

**Breeding Bird Survey - Additional Late Season Visits**

**Horn Crag Quarry, Silsden**

A.D. Calvert Architectural Stone Supplies

Report Reference: ER-5064-10

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Report Title:	Breeding Bird Survey Horn Crag Quarry, Silsden
Report Reference:	ER-5064-10
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## Introduction

1. Following comments from the LPA, an additional two breeding bird survey visits were made in the later months of the breeding season to Horn Crag Quarry.
2. The results of these two visits should be read and interpreted with the context of the results from the three earlier survey visits carried out in 2021 and reported in ER-5064-03 (Brooks Ecological).
3. The Site (c. 6.0 hectares) is situated to the north of Silsden. The Site comprises a former quarry and surrounding land which has long ceased active quarrying and has allowed heathland and associated secondary mature habitats to develop.
4. The surrounding habitats are generally pastoral, with fields grazed by sheep, cattle and horses. Silsden reservoir lies to the west of the Site. Small areas of woodland are scattered across the landscape, alongside farmhouses and holiday parks.

**Figure 1** The Site



## Method

5. Two late season breeding bird survey visits were undertaken at the site in July and August 2022 (Table 1).

**Table 1.** Breeding Bird Survey 2022, Visit & Weather Data

Visit	Date	Survey Times	Wind Force (Beaufort Scale)	Cloud Cover (Oktas)	Visibility	Temp (°C)	Precipitation
1	15/07/2022	05:12-06:21	2	8	Good	12	Dry
2	25/08/2022	06:33-07:39	0	7	Good	13	Dry

6. The two breeding bird survey visits incorporated amended visit Common Birds Census (CBC) territory mapping methodology to record breeding bird activity on site. Registrations of all bird species observed within the site red line boundary, overflying the site, and heard singing and/or calling were entered onto field survey maps using standard British Trust for Ornithology (BTO) species and activity codes. Registrations of birds within 100m of the site red line boundary were also recorded to ensure that any breeding territories overlapping the site boundary were included. The site was walked extensively and covered to within 100m of every point within the red line site boundary, the survey route was reversed on each visit to alleviate recording bias.
7. Surveys were completed using 10x42 binoculars. The field surveys and data analysis in 2022 were undertaken by David Lovett, an experienced consultant ornithologist with 10 years professional experience undertaking ornithological research, bird surveys and monitoring and providing advice on mitigation and habitat enhancement for birds throughout the United Kingdom.

## Results

8. A total of 17 bird species were recorded within the site red line boundary and in adjacent habitats (Table 2.). Of these, 4 species showed evidence of breeding behaviour, such as males displaying or singing within breeding territories, birds giving territorial calls, adults observed with food for young or adults observed with recently fledged young or in family groups.
9. Important breeding bird species recorded on site are those included as red listed (severe population decline (> 50%) over 25 years/longer term) and amber listed species of conservation concern (moderate population decline (> 25% but < 50%) over 25 years/longer term), in Birds of Conservation Concern 4 (BoCC4) (Eaton *et al.* 2015). Further information on bird conservation status and bird legislation relative to the species recorded is given in Appendix One.

**Table 2.** Number and Conservation Status of Bird Species Recorded 2022

TOTAL NUMBER of BIRDS SPECIES RECORDED	17
BoCC4 Red Listed Species of Conservation Concern	0
BoCC4 Amber Listed Species of Conservation Concern	4
BoCC4 Green Listed Species (not currently considered of conservation concern)	13
Species Not Assessed by BoCC4	0
Protected Species Listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)	0
Species considered by the Rare Breeding Birds Panel (RBBP) (UK) – R = Regular Breeding Birds, O = Occasional Breeding Birds, C = Colonising Species, P = Potential Breeding Birds	0
UK Biodiversity Action Plan (UKBAP) Priority Species in England	1
International Union for Conservation of Nature (IUCN) European Red List (2015) VU = Vulnerable (Globally Threatened), NT = Near Threatened, (all other species = Least Concern)	0
IUCN Global Red List VU = Vulnerable (Globally Threatened), NT = Near Threatened, (all other species = Least Concern)	0
Species Listed in Annex 1 of the European Union (EU) Wild Birds Directive 2009 (A1)	0

**Table 3.** Amber Listed Bird Species of Conservation Concern Recorded 2022

Horn Crag Quarry BBS July - August 2022 Bird Species (systematic order follows British Ornithologists Union (BOU) August 2019)	BTO Species Code	Schedule 1 Species	Rare Breeding Birds	UK BAP Species	European Red List	Global Red List	Annex 1 Species	Scientific Name	Estimate of Breeding Pairs or Territories
Woodpigeon	WP							<i>Columba palumbus</i>	0
Wren	WR							<i>Troglodytes troglodytes</i>	0
Meadow Pipit	MP							<i>Anthus pratensis</i>	5
Bullfinch	BF			UK				<i>Pyrrhula pyrrhula</i>	0

10. Key amber listed bird species recorded at the Site during the late season surveys (Table 4.) included wood pigeon, wren and bullfinch. These species showed no signs of breeding during July and August of 2022, though they were found to breed in the early months of 2021.
11. Meadow pipit was also noted as breeding in 2021 and the small flocks recorded during 2022 were made up of adults and recently fledged offspring. These flocks were only recorded during July, with only one meadow pipit recorded during the August visit.
12. Green listed bird species, not currently considered of conservation concern (Table 5.), were found to have territories generally associated with the mixed scrub in the western section of the Site.

**Table 4.** Green Listed Bird Species of Conservation Concern Recorded 2022

Horn Crag Quarry BBS July - August 2022 Bird Species (systematic order follows British Ornithologists Union (BOU) August 2019)	BTO Species Code	Schedule 1 Species	Rare Breeding Birds	UK BAP Species	European Red List	Global Red List	Annex 1 Species	Scientific Name	Estimate of Breeding Pairs or Territories
Magpie	MG							<i>Pica pica</i>	0
Jackdaw	JD							<i>Coloeus monedula</i>	1
Carriion crow	C.							<i>Corvus corone</i>	0
Coal tit	CT							<i>Parus ater</i>	0
Blue tit	BT							<i>Cyanistes caeruleus</i>	0
Great tit	GT							<i>Parus major</i>	2
Swallow	SL							<i>Hirundo rustica</i>	0
Chiffchaff	CC							<i>Phylloscopus collybita</i>	2
Goldcrest	GC							<i>Regulus regulus</i>	0
Blackbird	B.							<i>Turdus merula</i>	0
Robin	R.							<i>Erithacus rubecula</i>	0
Chaffinch	CH							<i>Fringilla coelebs</i>	0
Goldfinch	GO							<i>Carduelis carduelis</i>	0

13. Of the 13 green-listed species recorded, only jackdaw, great tit, and chiffchaff were noted as exhibiting breeding behaviour. Jackdaw and chiffchaff were previously noted as breeding on the site, in the quarry wall and mixed scrub respectively.
14. Great tit were not recorded at the site in 2021, with this species likely making use of the large amount of suitable habitat in the surrounding area.
15. All other green-listed species were seen in association with the scrub vegetation on site, with the exception of swallow, with a flock noted flying south-west over the site during the August survey visit.

## Conclusion

16. The two late season breeding bird survey visits undertaken at Horn Crag Quarry in 2022 provided additional data to that collected in 2021, which covered the early period of the bird breeding season.
17. For the two late season months, only 4 species (24%) of the 17 seen showed signs of breeding on-site, or close to the Site red line boundary.
18. Of these breeding species, one was an amber-listed species (25%), with the remaining being green-listed species (75%).
19. Analysis of breeding bird distribution on site found that, similarly to the results from 2021, all the green-listed species were restricted to areas along the western edge of the Site, where trees and mixed scrub have established naturally. The one breeding species on-site not associated with areas of scrub was meadow pipit, which was nesting amongst heather in the north and east of the Site.
20. Whilst meadow pipit was recorded as breeding on-site in 2021, an additional two territories were recorded in 2022, with small family groups of birds seen during the July survey visit.
21. The late season survey visits in 2022 added six species to the total found at the site (carrion crow, coal tit, great tit, swallow, goldcrest and goldfinch). Of these, only great tit, seen in two small family groups, was noted as breeding on the site or in the surrounding area.
22. Overall, the data from the late season survey visits to Horn Crag Quarry does little to change the ornithological value of the Site, as concluded in 2021.
23. The value of the site for breeding birds should still be considered at a local level within the context of the surrounding habitat, which predominantly includes areas of farmland, as well as small areas of woodland.
24. Development proposals for the site include reinstating quarrying, with stone being removed to an offsite processing facility. With regards to the breeding bird assemblage recorded on site, development would result in the loss of breeding and foraging habitat for red and amber listed bird species of conservation concern (recorded in 2021 and 2022). Species nesting in scrub and heathland habitats will be displaced into similar habitats in the surrounding area, though it is also possible that some species will tolerate the increased disturbance of the development and continue to make use of the Site post-development.
25. Given these factors, mitigation measures should be implemented to offset direct effects of the loss of breeding and foraging habitat for birds through development of the site. These measures are important to ensure that suitable

habitat remains available for red and amber listed breeding bird species and also other breeding bird species recorded on site, and that local bird biodiversity is enhanced and improved.

## Mitigation & Recommendations

26. The mitigation and recommendations for the site remain the same as in 2021, owing to only very minor changes in the overall breeding bird assemblage being found. They are repeated below.
27. Retain existing trees and areas of mixed scrub within the site red line boundary, where possible. Trees could be used to create screening for the Site boundary and areas of scrub retained. Planting should include a range of native species including alder, hawthorn, goat willow, field maple, oak and hazel.
28. Creating wide buffer zones through new planting of tree and scrub species, particularly along the site boundaries, will increase potential nesting and foraging habitat for birds and also improve connectivity through the Site.
29. Incorporate and retain 'wild areas' of un-managed vegetation, including areas of heather and associated heathland plants. This will provide breeding habitat for the amber-listed meadow pipit, as well as foraging habitat for other species seen to use the Site such as wheatear and pied wagtail.
30. Any site clearance works, including unavoidable removal of trees, scrub and vegetation, earth-moving and groundworks should be completed between September and February, to avoid disturbance to birds during the breeding bird season from 1st March to 31st August inclusive. Should any of these works be undertaken after February, a site breeding bird check should be made by a qualified ornithologist to ensure that no active nests of breeding birds are present before works commence. Dense areas of scrub present on the Site are likely to require supervised clearance.
31. Once quarrying operations have been completed, there is potential for the Site to be restored to encourage greater numbers of red and amber listed species to use the Site for breeding. This could include extending the existing, and creating new areas of scrub, adding trees to encourage more cavity nesting species, extending the heather cover for moorland species and encouraging raptors to make use of the exposed rock faces.

## Appendix 1 Policy & Legislation

### United Kingdom Conservation Status of Birds

The fourth major review of the status of birds occurring in the United Kingdom, Channel Islands and the Isle of Man – Birds of Conservation Concern 4 (BoCC4) (Eaton et al. 2015), presents lists of conservation concern based on assessments using objective listing criteria and most recent data. The listing criteria assess global conservation status, historical population decline, recent population decline (numbers and geographical range), European conservation status, rarity, localised distribution, and international importance of populations.

Lists are denoted Red, Amber and Green in a simple ‘traffic light’ system to provide a single, easily understood measure for each species to convey concern and hence to help set priorities for conservation action. Species are assigned to each list depending upon the scale of population decline and concern which includes breeding and non-breeding populations.

- Red list criteria – Severe population decline (> 50%) over 25 years or longer term.
- Amber list criteria – Moderate population decline (> 25% but < 50%) over 25 years or longer term.
- Green list criteria – Species not currently considered of conservation concern.

The review concerns native bird species only and not those introduced to the United Kingdom by humans, whether intentionally or accidentally. Populations of non-native bird species are not considered of conservation value, indeed introduced species can be harmful to the natural environment (Eaton et al. 2015). These species are therefore not assessed for conservation attention and termed ‘not assessed’.

### Summary of Relevant Legislation with Regard to Birds

The primary legislation affecting wild birds in England and Wales is the Wildlife & Countryside Act (1981) as amended. The basic principle of this act is that all wild birds, their nests, and eggs are protected by law and some rare species are afforded additional protection from disturbance during the breeding season (Schedule 1.). The term wild bird is defined as any bird of a species which is resident in, or a visitor to, the European territory of any Member State, in a wild state. Game birds are not included in this definition (except in certain sections of

the Act) but are covered by the Game Acts which give protection in the close season.

The Wildlife & Countryside Act (1981) states that ‘it is an offence, with certain exceptions, to:

- intentionally kill, injure or take any wild bird.
- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- intentionally take or destroy the egg of any wild bird.
- have in one’s possession or control any wild bird (dead or alive), part of a wild bird or egg of a wild bird which has been taken in contravention of the Act, the Protection of Birds Act 1958 or the law of any EU Member State (which implements the EU Birds Directive 1979).
- intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building or is in, on or near a nest with eggs or young; or disturb the dependant young of such a bird.
- have in one’s possession or control any birds of a species listed on Schedule 4 of the Act, unless registered and ringed in accordance with the Secretary of State’s regulations.

### Rare Breeding Birds in the United Kingdom

The U.K. Rare Breeding Bird Panel (RBBP) ([www.rbbp.org.uk](http://www.rbbp.org.uk)) collates data on over 160 species of rare breeding birds and scarcer non-native breeding species, and ensures data are archived properly and are used for conservation. This informs understanding of the status, distribution and population trends of the rarest breeding birds, too rare to monitor in any other way, and also species introduced to the U.K. Archived records form the definitive historical record of rare breeding birds in the U.K. Breeding species are categorised as – regular breeder, occasional breeder, colonising and potential breeder.

### United Kingdom Biodiversity Action Plan Bird (UK BAP) Species

United Kingdom Biodiversity Action Plan (U.K. BAP) Bird Species ([jncc.defra.gov.uk/uk\\_bap\\_priority\\_bird\\_species](http://jncc.defra.gov.uk/uk_bap_priority_bird_species)) are those identified by the Joint Nature Conservation Committee (JNCC) as being the most threatened and requiring conservation action under the U.K. Biodiversity Action Plan and included on a list of priority bird species, initially created between 1995 and 1999, and subsequently updated in response to the Species and Habitats Review Report published in 2007. Original species on the U.K. BAP list (1995-1999) have

a Species Action Plan (SAP) which provides details of relevant conservation information and action. Following devolution, the U.K. BAP has recently (July 2012) been succeeded by the U.K. Post-2010 Biodiversity Framework which is focused at a country-level (England, Wales, Scotland & Northern Ireland) rather than at a U.K. level, with the list of priority bird species remaining an important reference source for conservation of individual bird species and also for conservation of bird biodiversity within a specified area or site. U.K. BAP species are identified in order to guide decision-makers, such as local planning authorities and regional authorities, in their duty to have regard to the conservation of bird biodiversity.

### **IUCN Red List Status (European Red List & Global Red List)**

Birdlife International (the official International Union for Conservation of Nature (IUCN) Red List authority for birds) determines the global conservation status of birds ([www.iucn.org/theme/species/birds](http://www.iucn.org/theme/species/birds)). The IUCN red list is used by government agencies, wildlife departments, conservation-related non-governmental organisations (NGOs), natural resource planners, educational organisations, students, and the business community. It is crucial to identify bird species requiring targeted recovery efforts, but also for focusing on conservation to identify key sites and habitats that need conserving.

### **EU Biodiversity Legislation**

Additional protection for birds is also provided to species listed within the European Union (EU) Wild Birds Directive 2009/147/EC. Further information may be found at;

[ec.europa.eu/environment/nature/legislation/birdsdirective\\_jncc.defra.gov.uk](http://ec.europa.eu/environment/nature/legislation/birdsdirective_jncc.defra.gov.uk)

This imposes strict legal obligations on EU member states to maintain populations of naturally occurring wild birds at levels corresponding to ecological requirements and to preserve a sufficient diversity and areas of habitats for their conservation. Bird species mentioned in Annex I (194 species and sub-species (races)) are particularly threatened and form the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.

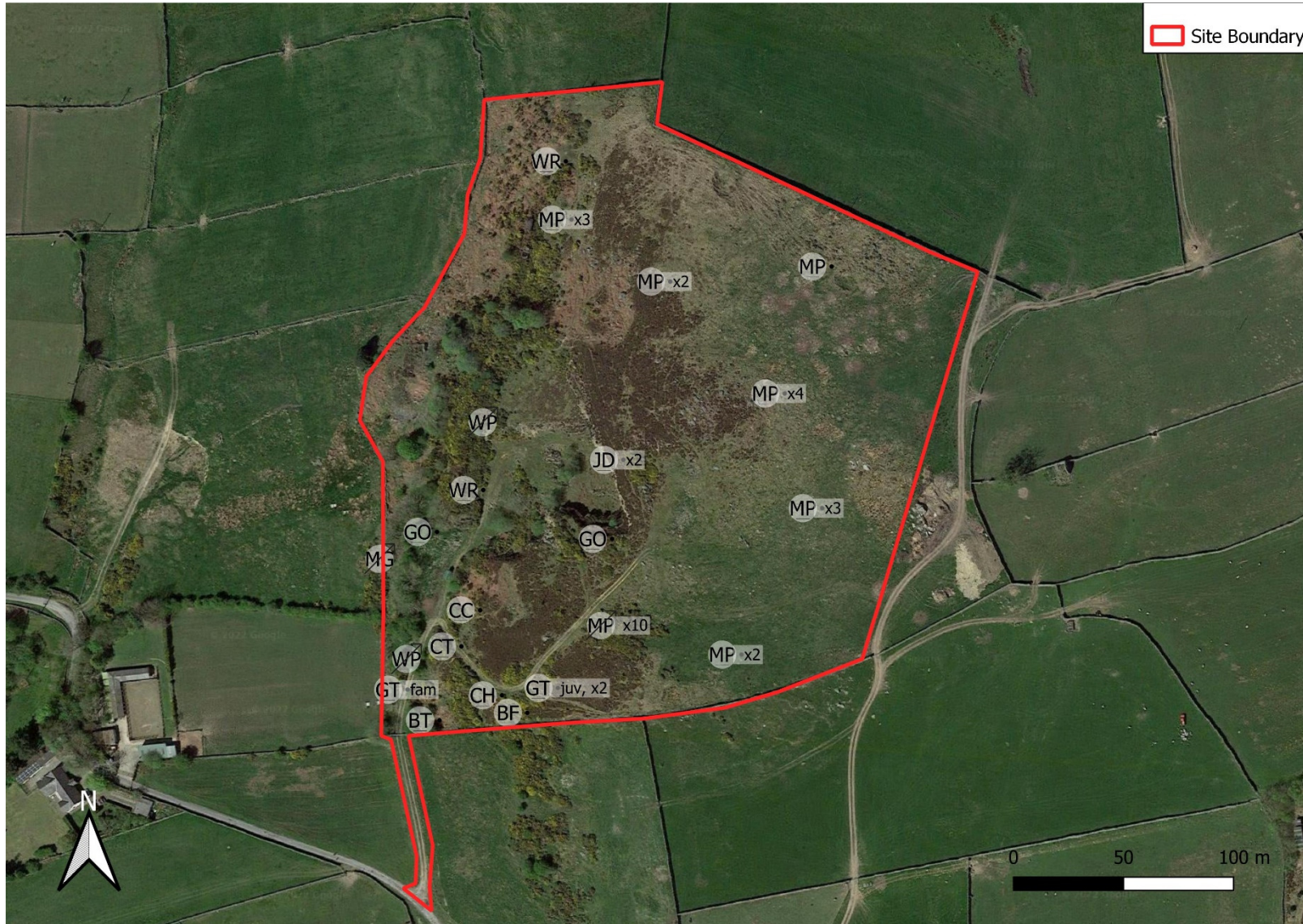
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## Appendix 2 Breeding Bird Survey Maps

July Visit



August Visit

