

**SPA Bird Foraging Surveys**

**Horn Crag, Silsden**

A. D. Calvert Architectural Stone Supplies

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## Summary Statement

Due to absence of target species, the Site has not been found to be functionally linked to surrounding Special Protection Areas (SPA).

## Introduction

1. Following the recommendations made in Brooks Ecological's Preliminary Ecological Appraisal Report (ER-5064-01, Brooks Ecological was commissioned by A. D. Calvert Architectural Stone Supplies to carry out a Special Protection Areas (SPA) Bird Foraging Survey at Horn Crag Quarry, Silsden, West Yorkshire.
2. The survey provides information from standardised survey on the presence, or likely absence, of 'target species' - these being species which:
  - (i) on their own, or as part of an assemblage, constitute a qualifying interest for either of the nearby SPA sites (The North Pennine Moors SPA and The South Pennine Moors Phase 2 SPA), and;
  - (ii) are known to forage or flock (pre-breeding) outside of the protected area.
3. At this Site the target species are therefore:
  - Twite;
  - Curlew;
  - Ring ouzel;
  - Golden plover; and
  - Lapwing.
4. These are referred to in the text as "target species" or "SPA Birds".

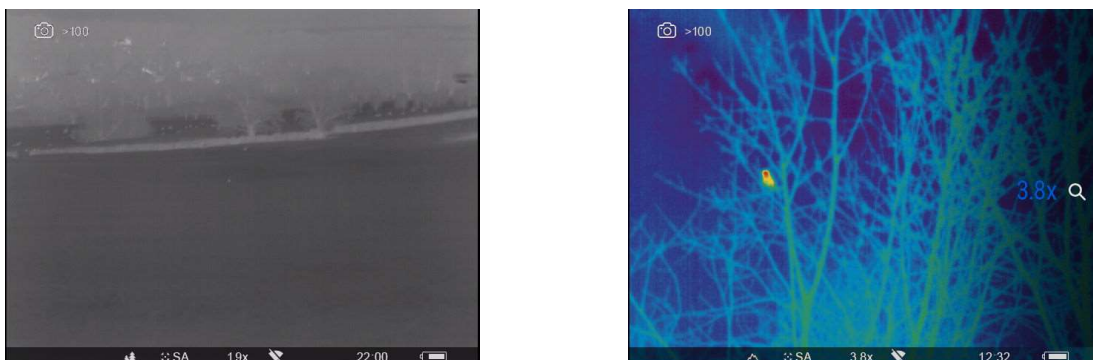
**Figure 1** The Site



## Method

5. Survey methodology was adapted from several key texts, including O'Brian and Smith, 1992 and following the key requirements of the specification. Obrien and Smith (1992) methodology for surveying breeding waders in the United Kingdom is straightforward to apply, allows repeatability in successive years and provides comparable data. It is a generic methodology designed to survey several species simultaneously; principally Lapwing, Curlew, Common Snipe, Redshank and Oystercatcher, but other relevant bird species can also be recorded. The survey methodology is based on field-by-field observations and is recommended for grasslands in northern England which are sometimes considered as upland, provided that the areas are enclosed and below the moorland line, e.g. in-bye pasture.
6. Where there are several fields on each site, data was collected on a field-by-field basis. Surveys comprised a combination of transects and vantage point observations appropriate to each site. Each field and buffer area were walked to within 100m of every point, some sites being better suited to using a vantage point and observing the site with binoculars and/or a tripod mounted telescope.
7. Diurnal Surveys were completed during suitable weather conditions, to ensure that data obtained will be reliable. They were not carried out in cold (below 6 °C), wet (heavy or prolonged rain) or windy conditions (when winds exceed Beaufort force 3 (>13mph), or during periods of low visibility.
8. In addition, nocturnal surveys were all completed during periods of full moon or within one week of the full moon. These surveys made use of a Pulsar Helion XP38 Thermal Scope - a device which would be able to locate and resolve all the target species at the relevant distance.

**Figure 2** Examples of thermography showing bird heat signatures (not from this site)



## Survey Results

9. Target species were not found within the Site red-line boundary during any of the survey visits. Curlew were seen in neighbouring fields on 2 out of 9 survey visits.
10. The birds were seen flying over the Site and towards adjacent sheep grazed pasture.

**Table 1** - Survey Results Summary

		Species	Time	Habitat present	Behaviour	Direction of flight	Count
Daytime	20.04.21	Curlew	07:30	Off site in adjacent pasture, west	Flying, calling	North	3 individuals
	12.05.21	Curlew	06:30	Over site and off site in adjacent pasture, east	Flying, calling	North	2 individuals
	09.06.21	Curlew	05:30	Over site and off site in adjacent pasture, east	Flying, calling	East	1 individual
Evening	22.04.21	0	20:00	-	-	-	-
	18.05.21	0	20:22	-	-	-	-
	15.06.21	0	20:30	-	-	-	-
Nocturnal	28.04.21	0	22:30	-	-	-	-
	27.05.21	0	22:20	-	-	-	-
	22.06.21	0	23:15	-	-	-	-

## Evaluation

11. Natural England has been able to provide access to the most recent information on the status of key SPA species in respect of both the North and South Pennine Moors protected areas. In the case of the North Pennine Moors this comprises of a data review dating from 2018 and for the South Pennine Moors, full Breeding Bird Survey results from 2014.
12. The North Pennine Moors SPA qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of EU importance of the following species:
  - Golden plover;
  - Hen harrier;
  - Merlin; and
  - Peregrine.
13. None of these qualifying species of the North Pennines Moors SPA have been identified during these surveys.

14. The South Pennine Moors Phase 2 SPA qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of EU importance of the following species:
- Golden plover;
  - Merlin;
  - Peregrine;
  - Short-eared owl; and
  - Dunlin.
15. None of these qualifying species of the South Pennines Moors Phase 2 SPA have been identified during these surveys.
16. The South Pennine Moors Phase 2 SPA also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting a breeding assemblage of EU importance – this assemblage contains:
- Common sandpiper;
  - Dunlin;
  - Twite;
  - Common snipe;
  - Curlew;
  - Wheatear;
  - Stonechat;
  - Redshank;
  - Ring ouzel; and
  - Lapwing.
17. Curlew is the only species encountered in the survey area.
18. Surveys from 2014 suggest a figure of 456 pairs of curlews are present in the South Pennines SPA, representing approximately 0.7% of the UK breeding population and a stable situation between 2005 and 2014. Breeding was identified in most of the moorland tetrads south of Burley, Ilkley and Addingham during the 2014 surveys, with curlews likely to be making use of areas where moor grass and rushes are dominant.
19. Figures used in table 2 below to identify the percentage of the SPA breeding assemblage making use of a Site use a conservative assessment that presence of an individual implies use of the Site by a breeding pair.
20. Unless it is known to be otherwise, birds are assumed to be breeding within the SPA.
21. For the purposes of this assessment, presence on the ground within a Site is taken as foraging only - even if other activities such as preening, or loafing were noted during the survey.
22. Presence of a species on 1 survey visit is characterised as very occasional, on 2-4 visits as occasional and on more than 4 visits as regular.

**Table 2** SPA assemblage species count

Species	Peak Count	Frequency	% of SPA breeding Population
Curlew	3 adults	2/9 visits	0.3 %

## Conclusion

23. Given the lack of active foraging seen within the ecological zone of influence of the site it is possible to conclude that recommencement of quarrying would not lead to any noticeable effect on curlews specifically or the North and South Pennine Moors qualifying interests.

## References

Natural England (2014) *South Pennine Moors SSSI/SPA Phase 2 - Breeding Bird Survey* December 2014

Natural England (2018) *Data Review for North Pennine Moors SPA and Constituent SSSIs* February 2018

O'Brien, M.G. & Smith, K.W. 1992. *Changes in the status of waders breeding on wet lowland grasslands in England and Wales between 1982 and 1989*. *Bird Study* 89: 165-176.