

Breeding Bird Survey
Land off Rockingham Roundabout

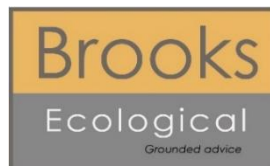
Gregory Projects (Barnsley) Limited

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Report Title:	Breeding Bird Survey Land off Rockingham Roundabout
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Introduction

1. Following a request from Wildscapes CIC and Barnsley Metropolitan Borough Council, a Breeding Bird Survey was undertaken at land off Rockingham Roundabout, Hoyland, Barnsley.
2. The Site (c. 3.99 hectares) is situated to the south of Barnsley, close to Junction 36 of the M1. The area covered by the Site's red line boundary is adjacent to existing areas of development to the north, south, and west. A small area of woodland is present on the eastern boundary of the Site, with open, previously developed land beyond.
3. Habitats within the red line boundary include rank grassland, with some areas being covered by scattered scrub species; ephemeral vegetation; shallow ditches; and woodland.

Figure 1 The Site.



Method

4. Three breeding bird survey visits were undertaken at the Site between April and June 2022 (Table 1).

Table 1 Breeding Bird Survey; Visit & Weather Data.

Visit	Date	Survey Times	Wind Force (Beaufort Scale)	Cloud Cover (Oktas)	Visibility	Temp (°C)	Precipitation
1	01/04/2022	07:32-09:05	2	7	Good	3	Dry
2	16/05/2022	05:23-06:50	1	6	Good	12	Dry
3	29/06/2022	05:47-07:02	3	4	Good	13	Dry

5. The three breeding bird survey visits incorporated amended Common Birds Census (CBC) territory mapping methodology to record breeding bird activity on-Site. Registrations of all bird species observed within the 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 50m of the red line boundary (where access allowed) were also recorded to ensure that any breeding territories overlapping the Site boundary were included. The Site was walked extensively and covered to within 50m of every point within the red line boundary; the survey route was reversed on each visit to alleviate recording bias.
6. The recently published Bird Survey Guidelines (www.birdsurveyguidelines.org) suggest that up to six survey visits should be carried out for sites that contain complex habitats such as lowland deciduous woodland. At this site, the majority of the land is open grassland with young, scattered scrub. Linear features of hedgerows are present within and around the Site, as well as individual mature trees. In assessing the appropriate survey effort at the Site, the following were considered:
 - the absence of complex and densely vegetated habitats;
 - the absence of rare habitats;
 - the absence of habitats that are likely to support particularly early- or late-breeding species; and
 - the location of the Site, in a busy area with high levels of disturbance from nearby developments and a busy road.
7. Three survey visits spread across the main bird breeding season was deemed sufficient effort to encounter all bird species using the Site and to provide robust data for analysis of how these species use the Site.

8. Surveys were completed using 10x42 binoculars. The field surveys and data analysis in 2022 were undertaken by David Lovett, an experienced ornithologist with nine years' professional experience undertaking ornithological surveys and monitoring, site, and species evaluations, and providing advice on mitigation and habitat enhancement for birds throughout the United Kingdom.

Results

9. Analysis of data from the three breeding bird survey visits undertaken at the Site from April to June 2022, recorded a total of 12 bird species within the red line boundary and in adjacent habitats (Table 2). Of these, 10 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.

Table 2 Number and Conservation Status of bird species recorded, April-June 2022

TOTAL NUMBER OF BIRDS SPECIES RECORDED	12
BoCC4 Red Listed Species of Conservation Concern	1
BoCC4 Amber Listed Species of Conservation Concern	3
BoCC4 Green Listed Species (not currently considered of conservation concern)	8
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	2
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

10. 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 5 (BoCC5) (Stanbury *et al.*, 2021). Further information on bird conservation status and bird legislation relative to the species recorded is given in Appendix 1.

Table 3 Red Listed bird species of conservation concern, recorded April-June 2022.

Land off Rockingham Roundabout	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
BBS April - June 2022									
Bird Species (systematic order follows British Ornithologists Union (BOU) August 2019)									
Skylark	S.			UK				<i>Alauda arvensis</i>	1

11. Key red listed breeding bird species recorded on-Site during surveys in spring and early summer 2022 (Table 3) was limited to a single species, skylark. A single singing male was seen and heard flying over grassland in the west of the Site during the second and third survey visits. The rough grassland present on-Site offers suitable nesting habitat for this species.

Table 4 Amber Listed bird species of conservation concern, recorded April-June 2022.

Land off Rockingham Roundabout	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
BBS April - June 2022									
Bird Species (systematic order follows British Ornithologists Union (BOU) August 2019)									
Woodpigeon	WP							<i>Columba palumbus</i>	2
Wren	WR							<i>Troglodytes troglodytes</i>	2
Dunnock	D.			UK				<i>Prunella modularis</i>	1

12. Key amber listed breeding bird species recorded on-Site during surveys in spring and early summer 2022 (Table 4) included three species: woodpigeon, wren, and dunnock.
13. Woodpigeon (2 territories) was found in association with woodland suitable for nesting, along the southern and eastern edge of the Site. Non-breeding flocks of this species were also noted foraging within the more open central areas of the Site.
14. Wren (2 territories) and dunnock (1 territory) followed a similar distribution to woodpigeon, though these two species will nest in the understorey of the woodland rather than in the tree canopies.

Table 5 Green Listed bird species, recorded April-June 2022.

Land off Rockingham Roundabout BBS April - June 2022	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
Bird Species (systematic order follows British Ornithologists Union (BOU) August 2019)									
Magpie	MG							<i>Pica pica</i>	1
Jackdaw	JD							<i>Coloeus monedula</i>	0
Carrion crow	C.							<i>Corvus corone</i>	0
Blue tit	BT							<i>Cyanistes caeruleus</i>	1
Chiffchaff	CC							<i>Phylloscopus collybita</i>	1
Blackbird	B.							<i>Turdus merula</i>	1
Robin	R.							<i>Erithacus rubecula</i>	3
Goldfinch	GO							<i>Carduelis carduelis</i>	1

15. Green listed bird species, not currently considered of conservation concern (Table 5), were found to follow similar distribution patterns to red and amber listed species, with the majority of birds seen in association with woodland and scrub along the southern and eastern edges of the Site. The more open areas of the Site attracted low numbers of foraging, non-breeding species.
16. The most abundant breeding bird species on-Site was robin (3 territories), with singing birds recorded in the southern and eastern woodland.
17. All other green-listed species were recorded in single territories/breeding pairs. Chiffchaff, blackbird, and goldfinch were all recorded singing in woodland around the Site edge, with a family group of adult and recently fledged blue tit recorded during the final survey visits.
18. A nesting magpie was noted off-Site on Rockingham roundabout, first recorded during the first survey visit.
19. Non-breeding species recorded during the survey visits included foraging jackdaw and carrion crow, making use of the more open grassland areas.

Conclusion

20. The three breeding bird survey visits undertaken between April and June 2022 provide robust data for breeding birds, with 10 species (83%) showing evidence of breeding on-Site from a total of 12 species recorded within or close to the red line boundary.
21. The breeding bird assemblage recorded on-Site included one red listed species of conservation concern and three amber listed species of conservation concern, with eight more common green listed bird species recorded breeding on-Site in surveys in 2022.
22. Analysis of breeding bird distribution on-Site found that red and amber listed bird species of conservation concern were typically found in association with woodland and scrub along the southern and eastern edges of the Site. Skylark is the exception to this, making use of the more open grassland areas in the centre of the Site.
23. Green listed species, not currently of conservation concern, were typically associated with denser woodland habitat, located along the southern and eastern edges of the Site
24. The most important breeding bird species recorded on-Site from surveys in spring and early summer 2022 are red listed species of conservation concern. A single singing skylark was recorded during visits 2 and 3. Suitable nesting habitat for this species is present in the form of rank, unmanaged grassland.
25. The red-listed willow tit, for which the nearby Dearne Valley Wetland SSSI is partly designated, was not recorded over the course of the survey visits. This is most likely due to the absence of standing deadwood of large enough size for nesting cavities to be excavated.
26. Breeding amber listed species were found in association with the woodland around the southern and eastern edges of the site. Woodpigeon make use of the canopy layer of the woodland, with wren and dunnock likely nesting in the understorey of scrub species.
27. Long term declines of key red listed breeding bird species recorded on-Site have been recorded in the UK during 1970—2018, with a decline of 56% seen for skylark. Declines of amber listed species are also seen, including 33% for dunnock. Whilst the UK wren and woodpigeon long-term population trends were still noted as increasing over the period of 1970—2018 (+65% and +121% respectively), the significance of the UK populations in a European context has seen both these species moved to the amber list. Declines have been attributed to loss of breeding and foraging habitat, which has driven reduced breeding success and increased mortality, mainly through major changes in farming practices and agricultural intensification.
28. Overall, the ornithological value of the Site for breeding birds should be considered at a site level within the context of the surrounding habitat, which includes other areas of urban greenspace providing grassland, scrub, farmland, and woodland.
29. The low numbers of both individuals and species can be attributed to the heavily disturbed nature of the Site, with high levels of anthropogenic noise from nearby industry and roads. There is little structured vegetation on-Site, and it is largely homogeneous.
30. Development proposals for the Site include construction of new industrial units. With regard to the breeding bird assemblage recorded on-Site from surveys undertaken in spring and early summer 2022, development of the Site would result in the loss of a small area of breeding and foraging habitat for key red and amber listed bird species of conservation concern. Most of these species, particularly skylark, would be displaced into neighbouring habitat present locally to the north and east of the Site.
31. 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

32. Landscape proposals include areas of woodland and scrub, both new and retained, along the southern and eastern edges of the Site. These areas should be managed to improve nesting and foraging opportunities for birds. This could be achieved through new planting of a range of native species such as alder, hawthorn, goat willow, field maple, and hazel.
33. Newly planted trees and shrubs that form part of the Site landscaping should include native fruiting tree species such as rowan and wild cherry to provide increased foraging opportunities for birds.
34. New hedges bordering the site will be planted with native species, including field maple, hazel, blackthorn, holly, and gorse. These boundary features will create more foraging and nesting opportunities for a variety of species, including wren and dunnoek.
35. Install terrace-type nest boxes under the eaves of new buildings within the development to provide nesting sites for house sparrow (32mm diameter entrance hole size).
36. Install specific swift nest boxes externally at high level under eaves of new buildings to encourage this declining summer migrant species to nest.
37. Provide a range of small hole-entrance nest boxes (including entrance hole protection plates) throughout the Site, particularly on mature trees. This would improve nesting opportunities for cavity-nesting bird species such as blue tit (25mm diameter entrance hole size) and great tit (28mm diameter entrance hole size). In addition, providing open-fronted nest boxes will create additional nesting sites for species such as robin and wren.
38. 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.

Appendix 1 Policy & legislation

United Kingdom Conservation Status of Birds

The fifth major review of the status of birds occurring in the United Kingdom, Channel Islands and the Isle of Man – Birds of Conservation Concern 5 (BoCC4) (Stanbury *et al.*, 2021), 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 on 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 (Stanbury *et al.*, 2021). 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, and their nests and eggs, are protected by law. 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 UK Rare Breeding Bird Panel (RBBP) (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 UK. Archived records form the definitive historical record of rare breeding birds in the UK. 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 (UK BAP) Bird Species (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 UK 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 UK BAP list (1995–1999) have a Species Action Plan (SAP) which provides details of relevant conservation information and action. Following devolution, the UK BAP has recently (July 2012) been succeeded by the UK Post-2010 Biodiversity Framework which is focused at a country-level (England, Wales, Scotland, & Northern Ireland) rather than at a UK 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. UK 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). 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

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

Visit 1



Visit 2



Visit 3

