



Harworth Estates

Rockingham Business Park, Barnsley

Breeding Bird Survey Report

September 2016

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1.0 EXECUTIVE SUMMARY

- 1.1 This assessment has been undertaken to identify any potential ecological issues associated with the proposed industrial development of land off A6195 near Birdwell, Barnsley, South Yorkshire. To meet the requirement of the brief, a suite of breeding bird surveys were undertaken and recommendations for mitigation, compensation and further survey were made where appropriate.
- 1.2 No statutory designated sites of international or national nature conservation importance were identified within 5 km or 2 km of the site boundary, respectively. Two local wildlife sites were present within 2km of the site, Short Wood & Hay Green approximately 50m north of the site and Barrow Colliery located around 700m from site. Neither LWS was designated for its assemblage of breeding birds.
- 1.3 Habitats on site considered to be of greatest value to breeding birds included the areas of immature scrub / woodland, hedgerows and waterbodies which offered nesting opportunities for a range of species. Grassland areas were also considered to provide some potential to ground nesting species however the intensively grazed nature of the majority of the field compartments was considered to significantly reduce this potential.
- 1.4 A moderate assemblage of birds was recorded on-site however these were considered to be typical on both local and wider scales but a low number of red listed species including house sparrow, starling and skylark were recorded.
- 1.5 All hedgerows, woodland and scrub should be retained where possible however where vegetation clearance must take place, this should occur outside of the bird breeding season (March to August inclusive) to minimise the risk of disturbance to breeding birds. If this is not possible, such vegetation should be checked prior to removal by a suitably experienced ecologist. If active nests are found, vegetation should be left untouched and suitably buffered from works until all birds have fledged. Specific advice should be sought prior to undertaking the clearance.

INTRODUCTION

- 1.6 This report has been prepared by FPCR Environment and Design Ltd on behalf of Harworth Estates. The report provides the results of a series of breeding bird surveys undertaken on a site to the north and south of the Dearne Valley Parkway (A6195).

Site Location and Context

- 1.7 The subject site is located adjacent to the west of Shortwood Business Park and comprises a parcel of land to the north and south across the A6195 dual carriageway. To the north / northwest lies arable farmland beyond which the existing residential development of Birdwell, to the northeast, Short Wood, to the east lies the existing development of Short Wood Business Park, to the south the more extensive residential area of Hoyland and to the east of this is an industrial development currently under construction. Junction 36 of the M1 Motorway lies around 800m to the west. The surrounding land use comprised largely arable and pasture with an area of broadleaved semi-natural woodland to the north.
- 1.8 The subject site consists of a former quarry restored to arable and improved pasture with associated native hedgerows and mixed plantation woodland. Two attenuation bodies, drainage channel (partially culverted) and associated semi-improved grassland are in the southwest and further limited parcels of semi-improved grassland are associated with plantation margins.

Objectives of Study

- 1.9 The objectives of the survey were to:
- Identify the presence and distribution of breeding birds on the site;
 - Evaluate the importance of local bird populations and their habitat requirements;
 - Evaluate the conservation importance of the site;
 - To identify areas of ornithological interest and make recommendations to minimise the potential impact of the scheme.

Development Proposals

- 1.10 Proposals are for a business park development comprising warehousing with associated parking, lorry compounds and infrastructure.

2.0 LEGISLATION & STATUS

Legislation

- 2.1 The Wildlife and Countryside Act 1981 (as amended) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions to recklessly or intentionally:
- Kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird while in use or being built;
 - Take or destroy the egg of any wild bird.
- 2.2 Species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are specially protected at all times. This protection extends whereby they are protected against intentional disturbance whilst building or occupying a nest, and against disturbance of dependent young.
- 2.3 Certain species have also been identified as Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006) (formerly known as UK BAP priority species) along with species listed on the Barnsley Biodiversity Action Plan.

Status

- 2.4 In addition to statutory protection, some bird species are classified according to their conservation status, such as their inclusion on the Red and Amber lists of Birds of Conservation Concern (BoCC) in the UK¹:
- Red list (high conservation concern) species are those that are globally threatened according to IUCN criteria; those whose population has declined rapidly (50% or more) in recent years; and those that have declined historically and not shown a substantial recent recovery.
 - Amber list (medium conservation concern) species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately (between 25% and 49%) in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
 - Green list (low conservation concern) species fulfil none of the above criteria.

¹ Eaton MA, Aebischer N, Brown A, Hearn R, Lock L, Musgrove A, Noble D, Stroud D and Gregory RD (2016) *Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man*. British Birds 108, pp708-746

3.0 METHODOLOGY

Desktop Study

- 3.1 A desktop survey was undertaken for existing ecological data regarding statutorily and non-statutorily habitats / sites of interest to nature conservation and protected bird species. The following organisations were contacted:
- Multi Agency Geographic Information for the Countryside (MAGIC) website²
 - Sheffield City Ecology Unit
 - Rotherham Biological Records
- 3.2 The desk study also made use of information from the recent county annual bird reports, The Yorkshire Bird Report 2008 as published by the Yorkshire Naturalist Union. The abundance of species referred to by these reports follows the following criteria:
- Vagrant – Up to 10 records in total since records began.
 - Rare – 0-10 individuals each year in the past 10 years
 - Scarce – 11-100 individuals each year in the past 10 years
 - Uncommon – 101-1000 individuals each year in the past 10 years
 - Fairly Common – More than 1000 records per year
 - Common – More than 10,000 records per year
 - Abundant – More than 50,000 records per year

Breeding Bird Field Surveys

- 3.3 The survey methodology employed was broadly based on that of territory mapping³ as used for the British Trust for Ornithology (BTO) Common Bird Census (CBC). Standard BTO species codes and symbols for bird activities were used to identify birds and denote activity, sex and age where appropriate. The criteria used in the assessment of breeding birds has been adapted from the standard criteria proposed by the European Ornithological Atlas Committee⁴ and are grouped into three categories: possible breeder, probable breeder and confirmed breeder. Birds that were considered to be not using the site for breeding were categorised as 'non breeders'. Breeding evidence used in this report follows EOAC guidelines 1979, as shown in Appendix A.
- 3.4 To provide a reasonable level of accuracy for determining the population status of the breeding birds on the site, three surveys were undertaken during the hours after dawn in the period April to June 2015. A route was mapped out prior to the surveys being undertaken, paying particular attention to any linear features, such as hedgerows and tree lines, and natural features such as ponds and areas of woodland / scrub. Bird surveys were not undertaken in unfavourable conditions such as heavy rain or strong wind, which may negatively affect the results, see Table 1 for weather data.

² <http://www.magic.defra.gov.uk/>

³ Bibby, C.J., N.D. Burgess & D.A. Hill, 2000: Bird Census Techniques: 2nd Edition. London: Academic Press

⁴ EOAC, 1979. Categories of Breeding Bird Evidence. European Ornithological Atlas Committee.

Table 1: Survey Dates and Conditions

Date	Cloud Cover (%)	Rain	Wind	Visibility
30/04/2015	60%	Light Drizzle	Light Breeze	Excellent
27/05/2015	95%	None	Light Breeze	Excellent
22/06/2015	80%	None	Light Breeze	Excellent

Species & Assemblage Assessment

- 3.5 The CIEEM guidance on ecological impact assessment assesses nature conservation importance within a geographical context. To attain each level of importance, an ornithological resource or one of the features (species population or assemblage of species) should meet the criteria set out in Table 2. In some cases, professional judgment may be required to increase or decrease the allocation of importance, based upon local knowledge.
- 3.6 The county annual bird report, The Yorkshire Bird Report 2012 as published by the Yorkshire Naturalist Union, was consulted to inform the assessment. The abundance of species referred to by these reports follows the following criteria:
- Vagrant – Up to 10 records in total since records began.
 - Rare – 0-10 individuals each year in the past 10 years
 - Scarce – 11-100 individuals each year in the past 10 years
 - Uncommon – 101-1000 individuals each year in the past 10 years
 - Fairly Common – More than 1000 records per year
 - Common – More than 10,000 records per year
 - Abundant – More than 50,000 records per year

Table 2. Evaluation Criteria

Nature Conservation Value	Examples of Selection Criteria
International	A species which is part of the cited interest of an SPA and which regularly occurs in internationally or nationally important numbers. A species present in internationally important numbers (>1% of international population).
National	A species which is part of the cited interest of a SSSI and which regularly occurs in nationally or regionally important numbers. A nationally important assemblage of breeding or over-wintering species. A species present in nationally important numbers (>1% UK population). Rare breeding species (<300 breeding pairs in the UK).

Nature Conservation Value	Examples of Selection Criteria
Regional	Species listed as Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006), which are not covered above, and which regularly occurs in regionally important numbers. Species present in regionally important numbers (>1% of regional population). Sustainable populations of species that are rare or scarce within a region. Species on the BoCC Red List and which regularly occurs in regionally important numbers.
County	Species listed as Priority Species under Schedule 41 of the Natural Environment and Rural Communities (NERC) Act (2006), which are not covered above and which regularly occurs in county important numbers Species present in county important numbers (>1% of county population). Sustainable populations of species that are rare or scarce within a county, or listed as priority species for nature conservation under S41 of the NERC Act. A site designated for its county important assemblage of birds (e.g. a SINC Site). Species on the BoCC Red List and which regularly occur in county important numbers.
Local	Other species of conservation interest (e.g. all other species on the BoCC Red and Amber List or listed as Priority Species under Schedule 41 of the NERC Act (2006) which are not covered above) regularly occurring in locally sustainable populations. Sustainable populations of species which are rare or scarce within the locality.
Site	Species that are common and widespread

4.0 RESULTS AND EVALUATION

Desk Study

- 4.1 There were no statutory or non-statutory sites within the search area that had received designated status as a result of the bird assemblages they support however during an Local Wildlife Site (LWS) assessment of Short wood and Hey Green LWS, breeding dunnoek (*Prunella modularis*), bullfinch (*Pyrrhula pyrrhula*) and song thrush (*Turdus philomelos*) were recorded.
- 4.2 A LWS assessment of Barrow Colliery was also made and this too was not afforded designation for it's avian interest however UKBAP bird species recorded during the survey did include: Skylark (*Alauda arvensis*), linnet (*Carduelis cannabina*), yellowhammer (*Emberiza citrinella*), grey partridge (*Perdix perdix*), dunnoek, bullfinch and song thrush.
- 4.3 Rotherham Biological Records provided a large number of records for bird species from the search area surrounding the site including a number of 'notable' species as listed in Table 3.

Table 3. Notable Bird Species Recorded Within the Site as provided by Sheffield City Ecology Unit.

Species		WCA ¹	NERC ²
Red List³			
Black-Tailed Godwit	<i>Limosa limosa</i>	X (M)	X
Corn Bunting	<i>Miliaria calandra</i>		X

Species		WCA ¹	NERC ²
Cuckoo	<i>Cuculus canorus</i>		X
Curlew	<i>Numenius arquata</i>		X
Fieldfare	<i>Turdus pilaris</i>	X (M)	X
Grasshopper warbler	<i>Locustella naevia</i>		X
Grey Partridge	<i>Perdix perdix</i>		X
Grey Wagtail	<i>Motacilla cinerea</i>		
House Sparrow	<i>Passer domesticus</i>		X
Lapwing	<i>Vanellus vanellus</i>		X
Lesser Spotted Woodpecker	<i>Dendrocopos minor</i>		X
Linnet	<i>Carduelis cannabina</i>		X
Merlin	<i>Falco columbarius</i>	X(R)	
Mistle Thrush	<i>Turdus viscivorus</i>		
Redwing	<i>Turdus iliacus</i>		X
Ring Ouzel	<i>Turdus torquatus</i>		X
Skylark	<i>Alauda arvensis</i>		X
Song Thrush	<i>Turdus philomelos</i>		X
Spotted Flycatcher	<i>Muscicapa striata</i>		X
Starling	<i>Sturnus vulgaris</i>		X
Tree Pipit	<i>Anthus trivialis</i>		X
Tree Sparrow	<i>Passer montanus</i>		X
Turtle Dove	<i>Streptopelia turtur</i>		X
Willow Tit	<i>Poecile montanus</i>		X
Yellowhammer	<i>Emberiza citrinella</i>		X
Yellow Wagtail	<i>Motacilla flava subsp. flavissima</i>		x
Amber List ³			
Bullfinch	<i>Pyrrhula pyrrhula</i>		X
Dunnock	<i>Prunella modularis</i>		X
Greenshank	<i>Tringa nebularia</i>	X(M)	
House Martin	<i>Delichon urbica</i>		
Kestrel	<i>Falco tinnunculus</i>		
Kingfisher	<i>Alcedo atthis</i>	X(R)	
Meadow Pipit	<i>Anthus pratensis</i>		
Pink-Footed Goose	<i>Anser brachyrhynchus</i>		
Redshank	<i>Tringa totanus</i>		
Redstart	<i>Phoenicurus phoenicurus</i>		
Reed Bunting	<i>Emberiza schoeniclus</i>		
Short-Eared Owl	<i>Asio flammeus</i>		
Stock Dove	<i>Columba oenas</i>		
Wigeon	<i>Anas penelope</i>		

Species		WCA ¹	NERC ²
Willow Warbler	<i>Phylloscopus trochilus</i>		
Green List ³			
Barn Owl	<i>Tyto alba</i>	X(R)	
Brambling	<i>Fringilla montifringilla</i>	X(M)	
Firecrest	<i>Regulus ignicapilla</i>	X(R)	
Little Ringed Plover	<i>Charadrius dubius</i>	X(R)	

¹ Birds listed on Schedule 1 of the Wildlife and Countryside Act (1981) as amended. (M) indicates non-breeding / migratory species, and (R) indicates resident / migratory species that may breed in Yorkshire.

² Birds listed as Priority Species on Section 41 of the NERC Act 2006.

³ The bird population status on the RSPB Birds of Conservation Concern (BoCC) list. Red and amber lists are declining species.

Breeding Bird Survey

Summary of the 2015 Breeding Bird Field Surveys

- 4.4 A total of 32 bird species were recorded during the breeding bird surveys in 2015. Of the species observed, 11 are either protected, appear on the RSPB BoCC as declining (red or amber lists); or are identified as priority species for nature conservation under S41 of the NERC Act. A full list of results can be found in Appendix B, whilst the recorded locations of the 13 notable species can be found on Figure 1 and detailed in Table 4.
- 4.5 Of the 32 species recorded, 11 were confirmed as breeding; blackbird *Turdus merula*, blue tit *Parus caeruleus*, bullfinch *Pyrrhula pyrrhula*, carrion crow *Corvus corone*, goldfinch *Carduelis carduelis*, great tit *Parus major*, long-tailed tit *Aegithalos caudatus*, magpie *Pica pica*, mallard *Anas platyrhynchos*, moorhen *Gallinula chloropus* and woodpigeon *Columba palumbus*. A further 10 species were considered probable breeders whilst the remaining 13 species were considered to be possible or non-breeders.

Table 4. Protected Species of Principal Importance, BoCC Red and Amber Listed Bird Species Recorded on site during Breeding Bird Surveys 2015 and their Recent Status within Yorkshire.

Species	Conservation Status	Peak Count / Survey Occasions Recorded	Breeding Status	Recent Status within Yorkshire
Black-headed Gull	Amber List	1/1	Non-breeder	Common breeder and abundant in winter
Bulfinch	Amber List NERC ACT (S41)	5/2	Breeding	Uncommon breeder; scarce passage migrant / winter visitor
Dunnoek	Amber List NERC ACT (S41)	3/3	Probable-breeder	Abundant resident; passage migrant
House sparrow	Red List NERC ACT (S41)	1 colony/2	Non-breeder	Abundant resident but has decreased

Species	Conservation Status	Peak Count / Survey Occasions Recorded	Breeding Status	Recent Status within Yorkshire
Kestrel	Amber List	1/1	Non-breeder	Fairly common resident and passage migrant
Mallard	Amber List	2/1	Confirmed Breeder	Fairly common breeder; common migrant and winter visitor
Reed bunting	Amber List NERC ACT (S41)	1/2	Probable-breeder	Fairly common breeding resident and passage migrant
Skylark	Red List NERC ACT (S41)	2/3	Probable-breeder	Common resident; passage migrant and winter visitor
Starling	Red List NERC ACT (S41)	40/3	Non-breeder	Abundant but decreasing resident, passage migrant and winter visitor
Willow warbler	Amber List	7/3	Probable-breeder	Common to abundant breeding summer visitor and passage migrant
Yellowhammer	Red List NERC ACT (S41)	1/1	Non-breeder	Fairly common resident and passage migrant

Description

4.6 Many habitats are of recent origin, having been created as part of a restoration scheme of the former colliery site. Habitats on site include areas of open improved pasture, recent plantation woodland/scrub and open water with associated reeds/ephemeral habitats. The following provides a summary of the breeding bird assemblages recorded during the breeding bird surveys within these different habitat types.

- **Grassland** – large areas of improved grassland with smaller areas of semi/unimproved grassland were present on-site. The grasslands generally supported few bird species however swallow were recorded foraging overhead presumably due to the high numbers of winged invertebrates resulting in part no-doubt from the presence of dairy cattle. Rook were also recorded foraging within the grassland areas, also believed to be in connection with the cattle. No skylark were recorded during any of the surveys within these compartments which although the habitats were considered to be suitable, the intensive grazing regime was considered to cause levels of disturbance greater than that which skylark, or other ground nesting birds, were willing to tolerate.
- **Plantation** – compartments of young mixed species plantation were present located throughout the site. These areas offered suitable foraging and nesting habitat to a wide number of woodland edge specialists including long-tailed tit, robin *Erithacus rubecula*, wren *Troglodytes troglodytes*, magpie *Pica pica*, chaffinch *Fringilla coelebs*, great tit *Parus major*, blue tit *Parus caeruleus*, willow warbler *Phylloscopus trochilus*, blackcap *Sylvia atricapilla*, blackbird and wood pigeon. Active carrion crow and wood pigeon nests were recorded within

these areas along with a number of disused carrion crow and wood pigeon nests from previous attempts.

- **Waterbodies** – two waterbodies were present within the survey area associated with which were all of the aquatic species including mallard, moorhen, reed bunting and reed warbler. The northernmost pond held the majority of the species with mallard, moorhen, reed bunting and reed warbler all present with only moorhen present on the southern waterbody. The northernmost waterbody was densely vegetated with a variety of emergent aquatic plants with only a small area of open water and had large quantities of deep silt. The southernmost waterbody was densely fringed with common reed *Phragmites australis* with a central area of open water and firm banks which dropped vertically away into several feet of water. Although no nests were observed, behaviour strongly indicative of nesting was present from all of the above species with moorhen chicks being recorded.
- **Hedgerows, Scrub** – Hedgerows abounded several of the fields, often forming the boundary between field compartments and the plantation woodland. These areas offered nesting and foraging opportunities for a variety of species including blackbird, dunnock, wren and robin. Whilst no nests were recorded within these areas they were considered to provide excellent opportunities for a range of species.
- **Arable Farmland** – A small assemblage of birds indicative of farmland habitats were recorded including skylark and yellowhammer, both BoCC red list and Species of Principle Importance however these were recorded in very low numbers with peak counts of just 2 and 1 birds respectively. Yellowhammer was recorded during a single survey occasion and so not considered to be a breeding species with skylark being recorded on 2 survey occasions making this a probable breeder.

Evaluation

- 4.7 The breeding bird surveys have highlighted that the site supports a breeding bird assemblage typical of the habitats present on-site. The young plantation and scrub habitats that were considered to be of most note however these were still considered to be low in overall numbers with no particularly rare species or assemblages considered to be important. The breeding bird assemblage recorded is considered to be of no more than Local Nature Conservation Value.
- 4.8 This assessment is further supported by the results of the desktop study which, although a wide range of species records were highlighted, many of the records were of individual birds and not recently recorded – quite a number of which were over 15 years old. It should also be noted that this area is well watched with a number of very active local birders and so the consultation results are considered to be up-to-date and comprehensive. The results were also typical both of such habitats as contained within the site and the local area.

Site Proposals

- 4.9 At the time of writing the site proposals were for the majority of the habitats retained on-site to be lost to mixed use industrial development with associated infrastructure. All grassland is to be lost and the majority of the plantation woodland with the exceptions of two belts along the western boundaries.

Potential Impacts Associated with Site Proposals

- 4.10 The impact on breeding bird species arising from the potential effects of any of the considered proposals is based upon an understanding of each species' ecological requirements, the number of birds recorded on site, their nature conservation criteria based on legislation and current guidance (e.g. Red and Amber listed Birds of Conservation Concern 4 (2016); Species listed as principal importance (S.41 NERC Act) and Local BAP species), their county status according to The Birds of Yorkshire Annual Reports and professional judgement.
- 4.11 A retained section of habitat is present along the western end of the southern part of the site. This area was considered to provide good connectivity for a range of species due to the variety of habitats present within the area including unimproved grassland, scrub and aquatic. To the north of this area, separated by the A6195, is a wildlife mitigation area containing habitats largely similar to those described above within the application boundary and connected by an underpass. Whilst this underpass was not considered to provide optimal connectivity, numerous bird species, including smaller tit species were noted to cross between the two areas over the A6195 and by retaining this area it is considered that the ability of birds to pass between the northern and southern sections of the site will not be impeded.
- 4.12 The species recorded on site that are arguably the most vulnerable to impacts resulting from the proposed development are the 7 species which are listed as BoCC Red list Species and/or those listed on the NERC ACT (S41). The habitat requirements, species account and nature conservation value of these 7 species are summarised in Table 4.

Table 5. Evaluation of Species Considered Potentially Sensitive to Site Proposals

Species	Habitat Requirements ¹	Species Account / Notes	Nature Conservation Value ²
Bullfinch	Breeds mainly in broad-leaved woods, but also commonly in dense hedgerows and thickets. Adults are vegetarian, but invertebrates are important in diet of young.	Single birds recorded on two occasions to the south west of the site where established hedgerows occur. The majority of the site provides unsuitable habitat and therefore poor opportunities to the species.	Site
Dunnock	Commonly invades a wide variety of scrub grown situations. Has adapted to field hedgerows, farms, railway embankments, parks, gardens and vacant urban land. Feeds mainly on insects but small seeds are an important winter food.	The small number recorded was restricted to boundary hedgerows along the southern and eastern boundaries. Breeding was confirmed when an adult was observed carrying food.	Local
House sparrow	Often associated with man, will avoid closed or dense vegetation, and except for seasonal foraging in corn fields and other crops, will usually avoid open terrain lacking in shrubs, trees, and other cover.	Colonies were recorded within the southern most field compartment in association with the residential development.	Local

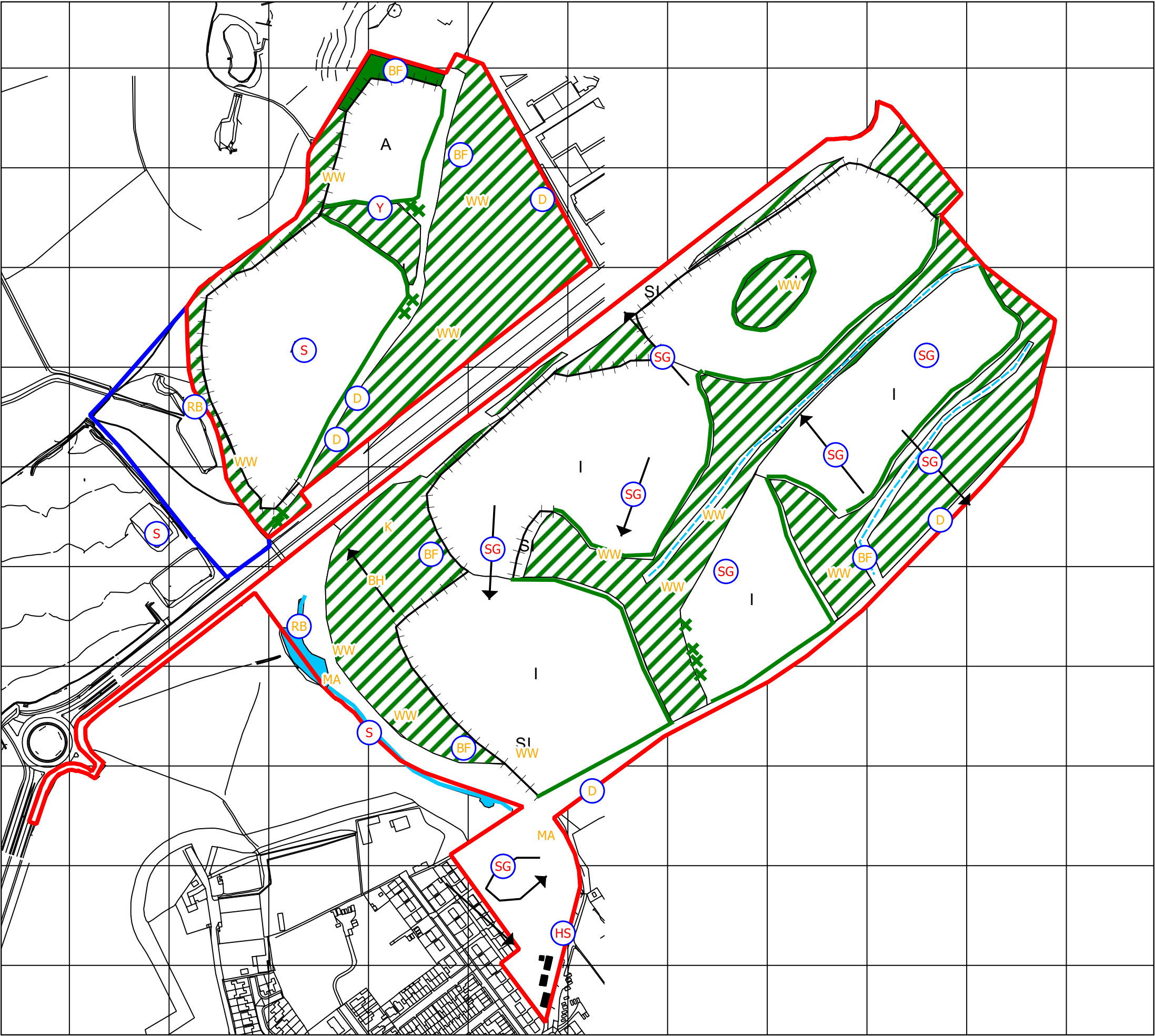
Species	Habitat Requirements ¹	Species Account / Notes	Nature Conservation Value ²
Reed bunting	Traditionally a bird of wet places such as reedbeds, river margins, fens, marshes and coastal grazing marshes. More recently colonised drier habitats such as ditches, young forestry plantations and some farm crops, especially oilseed rape.	Two or three pairs present to the south of the site associated with grassland, small ponds and young plantation woodland.	Local
Skylark	Ground nesting birds favouring open farmland habitats where short, grassy or sparse vegetation provides nesting cover and foraging opportunities. Plant and animal material taken at all times of the year, but insects especially important in summer, and cereal grain in spring.	Singing birds scattered around the site within open grassland. Several pairs considered to have bred.	Local
Starling	During breeding season will concentrate where suitable holes are available, either naturally or in apertures of buildings. Invertebrate food fed to young. Forages mainly on the ground in open areas of short grass or sparse vegetation, e.g. cereal stubble, farmyards.	Occurred in small numbers at the south of the site. Areas of grassland offer some foraging opportunities. Breeding considered possible.	Site
Yellowhammer	Traditionally based on edges of open areas of forest and fringing scrub of gorse, broom and hawthorn. Extends widely across cultivated land with hedges, plantations, and paths. Feeds mainly on grass seeds, invertebrates in the breeding season. Feeds wholly on the ground by hedges, tracks and newly sown fields.	A single singing male was seen on one survey occasion the northern most field compartment. Whilst habitats were considered suitable for breeding, the single sighting of this usually gregarious species suggests that the bird was just passing through site.	Local

¹ Snow & Perrins, 1998² Based upon criteria set out in Table 2 and professional judgement.

- 4.13 The site is not considered to support any bird species considered to be particularly sensitive to disturbance with the vast majority of species recorded being typical of urban/suburban habitats whilst the remainder, including yellow hammer, whilst typically found in rural areas are not particularly sensitive to disturbance.
- 4.14 It should however be noted that some disturbance will occur from activities including construction work, mainly machinery noise and construction personnel. Such impacts could potentially cause the temporary displacement of some birds from the site and a consequent reduction in breeding success.
- 4.15 Proposals include the siting and operation of industrial units which will also create potential impact disturbance to birds particularly around the edges of the development. Whilst all species recorded were considered to be relatively tolerant of disturbance, light spill onto boundary habitats including hedgerows could potentially deter or even prevent bird species from roosting

here. The use of directional lighting / shorter lighting columns to reduce light spill onto these areas will reduce or even eliminate any disturbance caused by lighting.

- 4.16 Direct habitat loss will occur as a result of the siting of the units and this is unavoidable however as described above and shown within the Breeding Bird Survey Results Plan a low number of species of conservation concern were recorded on-site and thus a correspondingly low number of species and individuals thereof are to potentially be disturbed. Of those species it is considered that willow warbler – a species often associated with scrub / young plantation are to be displaced the most however habitats present within the local area, particularly immediately to the north are considered highly suitably to support this species, perhaps more so than the habitats present on-site. The loss of grassland will also reduce the number of flying insects within the local area upon which swallow were seen feeding. Given the migratory nature of this species and the large number of identical fields within the local area it is considered that no adverse effect to this species will occur.



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Key

BoCC Red Listed Species

- HS House Sparrow
- S Skylark
- SG Starling
- Y Yellowhammer

BoCC Amber Listed Species

- BH Black-headed Gull
- BF Bullfinch
- D Dunnock
- K Kestrel
- MA Mallard
- RB Reed Bunting
- WW Willow Warbler
- Y Yellowhammer

- Birds listed on Section 41 of the NERC Act 2006
- Birds listed on Schedule 1 of the Wildlife and Countryside Act (1981)
- Bird only seen to fly over at this location
- Site Boundary
- Wider Survey Area



Harworth Estates Ltd.
Rockingham Business Park, Barnsley

BREEDING BIRD SURVEY RESULTS PLAN

Scale: 1:1

OGJ / JD

20/1/2016

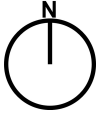


Figure 1

6424-E-01

Appendix A: EOAC Criteria for Categorisation of Breeding Status

Confirmed Breeder -

- Distraction display or injury feigning
- Used nest or eggshells found from this season
- Recently fledged young or downy young
- Adults entering or leaving nest-site in circumstances indicating occupied nest
- Adult carrying faecal sac or food for young
- Nest containing eggs
- Nest with young seen or heard

Probable Breeder – (Evidence accumulated during the survey indicates that the bird species is breeding on site)

- Pair in suitable nesting habitat
- Permanent territory (defended over at least 2 survey occasions)
- Courtship and display
- Visiting probable nest site
- Agitated behaviour
- Brood patch of incubating bird (from bird in hand)
- Nest building or excavating nest-hole

Possible breeder – (Evidence accumulated during the survey indicates that the bird species could be breeding on site, but the evidence is less conclusive than that obtained for probable breeders)

- Observed in suitable nesting habitat
- Singing male

Non-breeder -

- Flying over
- Migrant
- Summering non-breeder
- Observed in unsuitable nesting habitat

Appendix B: Breeding Bird Survey Results 2015

Species	Latin	Survey 1	Survey 2	Survey 3	Conservation Status
Blackbird	<i>Turdus merula</i>	6	5	5	Green list
Blackcap	<i>Sylvia atricapilla</i>	4	2	0	Green list
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	0	0	1	Amber list
Blue tit	<i>Cyanistes caeruleus</i>	7	0	1 + 1 family	Green list
Bulfinch	<i>Pyrrhula pyrrhula</i>	5	0	2	Amber list NERC S.41
Carrion crow	<i>Corvus corone</i>	6	1	7 + 1 family	Green list
Chaffinch	<i>Fringilla coelebs</i>	4	3	1	Green list
Chiffchaff	<i>Phylloscopus collybita</i>	1	3	2	Green list
Dunnock	<i>Prunella modularis</i>	3	2	1	Amber list NERC S.41
Feral Pigeon	<i>Columba livia domestica</i>	20	0	30	Green list
Goldfinch	<i>Carduelis carduelis</i>	1	0	1	Green list
Great tit	<i>Parus major</i>	4	3	1	Green list
House sparrow	<i>Passer domesticus</i>	1 Colony	0	1 colony	Red list NERC S.41
Jackdaw	<i>Corvus monedula</i>	7	5	13	Green list
Jay	<i>Garrulus glandarius</i>	1	0	1	Green list
Kestrel	<i>Falco tinnunculus</i>	1	0	0	Amber list
Long-tailed Tit	<i>Aegithalos caudatus</i>	8	1	1 Family	Green list
Magpie	<i>Pica pica</i>	11	5	7	Green list
Mallard	<i>Anas platyrhynchos</i>	2	0	0	Amber list
Moorhen	<i>Gallinula chloropus</i>	0	1 family	2	Green list
Reed bunting	<i>Emberiza schoeniclus</i>	1	0	1	Amber list NERC S.41
Reed warbler	<i>Acrocephalus scirpaceus</i>	0	1	2	Green list
Robin	<i>Erithacus rubecula</i>	4	0	2	Green list

Species	Latin	Survey 1	Survey 2	Survey 3	Conservation Status
Rook	<i>Corvus frugilegus</i>	15	1	13	Green list
Skylark	<i>Alauda arvensis</i>	2	1	1	Red list NERC S.41
Starling	<i>Sturnus vulgaris</i>	40	3	3	Red list NERC S.41
Swallow	<i>Hirundo rustica</i>	11	2	10	Green list
Whitethroat	<i>Sylvia communis</i>	0	0	1	Green list
Willow warbler	<i>Phylloscopus trochilus</i>	7	4	3	Amber list
Woodpigeon	<i>Columba palumbus</i>	23	20	21	Green list
Wren	<i>Troglodytes troglodytes</i>	3	3	2	Green list
Yellowhammer	<i>Emberiza citronella</i>	0	0	1	Red list NERC S.41
Total No. Species – 32 Species		27	19	29	