. By the rules of the territory mapping method, observations of a bird at the same position twice in three visits constitutes a territory. The difficulty with utilising this method for Red Grouse is that each territorial male has a large territory, and moves around it. A lot of the calling and display activity is at the edge of the territory, as each male competes with his neighbours, and sometimes the birds actually invade the neighbouring territory. Thus each male may be recorded several times on the same evening by participants at several nearby Watch Points; and then again, in different locations, on subsequent survey visits. This difficulty is overcome by rigorously applying one of the rules of the territory mapping methodology – the data must be interpreted to produce the minimum population estimate.

Using the concurrent observations, joined by dashed lines, to define territory boundaries, all the observations can be grouped into the different territories shown in the results section.

It must be stressed that there is not necessarily any correlation between the size and shape of each territory shown on the maps with the ground that each Grouse actually occupies. Many of the Grouse recorded cannot be assigned to a territory with any degree of certainty, and the maps represent notional territories, based on those observations which locate (often very approximately) a boundary between territories.

Results

The next nine pages show one of the maps issued to the project fieldworkers, with all the territories on that map shown, based on the analysis described in the preceding section.

All territories are numbered on each map, to ensure all have been counted (1 – 62, + 39A)

The total number estimated from the Survey maps is 63 territorial males.

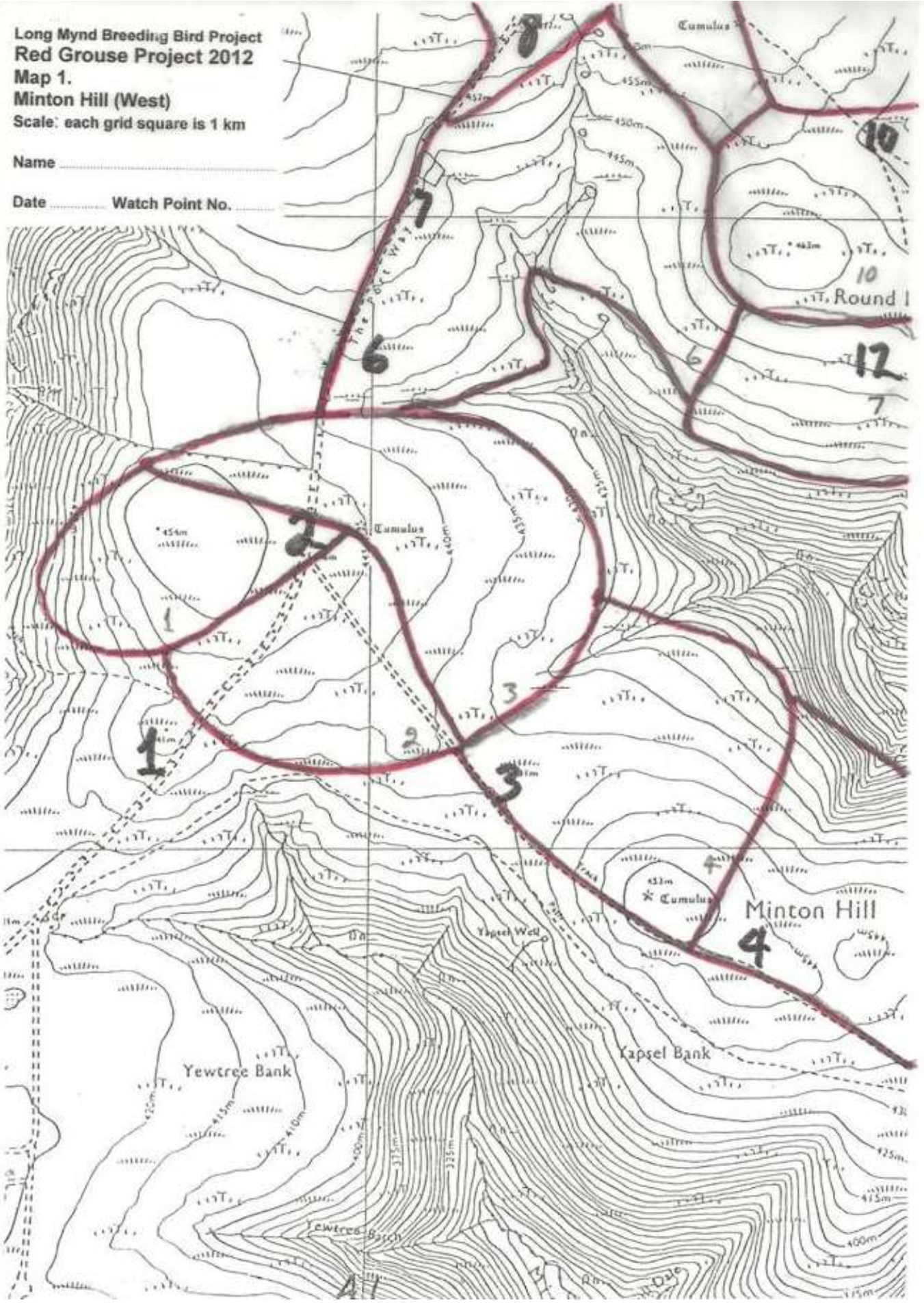
Comparison of Results with those from NT Records

Once the results were finalised, and the territories were mapped, they were compared with the casual records collected by the Trust during 2012. However, these records did not suggest any additional territories to those identified from the analysis of project survey maps.

Long Mynd Breeding Bird Project
 Red Grouse Project 2012
 Map 1.
 Minton Hill (West)
 Scale: each grid square is 1 km

Name

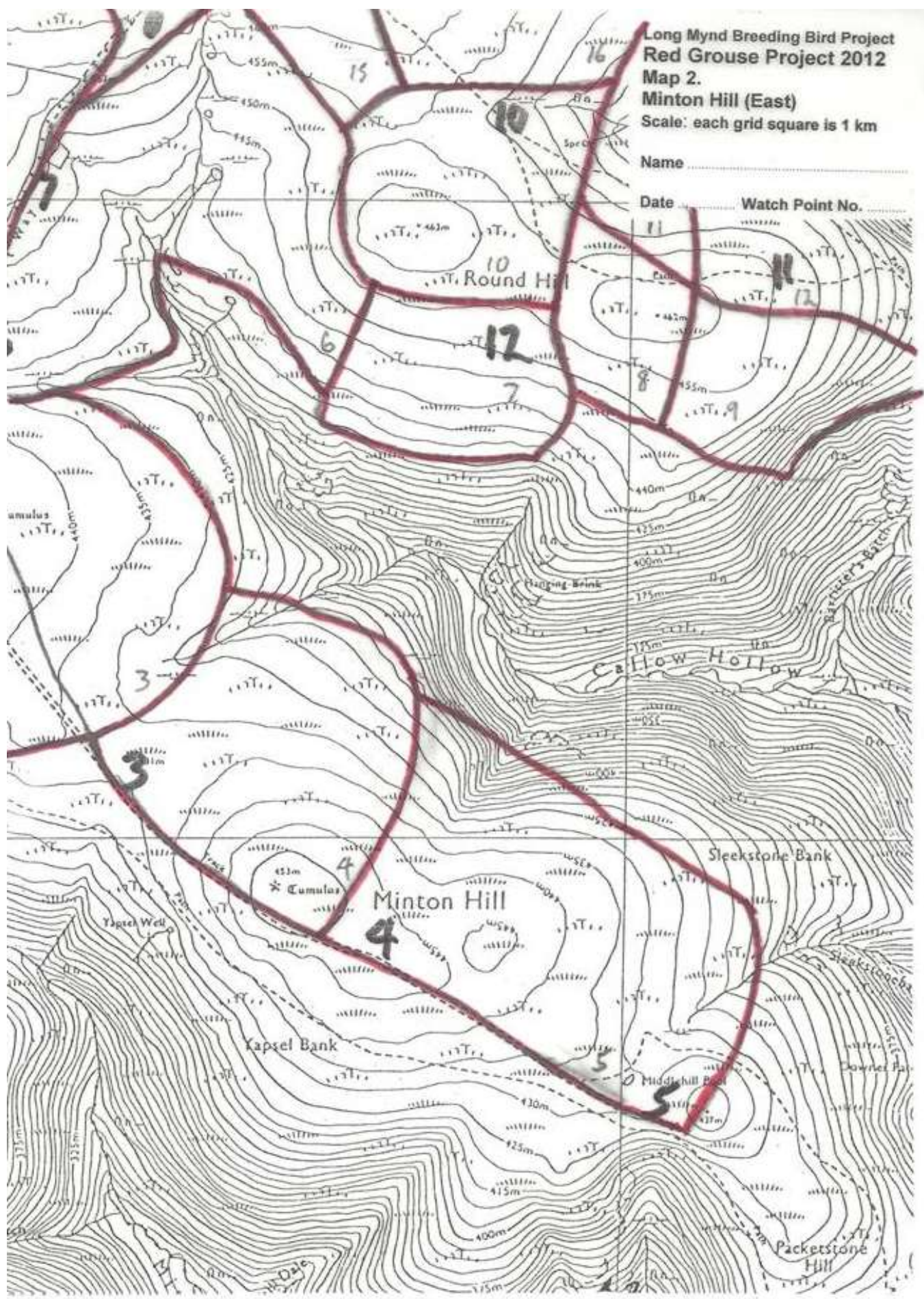
Date Watch Point No.



Long Mynd Breeding Bird Project
 Red Grouse Project 2012
 Map 2.
 Minton Hill (East)
 Scale: each grid square is 1 km

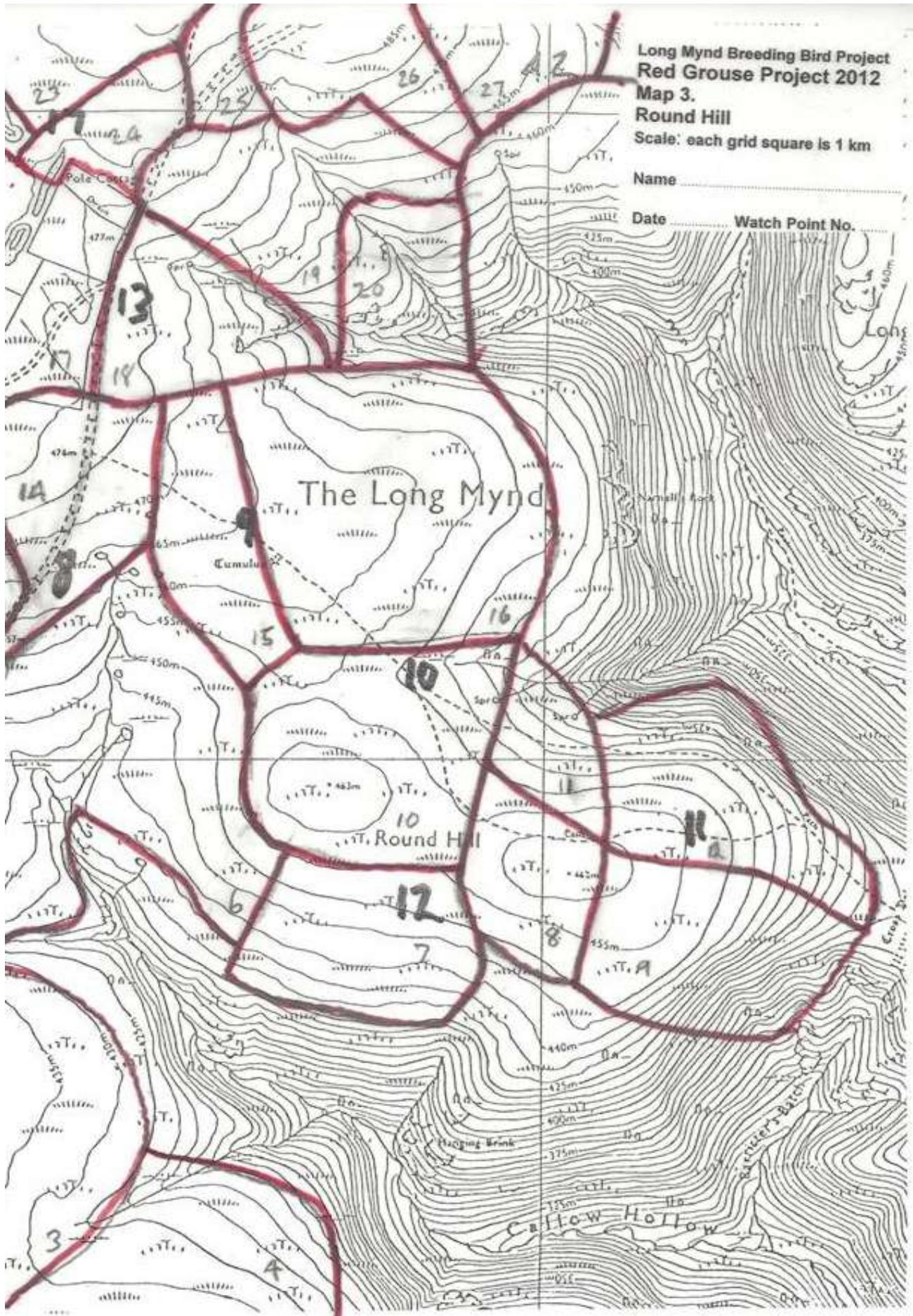
Name

Date Watch Point No.



Long Mynd Breeding Bird Project
Red Grouse Project 2012
Map 3.
Round Hill
Scale: each grid square is 1 km

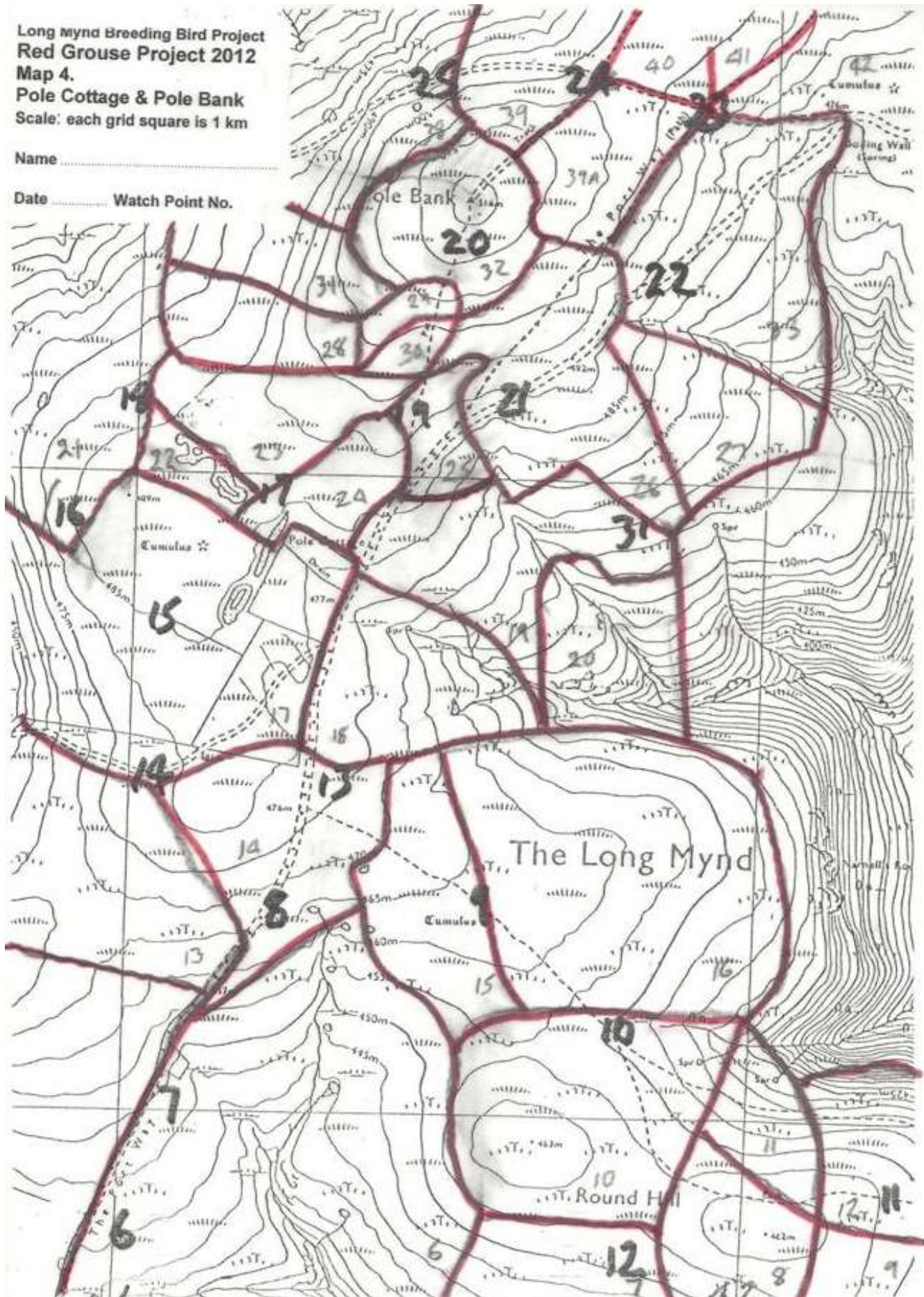
Name
Date Watch Point No.



Long Mynd Breeding Bird Project
Red Grouse Project 2012
Map 4.
Pole Cottage & Pole Bank
Scale: each grid square is 1 km

Name

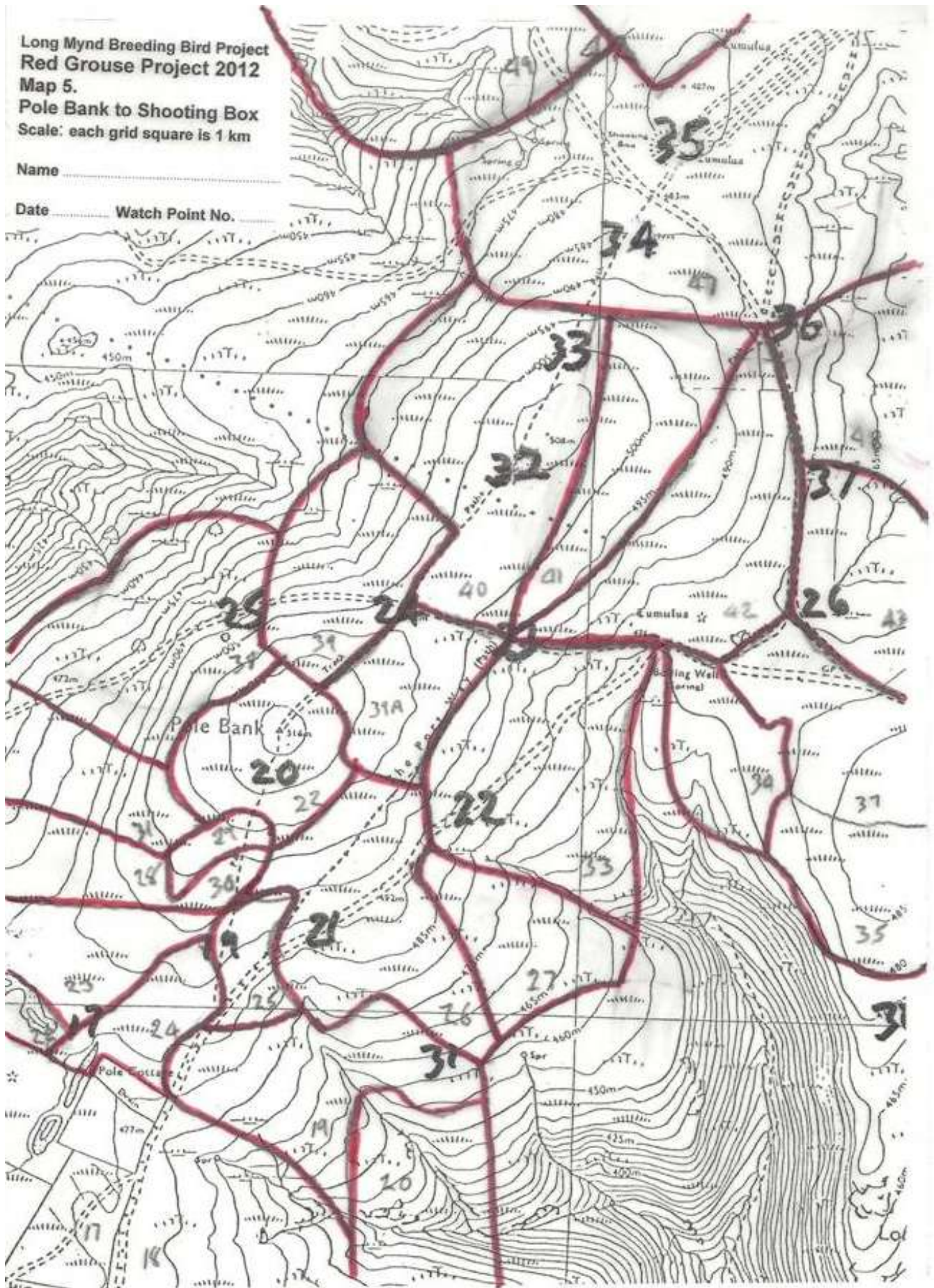
Date Watch Point No.



Long Mynd Breeding Bird Project
Red Grouse Project 2012
Map 5.
Pole Bank to Shooting Box
Scale: each grid square is 1 km

Name

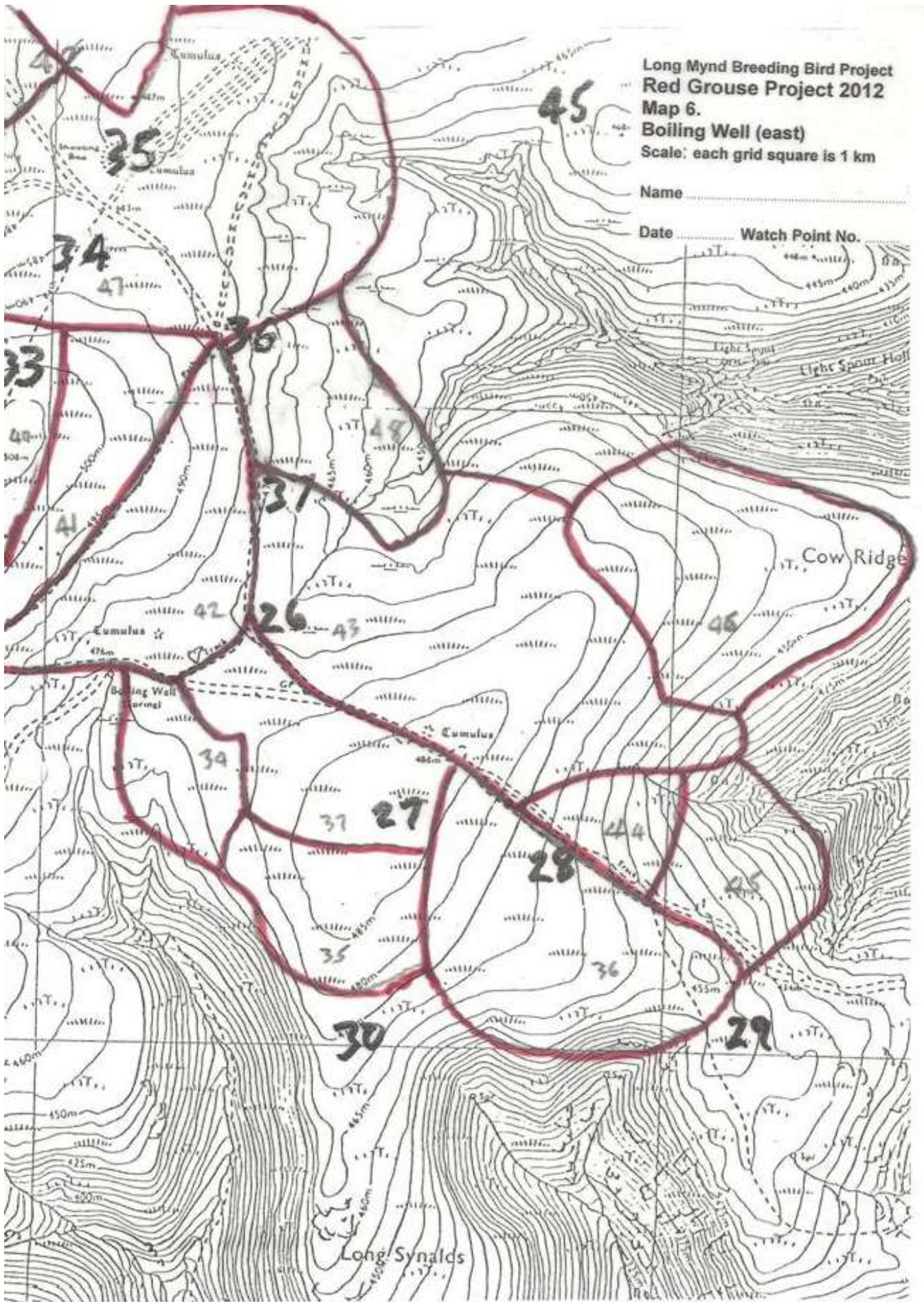
Date Watch Point No.



Long Mynd Breeding Bird Project
Red Grouse Project 2012
Map 6.
Boiling Well (east)
Scale: each grid square is 1 km

Name

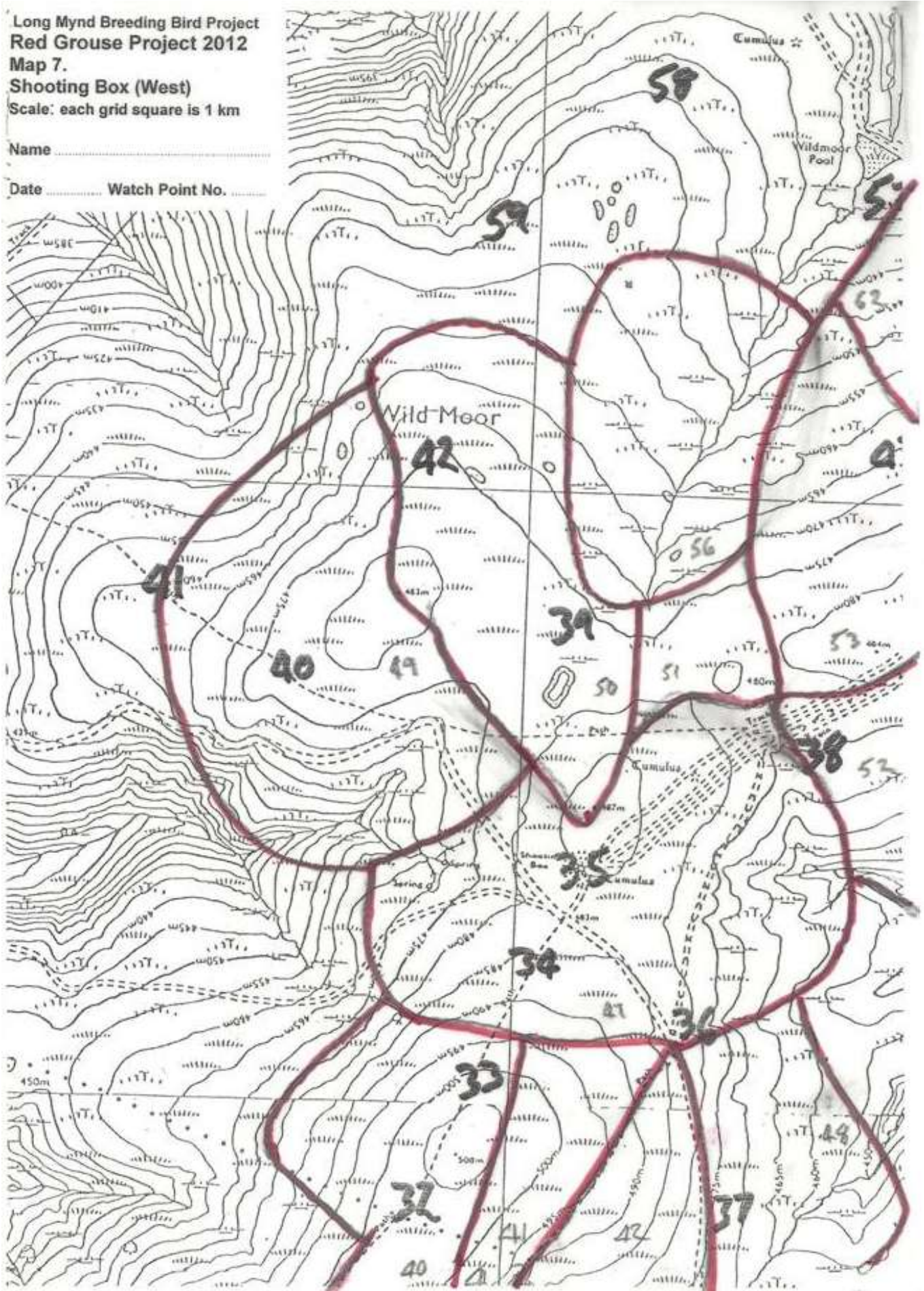
Date Watch Point No.



Long Mynd Breeding Bird Project
Red Grouse Project 2012
Map 7.
Shooting Box (West)
Scale: each grid square is 1 km

Name

Date Watch Point No.

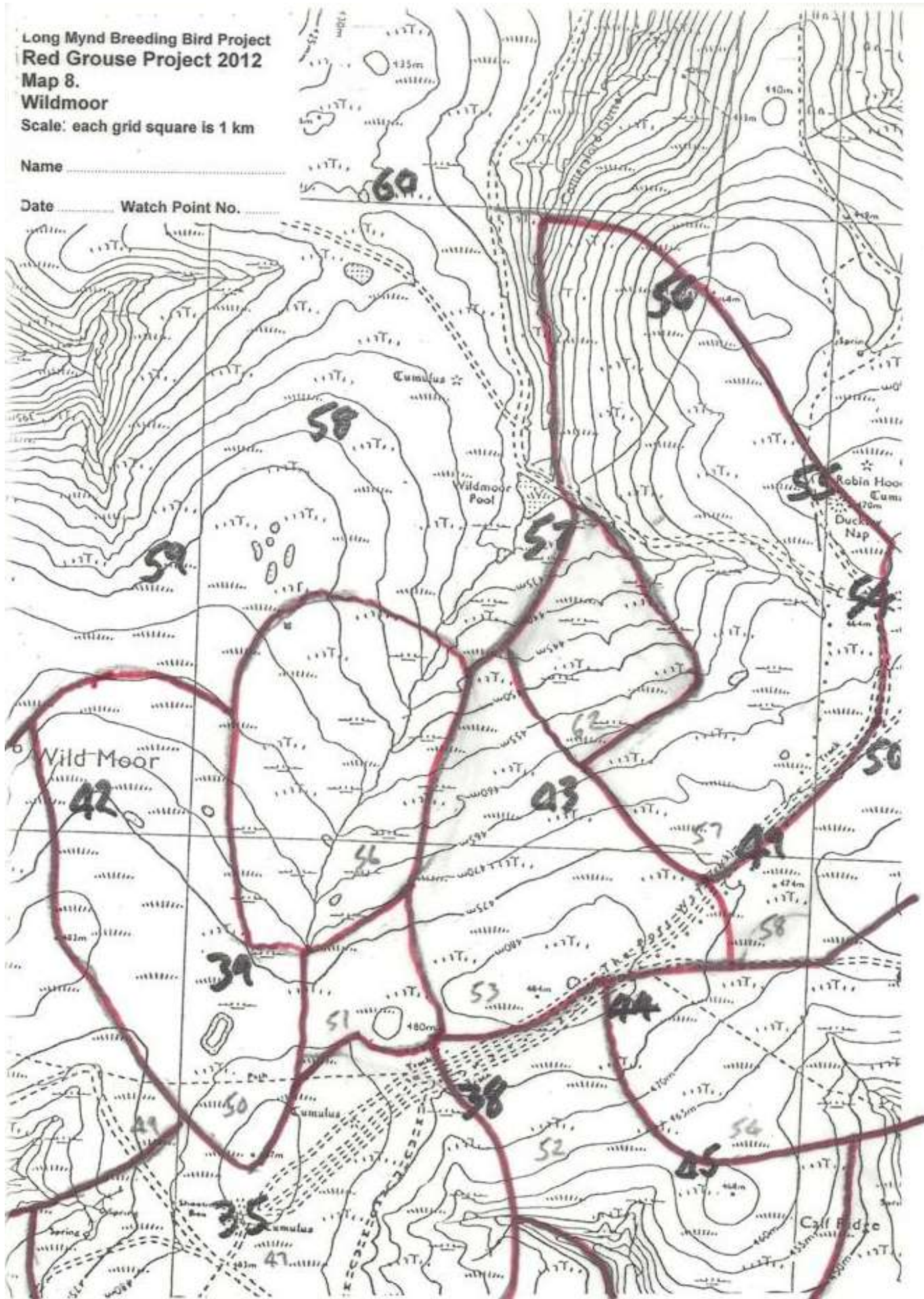


Long Mynd Breeding Bird Project
Red Grouse Project 2012
Map 8.
Wildmoor

Scale: each grid square is 1 km

Name

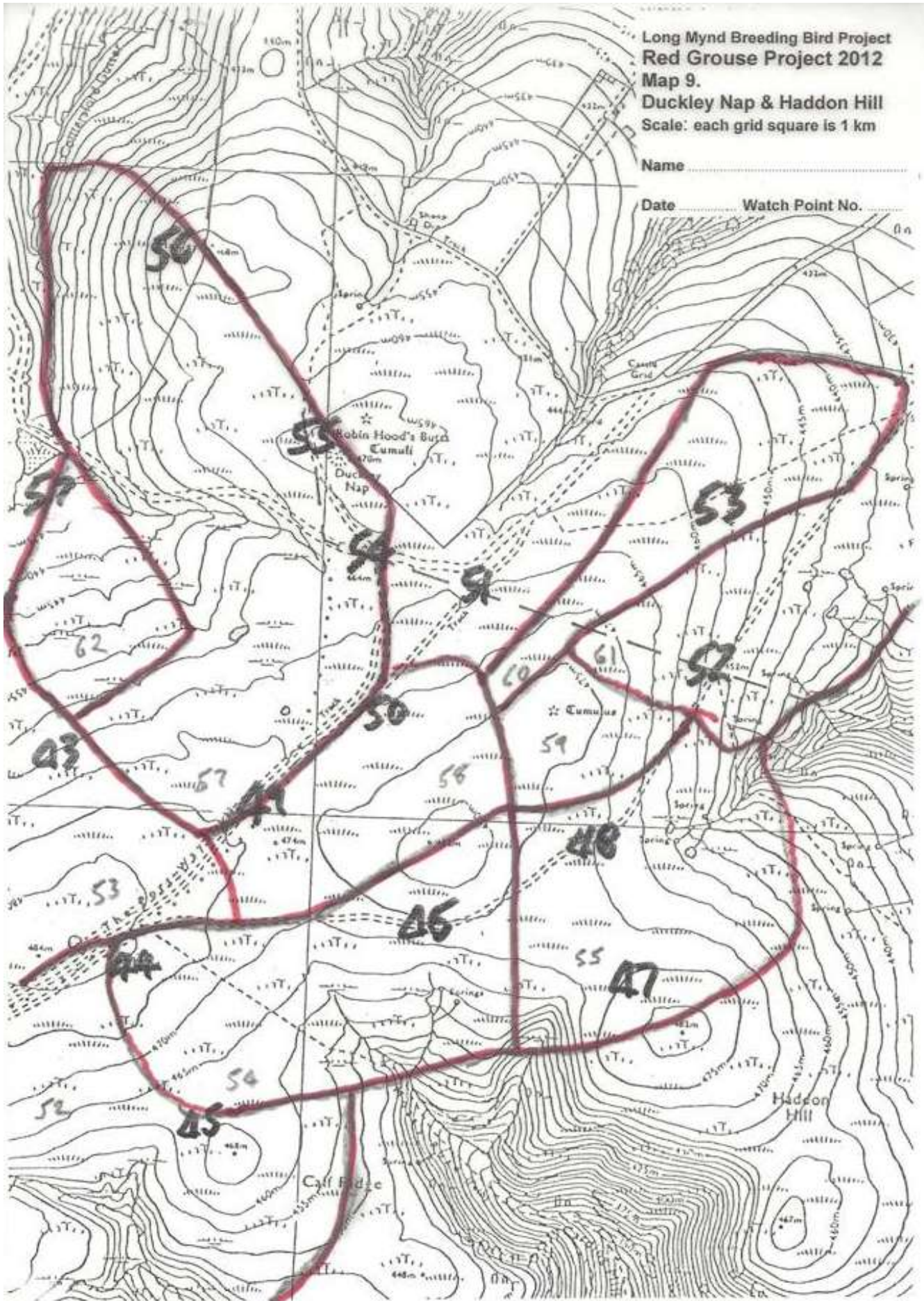
Date Watch Point No.



Long Mynd Breeding Bird Project
Red Grouse Project 2012
Map 9.
Duckley Nap & Haddon Hill
Scale: each grid square is 1 km

Name

Date Watch Point No.



Recording Conditions

The activity levels of the Grouse, and the likelihood of them being observed and recorded, vary according to the weather conditions. Although they may vary across the whole plateau, so they were not the same at every Watch Point, in general they were very poor on four of the six of the survey dates. In summary, the conditions during the survey periods were:-

29 March: Slight breeze. Still. Good visibility.

12 April: Slight breeze from the west. Very Still. Good visibility.

19 April: Light wind, no rain & good visibility during the recording period, but heavy rain all day depressed Grouse activity

26 April: Rain and mist. Very poor visibility for the whole of the recording period. Several surveyors went home early.

3 May: Light rain and mist. Very poor visibility for the whole of the recording period.

10 May: Very windy, and rain. Very poor visibility for the whole of the recording period.

The impact of the bad weather is reflected in the average number of records per watch point on each date.

Comparison with 2011 Recording Conditions.

In 2011, there was no rain on any evening that the survey was conducted, although some of the evenings were quite windy. The total number of record sheets submitted was 147, containing 818 records. The average number of Grouse records per sheet was 5.66. No Grouse at all were recorded on only 12 (8.2%) record sheets.

In 2012, the total number of record sheets submitted was 204, containing 816 records. The average number of Grouse records per sheet was 4.0. No Grouse at all were recorded on 51 (23.9%) record sheets.

Comparison of Results with 2011 Results

The distribution of territories is broadly similar to that found in 2011. However, seven apparently additional territories were found, all on the edge of the main range:-

- 1 at the southern edge of the range, east of Minton Hill
- 4 to the south and east of Round Hill
- 1 at Shooting Box
- 2 on Wild Moor

The consolidated map of all territories included in last years report showed five possible territories identified from dawn counts. Three of these were found in 2012 (numbers 47, 50 and 56), listed amongst the additional territories above, on Wild Moor (2) and Shooting Box), but two, on west and north Wild Moor, were not.

Two other additional territories were identified from other NT records in 2011, east of Round Hill and at the top of Townbrook. The former was found in 2012, but the latter was not.

Last years report also stated "It will be seen that some areas which have been managed recently, and have short heather, should be good for grouse e.g. the north end of Wild Moor and East of Round Hill, but none were found there". Four additional territories were identified east of Round Hill in 2012, but no additional ones were found at the north end of Wild Moor.

Comparison of the number of territories found each year in the main range is more difficult, as the maps are a product of the methodology, rather than a reflection of the actual area occupied by each Grouse. However, the number of additional territories found on the edge of the core area is growing, so it is unlikely that there were less in the core area than last year. Some of the territories marked on the 2012 maps are large, and it is possible that there were two territories in each of these cases, but there were no observations to separate them. There were fewer effective surveys in 2012, in view of the poor weather conditions.

The number of territories found by the 2011 was 55 – 57, and adding the results of NT records produced an estimate of 60 – 63 territories. This year the survey found 63 territories, including the seven new ones identified above. Four of the new ones were included in the 2011 estimate, but three were not. Assuming these three are indeed new additional territories, the population in 2012 is estimated to be at least the 63 found by the survey, but may be three higher than last years estimate (up to 66).

**The Total Estimated Population in 2012 is therefore
63 - 66 Territorial Males.**

Distribution of Territories and Heather Management areas

There are approximately 700 hectares of heather dominated heathland owned and managed by the National Trust on Long Mynd. Of this area, approximately 60% is targeted for active management by burning or cutting on a long rotation (a planned cycle of around 16 years). Over the last 10 years, approximately 160ha of heather have been cut or burnt in scattered patches. This is done primarily to add structural diversity to the heathland whilst maintaining heather as the dominant species. It benefits a range of wildlife species, but in particular the Red Grouse. The young areas of heather resulting from the management are also more accessible and nutritious to livestock than the old heather. The remaining 40% of heather dominated heathland is left as 'non-intervention' to support less mobile species which may be negatively affected by burning or cutting.

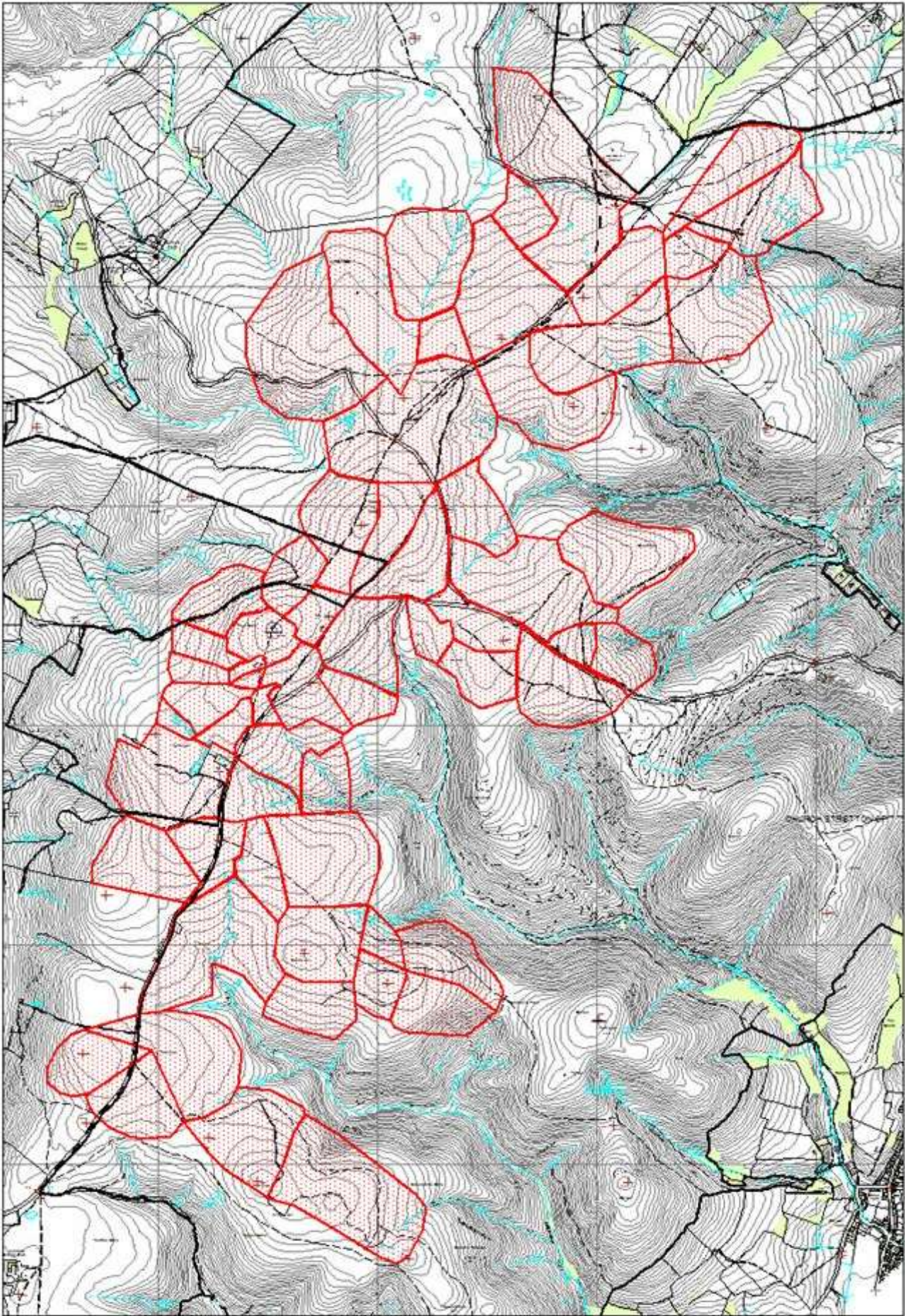
All the territories shown on the maps on pages 4 -12 have been input into the National Trust's GIS system, *Map Info.*, to produce a summary Map 10, as shown on page 15. This map also shows the contours, and confirms that the Red Grouse only inhabit the relatively flat plateau.

Map 11 shows all areas of heather, and the areas where management has been carried out in the last decade or so.

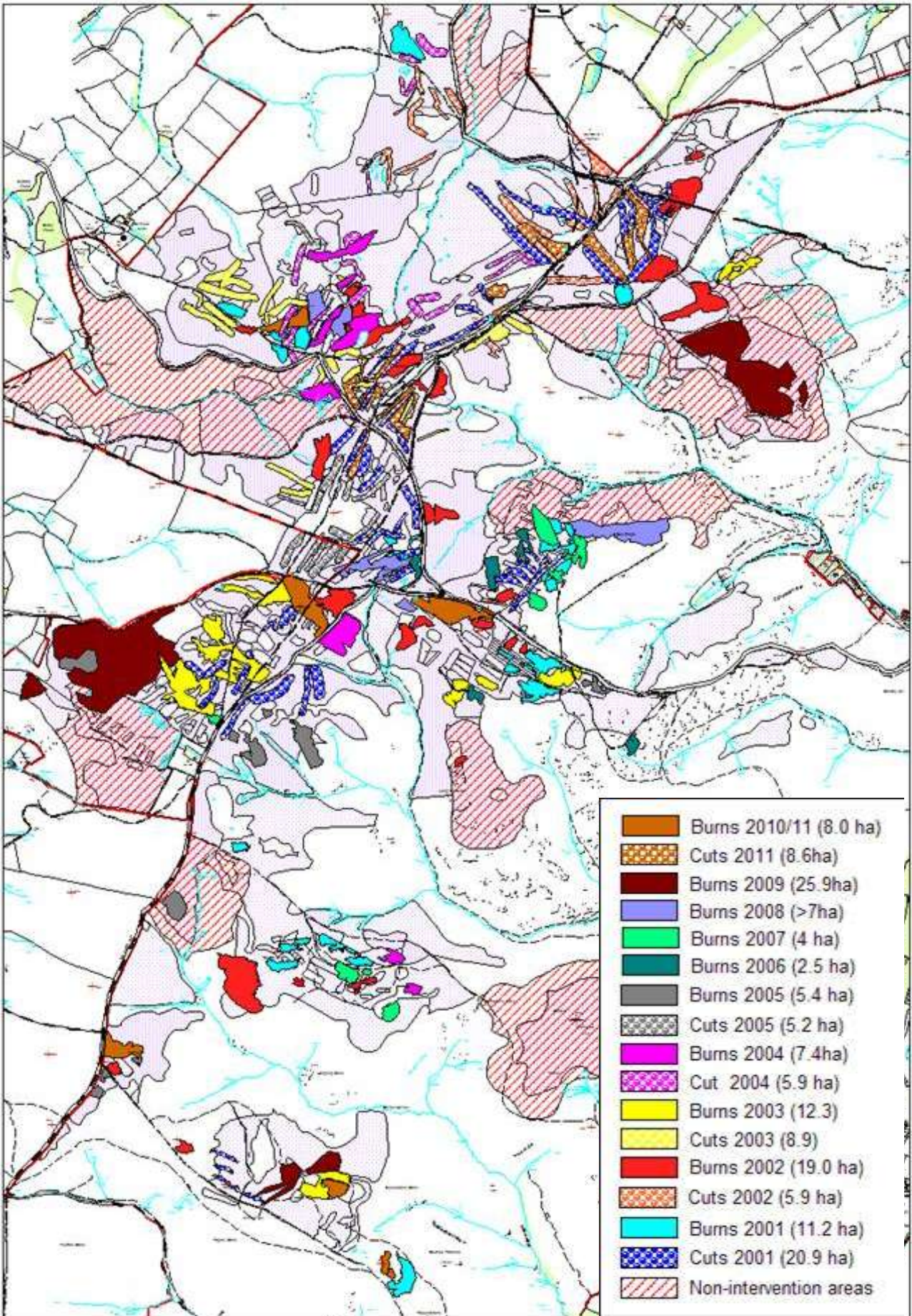
Map 12 overlays the territories map onto a Heather Management map (on page 17, opposite the first map).

It will be seen that some areas which have been managed recently, and have short heather, should be good for grouse e.g. the north end of Wild Moor, but none were found there. Conversely, some apparently 'unsuitable' areas where there has been no management do have grouse, such as south-west of Pole Cottage (not NT land).

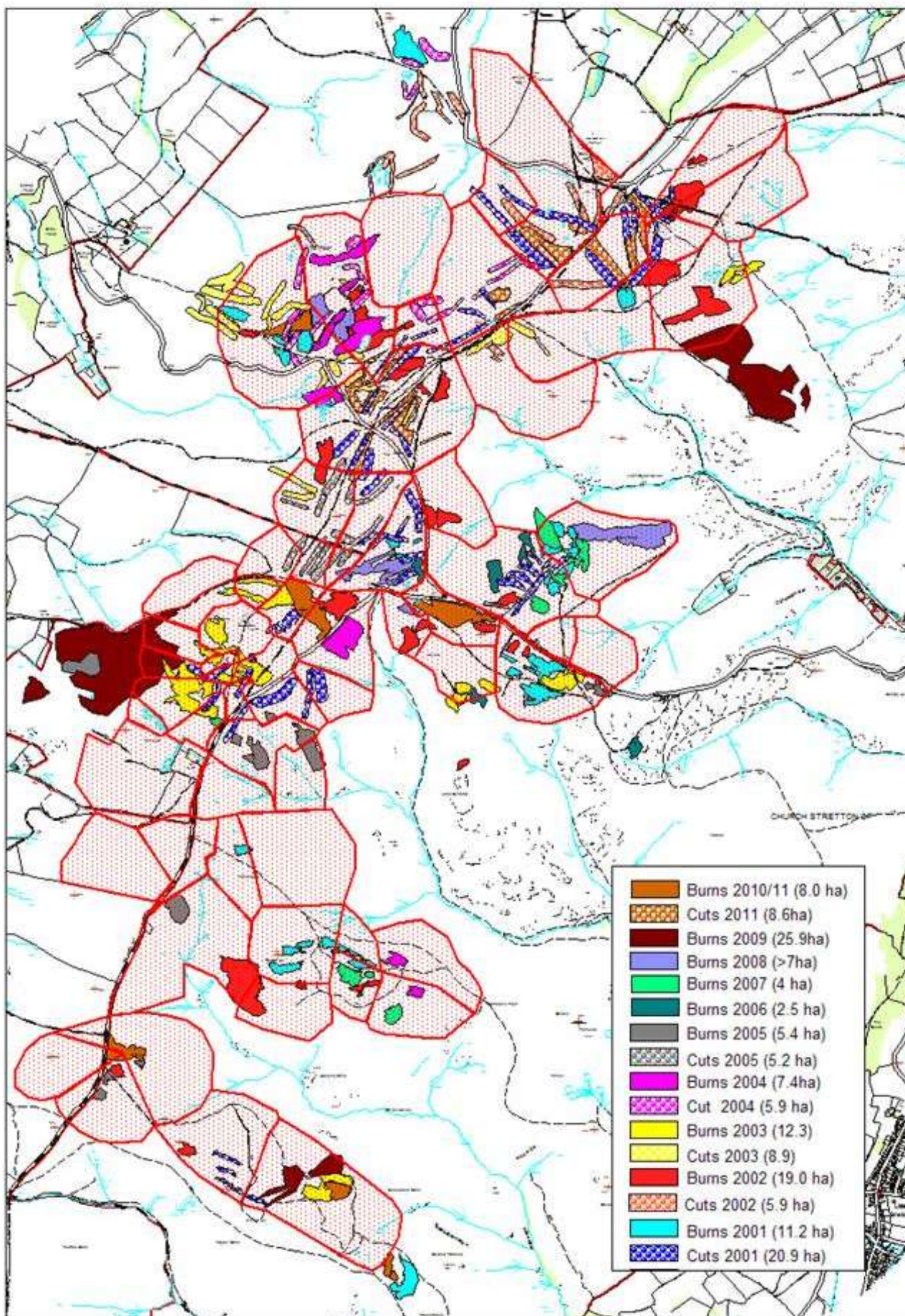
Map 10. Summary Map (with contours) – All Territories 2012



Map 11. Heather Management Areas 2001 - 11



Map 12. Grouse Territories 2012 overlain on Heather Management Areas 2001-11



In general most territories have some area of short heather in them. It appears that the heather management being carried out by the National Trust is continuing to benefit Red Grouse.

It is possible that some of the recently managed areas of heather have not yet had sufficient time to regenerate to suitable conditions. Some additional Watch Points were added to the 2012 survey to monitor such areas, and potential new areas should also be monitored in future years.

Notes of Caution

In 2011, the survey produced a more accurate (and higher) population estimate than that obtained by the three counts made at dawn by National Trust staff and volunteers in the preceding winter. The large number of participants, with systematic coverage of the whole of the Long Mynd over six separate evenings, produced excellent results. However, the Report listed seven notes of caution, some of which were addressed by changes in the methodology in 2012, but some of them still applied this year.

In 2012, there were more participants and more Watch Points, but the weather was very poor on three of the six evenings, and reasonably good weather during the survey period was preceded by heavy rain all day on a fourth evening. As a result, there were considerably more survey returns with no Grouse recorded (51, compared with 12 in 2011) and the number of survey returns with Grouse recorded was virtually identical in the two years (818 in 2011, and 816 this year), in spite of a big increase in the number of observers and survey returns (37 & 147 respectively in 2011, compared with 68 & 204 in 2012). Although most Watch Points were covered three times or more in 2012, in practice the poor weather limited the effectiveness of some of these counts, so several more Watch Points had less than three effective counts.

The poor survey conditions will have limited the number of occasions when two or more displaying males were recorded concurrently. Such observations are crucial for locating territory boundaries, so it is possible that there are two males in some of the larger "territories", as no observations were made during the surveys to separate them. The result should therefore be taken as the minimum number of territories, and there may be more.

In addition, it should be noted that:-

1. Every effort was made to select Watch Points with a good field of view (some new Watch Points were added in the light of experience in 2011), and participants were asked to move slightly if they could obtain a better field of view in the vicinity of the Watch Point, rather than at it. Even so, some Watch Points, particularly those on the hilltops, had fairly restricted fields of view. Observations from these Watch Points were generally of calls, rather than of seen birds, with some resulting inaccuracy in the mapping.
2. There were Watch Points within hearing range of all places where Grouse had been seen prior to the start of the Survey, and the Heather Management map on page 17 shows some areas which should be suitable for Grouse, but where none were found. Grouse may perhaps have been overlooked there, and these areas should be monitored thoroughly in future years.

3. Concurrent records of the same observation from different Watch Points would not necessarily have mapped the observation in the same position. This is particularly true for observations of calls heard faintly in the distance.
4. Although the scale of the maps provided to participants was larger than in 2011, there were still a few occasions where the scale was too small – the observations could not all be clearly differentiated.
5. Participants' experience of Red Grouse, and their experience of bird watching generally, varied tremendously. Some may have missed birds, and / or were not confident enough to summarise their observations into the number of definitely different and probably different males.

However, inaccurate mapping of observations did not present any apparent problems during the analysis, and concurrent observation of adjacent males usually included one made from the nearest Watch Point, which was presumably reasonably accurate. Therefore the potential limitations of the survey methodology do not appear to be reflected in the results.

Considerations for the Future

The method has produced excellent results, and it will be repeated annually to monitor the possible increase of the Red Grouse population on the Long Mynd.

As a result of lessons from the 2012 survey:-

1. Clearer guidance will be given to observers in 2013 on how to summarise their observations, so they record which observations relate to each bird.
2. Observers will also be requested to notify the organisers if they do not carry out a survey at a Watch Point they have been allocated.
3. Consideration will also be given to adding some additional Watch Points.

Red Grouse Elsewhere in Shropshire

Apart from The Long Mynd, the only other established population of Red Grouse elsewhere in Shropshire is on The Stiperstones. Details of monitoring results there are shown in Annexe 2. The population in 2012 was estimated at 18 territorial males, compared to 11 in 2011.

Red Grouse used to breed on Brown Clee (five pairs in 1989 - *Atlas 1992*), but none have done so there since the mid 1990s, and there are none there currently (information from the Game Keeper, via Gareth Thomas, *pers.comm.*).

They have also bred on Heath Mynd in the past, but attempts to reintroduce them there have not been successful (Neil Wainwright, *pers.comm.*).

Other Species

Several participants had wonderful views of Short-eared Owl. Other participants also recorded a flock of Golden Plover, two pairs of Curlew, and Red Kite, Hen Harrier, Merlin, Hobby, Kestrel, Buzzard, Grasshopper Warbler, Raven and Reed Bunting.

Acknowledgements and Distribution

Thanks to the 68 individuals who participated in the Project, and submitted survey maps:-

John Arnfield	Julian French	Gareth Parry
John Bacon	Tom Goodwin	Dave Pearce
Richard Bacon	Judy Greeman	Chris Penny
Steve Baker	Rod Greeman	Alan Pottinger
Ken Beckley	Nigel Green	Ian Ramsden
John Bent	Helen Griffiths	Ben Rivett
Matt Bevan	Don Hale	Glynn Roberts
Carole Blaggrave	Rose Harrison	Simon Sholl
Lesley Brown	John & Heather Hathaway	Mike & Jo Shurmer
Mick Burman	Jan Heaney	Mike Sillence
Sandy Burton	Sylvia & Richard Hickman	Leo Smith
Joe Collins	Pat & Graham Holbourn-Williams	Jenny Steel
Chris Cooke	Ian Hughes	Derrick Trowman
Mags Cousins	Paul Jackson	Caroline Uff
Julie Cowley	Keith Jones	Jeff Upex
Pamela Cusack	Malcolm Loft	Emma Wareham
Sylvia Davidson	Sally & Ian Mawhinney	Heather Williams
Vince Downs	Anna McCann	John & Helen
Andrew Fisher	Andrew Middleton	Worrell
Bernard & Jane Ford	Josie Owen	Colin Wright
Jeremy Freeland	Bob Parker	

Thanks also to Caroline Uff, National Trust Ecologist, for providing the results of previous monitoring of Red grouse on The Long Mynd, information about the Heather Management policy, and the maps from the Trust's GIS system.

Cassie Clayton, Reserves Manager at Stiperstones NNR, provided the data in Annexe 2.

The photograph on the cover is © Jenny Steel. Thanks to her for permission to use it.

Electronic versions (.pdf format) of this Report have been supplied to all the participants.

A paper copy has been supplied to the National Trust, together with all the fieldwork observations and analysis.

Further copies can be supplied on request by the Long Mynd Breeding Bird Project c/o The Bryn, Castle Hill, All Stretton SY6 6JP (01694 720296 leo@leosmith.org.uk).

Summary and Conclusion

The total estimated population of Red Grouse in Shropshire in 2012 is therefore 81 – 84 territorial males, of which 63 - 66 (around 78%) are on The Long Mynd.

It appears that the heather management being carried out by the National Trust is continuing to benefit Red Grouse.

Leo Smith
Long Mynd Breeding Bird Project
January 2012

Appendix 1. Project Recruiting Leaflet



Strettons Area Community Wildlife Group

A Practical Conservation Project

Estimating the Red Grouse Population on the Long Mynd

Introduction

The Red Grouse population on the Long Mynd was considerably higher than it is now, but it appears to be recovering as a result of the heather management carried out by the National Trust.

The Species was added to the *Red List of Birds of Conservation Concern* in the 2009 review, as the population is dwindling across the Country as a whole. Monitoring the population is therefore important nationally as well as locally.

Pairs are secretive in the breeding season, and stay in the deep heather, so they are difficult to count. The usual method involves mapping territorial displaying males on several dawn visits in spring, and analysing the comparative results (the "Territory Mapping Method"). The Long Mynd is a large area, and the Trust has had difficulty in getting enough helpers to undertake three dawn counts between December and February each year. The population estimate in the winter of 2010-11 was 32 – 50 pairs. This is not sufficiently accurate for such a scarce species, or to assess the effectiveness of the Trust's heather management.



As well as displaying at dawn, the territorial males also display around sunset. Most territories are within sight and hearing distance of the road along the top, between the Gliding Station and the Shooting Box car park. The display flight is noisy, conspicuous and unmistakable, and can be observed over long distances, so this is a suitable project for anyone interested in birds or conservation. No special knowledge or skills are needed.

Thirty-seven people helped map and count Red Grouse on the Long Mynd on six evenings at dusk in 2011, and the resulting maps produced a population estimate of 60 - 63 displaying males. This project was a big success, and it is being repeated in 2012.

We want to recruit as many helpers as possible. Counts will be held on six successive Thursdays between late March and early May. Please come to as many counts as you can.

A number of Watch Points near the road will be marked on large scale Ordnance Survey maps. Participants will be allocated a Watch Point, and go to it at least an hour before sunset, and stay there until about 15 minutes after sunset. The location and activity of all Grouse seen or heard will be marked on a map (provided). Methodology is very straightforward, and will be explained at the Briefing Meeting (and on site, for any helpers who can't get to the Briefing).

Project Briefing & Methodology

7.30pm – 8.30pm Thursday 22nd March 2012

Carding Mill Valley Tea Room (Refreshments provided)

Observation Dates (All Thursdays) and times

Sunset is about 7.40pm on the first date, and gets later by 15 minutes per week

- 6.10pm, 29th March
- 6.20pm, 5th April
- 6.30pm, 12th April
- 6.45pm, 19th April
- 7.00pm, 26th April
- 7.15pm, 3rd May

Meet at Pole Cottage Car Park (OS Grid Reference SO413937)

or meet at Carding Mill Valley Tea Room half an hour earlier for a lift up

N.B. Lifts must be booked in advance. Arrangements will be announced at the Briefing.

So far as possible, Watch Points will be allocated by email the day before, so participants can go straight there. People who missed the Briefing, and need an explanation, and people who don't use email, can meet at the Pole Cottage car park at the times listed above.

It can get very cold at sunset on the top, so please bring plenty of warm clothing.

This method produced better results than the previous NT dawn counts in 2011. It is hoped to repeat the project each year, to provide on-going monitoring of the Red Grouse population on the Long Mynd.

A copy of the 2011 Survey Report will be available for new participants.

Participants

This is a suitable project for all participants on the National Trust *Introduction to Bird Watching* Course, for members of the local SOS and RSPB members groups, for National Trust Volunteers, for members of the new Strettons Area Community Wildlife Group and for anyone else interested in birds.

The project will be part of the bird monitoring on the Long Mynd carried out for the National Trust as part of their Environmental Stewardship Higher Level Scheme Agreement with Natural England, which is co-ordinated by *Leo Smith Ornithological Surveys and Consultancy*

Further Information

Leo Smith
01694 720296
leo@leosmith.org.uk

Leo Smith
Revised March 2012

Appendix 2. Project Briefing Note

Strettons Area Community Wildlife Group & Long Mynd Breeding Bird Project Estimating the Red Grouse Population on the Long Mynd Project Briefing 2012

Complete the Participant Details Sheet

If you can say, which dates can you come? (Helpful for our planning)

Are you willing to cover a watching Point on a main footpath, rather than on the road?

N.B. Mobile Phone Number is important, if you have one

We will endeavour to provide lifts from Carding Mill Valley to Pole Cottage for those that want them, but that is conditional on other people being willing to offer them.

If you want a lift, or can offer lifts, make sure you complete the relevant parts of the Participant Details form, and liaise with John Arnfield.

Observation Dates (All Thursdays) and times

Sunset is about 7.40pm on the first date, and gets later by 15 minutes per week

- 6.10pm, 29th March
- 6.20pm, 5th April
- 6.30pm, 12th April
- 6.45pm, 19th April
- 7.00pm, 26th April
- 7.15pm, 3rd May

Watch Points

The survey will be carried out by watching and listening from a series of pre-determined Watch Points. All Watch Points are marked on the survey map which will be issued to you. You will be allocated a Watch Point number. Wherever possible, Watch Point numbers and survey Maps will be sent out by email by Wednesday afternoon. If you know where you are going, go directly to your Watch Point by the Start Time for that date. Otherwise meet at Pole Cottage Car Park (OS Grid Reference SO413937), or meet just east of the Carding Mill Valley Tea Room (by the staff car park) half an hour earlier if you've booked a lift up. N.B. Lifts must be booked in advance. See above

The Watch Points have been selected to give a good field of view over places where Grouse have been recorded before. At some Watch Points, note the contour lines on the map around the Watch Point to determine the direction you should be looking. They are not necessarily at the highest point, as that may offer a poor field of view. Use your discretion on where to stand / patrol – maximise your field of view. Stepping up onto the bank next to the road / path may provide a much better view.

If there is a particular hot-spot of Grouse activity, you may wish to leave the Watch Point to investigate. Be careful on rough terrain!

You don't need to stand still for the whole period (you'll need to keep warm!), but please spend almost all of your survey time within 50 metres of the Point marked on the map.

If possible, stay at the Watch Point until 15 minutes after sunset (but make sure you can get back to your car in daylight).

Change of Plans

If you've said you're coming, but find you can't, please leave a message 07791 901732

If you've requested a lift up from Carding Mill Valley, or offered to provide lifts for other people, ring John Arnfield 01694 724170 or 07891 686 443 ASAP.

Estimating Distance

It is important that your observations are mapped as accurately as possible. Use the features on the map (especially the contours) to determine locations. If you aren't familiar with the terrain, or estimating distances, you may want to pace out 100 metres before you start to help you to estimating distance

What to Record on the Site Visits

Name, Date & Watching Point Number

Start Time and Finish Time at Watch Point

Mark your observations on your Survey Map as accurately as possible, particularly the landing point at the end of the Display Flight.

Use the symbols below (they are all reproduced on the Fieldwork Record sheet). The dotted line, to distinguish two separate birds, is particularly important.

Symbols to use on Map

- M** = male Red Grouse (seen - position certain)
P = pair of Red Grouse (seen - position certain)
? = Unseen Male calling in distance, position uncertain
D = Display flight
→ = Direction Of Flight
→ = Bird disappeared from view
→X = Landing Place
—D = Landing Place

Two males seen concurrently

M:M Territorial Aggression

M — M = Same bird moved
(solid line)

M - - - M = Two different birds
(dotted line)

Number each observation recorded on the Survey Map , using the Ref. No. below
Clearly identify observations that are definitely different Males
Put the Map and the Fieldwork Record Sheet on separate pieces of paper
Write neatly – if the observations are illegible, there's no point in recording them!!!!

Liaison with Neighbour

Are any of your observations also on your neighbour's map, or not (use mobile phone for contact – enter result in comments column "Also recorded from WPX". Check that your neighbour's watch says the same time as yours does!!!).

What to bring

Coloured pen (fine felt tip best) & clipboard / book to rest on
Watch & Mobile phone
Very Warm, Windproof and Waterproof Clothing
Possibly a Torch, if you volunteer to leave the road
Possibly a compass, if you have one, to help map the direction of your observations

Inclement Weather

We won't be able to have cancellation arrangements but information will be posted via the email list when possible (this will necessarily be last minute). If it's misty, please come – Grouse call more in the mist!!! If it's raining hard, or it's very windy, and it's not going to change, don't come.
If in doubt, turn up

Handing in Survey Maps

If you can, hand them in to Leo Smith or John Arnfield before going home.
If not, either bring them next week, or post to Leo Smith; The Bryn, All Stretton, Shropshire SY6 6JP

Casual Records

If you are on Long Mynd any other time, and see 2 male Grouse displaying against each other, please mark the locations on a Survey Map.

If it's on the same map as you use for your next Survey, mark the locations on that (but clearly record that observation as on a separate date. If you want more maps for such records, please ask

More Information

If in doubt, ask - Leo Smith 01694 720296, leo@leosmith.org.uk

Feedback - Project Report

By comparing the information on all the maps at the end of the survey period, plus casual records collected between now and July, we hope to be able to define the different territories, and count them. The results will be presented in a report which will be sent to all participants, probably in November. Participants will also be asked if they'd like a Feedback meeting (September?)

Next Steps

Repeat next year if successful, and everyone is willing to help again

Leo Smith
March 2012

Appendix 3. Fieldwork Recording Sheet

Strettons Area Community Wildlife Group & Long Mynd Breeding Bird Project

RED GROUSE SURVEY 2012

Name _____ Date _____ Watch Point Number _____

Start Time _____ Finish Time _____ (At Watch Point)

Symbols to use on Map

- M = male Red Grouse (seen - position certain)
- P = pair of Red Grouse (seen - position certain)
- ? = Unseen Male calling in distance, position uncertain
- D = Display flight

- = Direction Of Flight
- = Bird disappeared from view
- X = Landing Place
- D = Landing Place

Two males seen concurrently

M:M Territorial Aggression

M — M = Same bird moved
(solid line)

M - - - M = Two different birds
(dotted line)

Number each observation recorded on the Survey Map , using the Ref. No. below

Ref		OBSERVATION	COMMENTS (Clearly identify observations that are definitely different Males)
No.	Time		
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Summary (Please summarise the records above - Number of Definitely Different Males and Probably Different Males)

Contact Number: Leo Smith 07791 901732

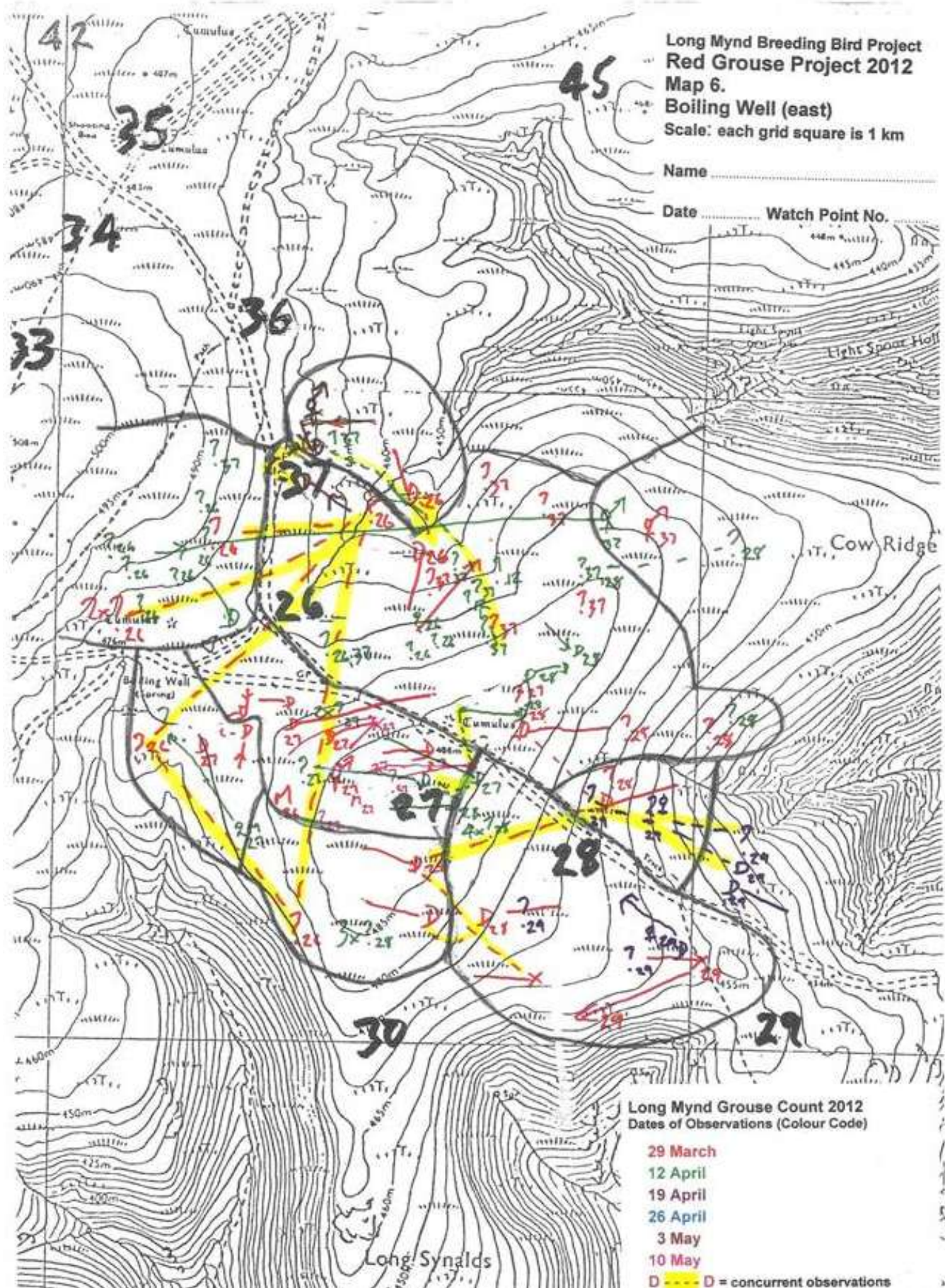
Appendix 4. Fieldwork Recording – Summary

Watch Points	March	April			May		Total Counts
	29	12	19	26	3	10	
1		Brown	Goodwin	Cooke	Freeland		4
2		Burman	Sholl	Parry	Green		4
3		Worrell	Bevan	Jones	Heaney		4
4		Bacon	Fisher		Wright		3
5			Bent	Bacon	Roberts		3
6		Greeman	Blagrove	Heaney	Burton		4
7		Greeman	Trowman	Williams	Baker		4
8		Williams	Burman	Blagrove	Mawhinney		4
9		Bent	Brown	Griffiths	Smith	Jones	5
10		Harrison		Cousins	Owen	Upex	4
11		Fisher	Uff	Downs	Ford		4
12		Bevan	Owen	Bent	Bacon		4
13		Hickman	Wright		Rivett		3
14	Ford	Cousins		Smith	Brown		4
15	W & F	Freeland		Beckley	Burman		4
16	Roberts	Ford			Davidson		3
17	Smith	Owen		Ford	Williams		4
18	Owen	Shurmer					2
19	Brown	Burton	Smith	Rivett	French		5
20	Shurmer	Hathaway		Steel	Downs		4
21	Davidson	Arnfield				Parry	3
22	Trowman	Blagrove				Beckley	3
23		Heaney				Bent	2
24	Parry	Sillence				Ford	3
25	Sholl	Sholl				Cousins	3
26	Jones	Beckley				Rivett	3
27	Cousins	Downs				Cowley	3
28	Greeman	Parry				Williams	3
29	Greeman		Griffiths			French	3
30		Rivett	Rivett				2
31		Upex	Bacon				2
32		Loft				Bacon J	2
33	Loft	Cooke				Greeman	3
34						Greeman	1
35		Mawhinney				Cusack	2
36	Arnfield	Baker				Griffiths	3
37	Pearce	Pearce					2
38	Heaney	Holbourn-Williams				Hathaway	3
39	Bacon R		Ford			Owen	3
40	Griffiths	Jackson	Greeman		Beckley		4
41	Jackson		Greeman				2
42	Parker	McCann			McCann	Smith	4
43	Sillence		Upex		Uff		3
44	Wright	Griffiths	Beckley	Scholl	Cooke	Cooke	6
45	Upex	Green	Cowley		Parry		4
46	Hathaway		Jones	Greeman	Sholl	Steel	5
47	Downs		Penny	Cowley	Hughes		4
48	Cowley		Hughes	Greeman	Jackson	Uff	5
49	Hughes			Trowman	Bent		3
50	Green		Mawhinney	Davidson	Griffiths		4
51			Baker	Cusack	Hickman		3
52	Ramsden		Cooke	Bevan	Hathaway		4
53	Bent		Green	Harrison	Cowley		4
54	Steel		Cousins	Burman	Holbourn-Williams		4
55	McCann		Hathaway	Brown	Upex		4
56	Rivett			Uff	Jones	Sillence	4
57	Holbourn-Williams		Worrell	Holbourn-Willi	Shurmer	Holbourn-Willi	5
58	Middleton		Sillence	Sillence			3
59	Bacon J						1
60	Uff		McCann	Hughes			3
Counts	40	39	34	31	36	24	204

Appendix 5. Fieldwork Recording – All Observations

Watch Points	March	April			May		Totals		
	29	12	19	26	3	10	Counts	Records	Average
1		1	6	0	0		4	7	1.8
2		3	15	3	4		4	25	6.3
3		3	5	0	1		4	9	2.3
4		2	2		1		3	5	1.7
5			0	0	1		3	1	0.3
6		1	2	0	1		4	4	1.0
7		1	3	0	0		4	4	1.0
8		4	7	4	0		4	15	3.8
9		5	2	6	2	0	5	15	3.0
10		7		3	1	0	4	11	2.8
11		13	9	4	1		4	27	6.8
12		5	5	0	1		4	11	2.8
13		5	3		4		3	12	4.0
14	8	0		2	2		4	12	3.0
15	2	5		5	11		4	23	5.8
16	6	8			4		3	18	6.0
17	8	13		9	4		4	34	8.5
18	6	12					2	18	9.0
19	22	11	2	4	4		5	43	8.6
20	12	9		2	5		4	28	7.0
21	25	16				4	3	45	15.0
22	14	8				8	3	30	10.0
23		4				4	2	8	4.0
24	10	2				3	3	15	5.0
25	7	2				0	3	9	3.0
26	9	14				0	3	23	7.7
27	16	7				7	3	30	10.0
28	13	14				0	3	27	9.0
29	2		8			0	3	10	3.3
30		3	0				2	3	1.5
31		16	3				2	19	9.5
32		0				0	2	0	0.0
33	4	0				0	3	4	1.3
34						2	1	2	2.0
35		0				0	2	0	0.0
36	13	1				4	3	18	6.0
37	9	8					2	17	8.5
38	5	6				0	3	11	3.7
39	10		2			2	3	14	4.7
40	12	9	0		7		4	28	7.0
41	1		0				2	1	0.5
42	0	5			12	2	4	19	4.8
43	9		2		7		3	18	6.0
44	5	8	5	5	4	1	6	28	4.7
45	2	1	5		10		4	18	4.5
46	2		1	2	6	2	5	13	2.6
47	0		3	1	2		4	6	1.5
48	3		3	0	4	6	5	16	3.2
49	1			1	4		3	6	2.0
50	1		1	0	7		4	9	2.3
51			1	0	8		3	9	3.0
52	0		4	0	4		4	8	2.0
53	0		2	0	3		4	5	1.3
54	2		1	0	4		4	7	1.8
55	1		0	0	0		4	1	0.3
56	0			0	5	0	4	5	1.3
57	0		0	0	8	0	5	8	1.6
58	0		1	2			3	3	1.0
59	1						1	1	1.0
60	0		0	0			3	0	0.0
Counts	40	39	34	31	36	24	204		
Records	241	232	103	53	142	45		816	
Average	6.0	5.9	3.0	1.7	3.9	1.9			4.0

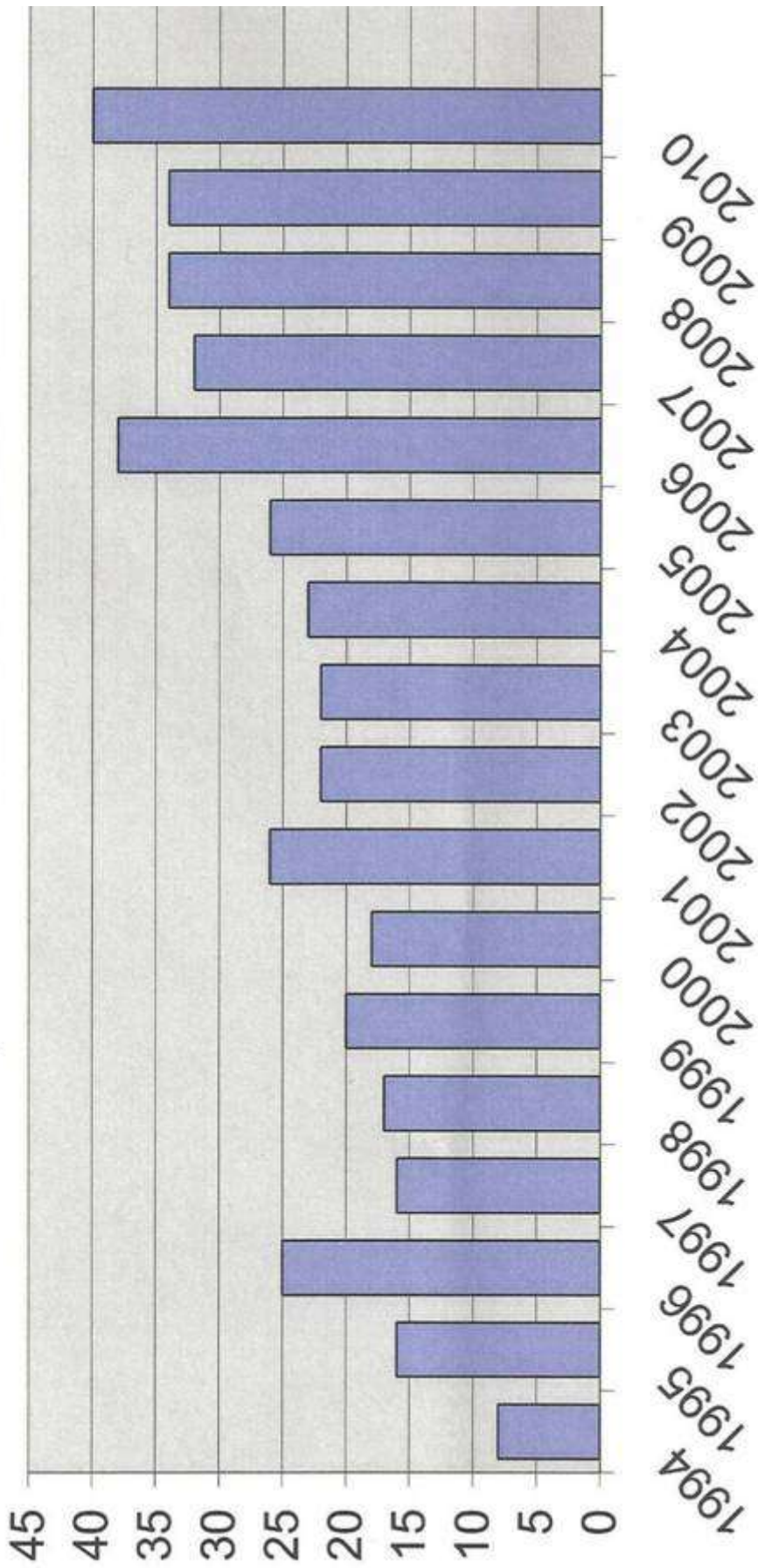
Appendix 6. Sample Master Map, showing all Fieldwork Observations



Annexe 1. Results of National Trust Dawn Counts on The Long Mynd

Number (minimum) of Red Grouse Territories on Long Mynd

min no. usually relates to territorial males recorded in at least 2 /3 visits



Annexe 2. Results of Natural England Monitoring on The Stiperstones

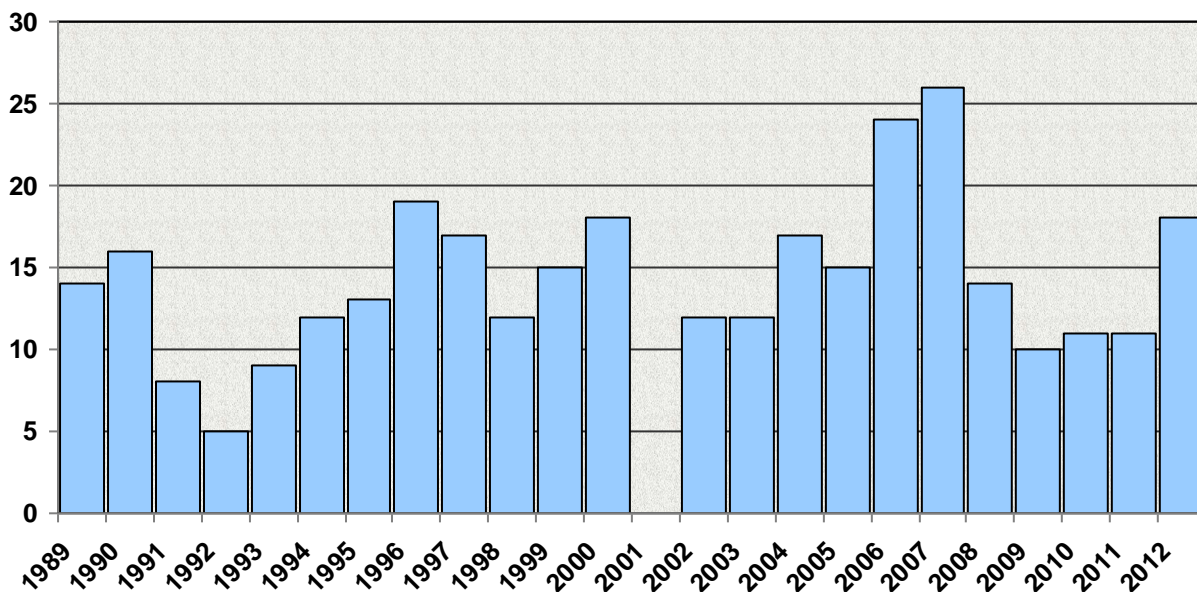
Natural England do two counts each year.

The first, mapping calling males at dawn in Spring, is similar to the monitoring previously carried out by the National Trust on The Long Mynd.

The second count involves several volunteers dragging a rope across the heather. Most of the Grouse habitat is covered, and the same area is covered each year. All flushed birds are counted, and the number of recently fledged young within the total are estimated. This provides an indication of breeding success.

The high counts in 2005-07 resulted from intensive predator control on and around NNR, which resumed in 2012.

Minimum Spring Count (Calling Males at Dawn)



Minimum Summer/Autumn count (Whole Population)

