
BREEDING BIRD SURVEYS 2017

**Land off Wakefield Road, Athersley,
Barnsley**

Harworth Group



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Field Investigations and Data

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Report Reference & History: Document 1, version 1.

Issue Status	Prepared / Date	Approved / Date
Draft 1	DG 15.07.17	CM 25.07.17
Client Issue		CM 26.07.17

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1.0 INTRODUCTION

- 1.1 Applied Ecological Services Ltd. (AES-LTD) was commissioned by Harworth Estates to undertake breeding bird surveys at land off Wakefield Road, Athersley, Barnsley, South Yorkshire. Survey was undertaken monthly between May and July 2017 by experienced Ornithologist David Gash ¹(AES-LTD).
- 1.2 The site, situated at grid reference SE 3476 0872 (approximate central point), exists as horse grazed improved and semi improved grassland. There is an issue running down the eastern part of the site and a pond area in the south which had dried up. There is a hedgerow running north to south down the centre of the site and with scattered and dense continuous scrub throughout the eastern part of the site and around the periphery of the western side. Broadleaved woodland is located to the south west of the site. The north west boundary of the site is bordered by industrial works and East Gawber Farm. Wakefield Road (A61) forms the eastern site boundary, along with the ARC Car Wash. The northern most section of the site boundary is delineated by a line of Ileylandii trees, with a stone wall separating the improved grassland field from the A61 Wakefield Road.

THE PROPOSED DEVELOPMENT

- 1.3 The development proposals are understood to provide a residential development of up to 200 dwellings and associated infrastructure, public open space / green space. The existing watercourse and pond will be retained within the open space along with existing vegetation where practical.

¹ David Gash (ACIEEM) is an experienced ornithologist with AES-LTD and has over 15 years of experience carrying out bird surveys

2.0 LEGISLATION AND POLICY BACKGROUND

- 2.1 Birds are afforded various levels of protection and levels of conservation status on a species by species basis, with the inclusion of a number of species on the following legislation:
- Wildlife and Countryside Act 1981 (as amended) [Department of the Environment (1981)];
 - EC Birds Directive (79/409/EEC);
 - Natural Environment and Rural Communities Act 2006 – Section 41;
- 2.2 The most significant general legislation for British birds lies within Part 1 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to:
- Kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird while that nest is in use or being built;
 - Take or destroy an egg of any wild bird.
- 2.3 In addition Schedule 1 of the Act lists a number of species which are protected by special penalties at all times.
- 2.4 Council Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive') provides for the conservation and management of all wild bird species naturally occurring in the European Union, their nests, eggs and habitats. The Birds Directive bans activities that directly threaten birds (e.g. deliberate killing and destruction of nests and young), regulates hunting of selected species, bans non-selective and large scale killing of birds, and promotes research for bird conservation and management. Article 4(4) of the Birds Directive requires that member states "should strive to avoid pollution or deterioration of habitats." The Conservation of Habitats and Species (Amendment) Regulations 2012 provide a fuller transposition of the Birds Directive into English law. Regulation 8 introduces a new Regulation 9A to the Habitats Regulations for duties of appropriate authorities in relation to wild bird habitat. Regulation 9A(3) addresses the transposition of Article 2 of the Birds

Directive, while Regulation 9A(8), requiring competent authorities to “use all reasonable endeavours” to “avoid any pollution or deterioration of habitats of wild birds.”

2.5 Annex 1 of the EC Birds Directive also lists rare and vulnerable species of wild birds that are subject to special conservation measures.

2.6 In addition to statutory protection, some bird species have been identified within key documents as species of conservation concern

- UK Biodiversity Action Plan (1995) lists of globally threatened or declining species;
- Local Biodiversity Action Plan (Barnsley & Wakefield); and
- Eaton *et al.* (2015) Birds of Conservation Concern (2015) The population status of birds in the United Kingdom, Channel Islands and Isle of Man.

2.7 The UK Biodiversity Action Plan (UKBAP) (2007) lists 59 bird species as priority species requiring conservation action, and consequently action plans have been developed for the conservation of these species.

2.8 The Barnsley Biodiversity Action Plan (LBAP) (2009) lists 9 bird species as priority species requiring conservation action. Species Action plans have been prepared for bittern, lapwing, little ringed plover, grey partridge, tree sparrow, skylark, barn owl, kestrel and twite. The plan has been revised and will be adopted in 2017.

2.9 Some birds 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 UK (Eaton *et al* 2015).

- Red List species are those whose breeding population or range is rapidly declining (50% or more in the last 25 years), recently or historically, and those of global conservation concern.
- Amber List species are those whose breeding population is in moderate decline (25 – 49% in the last 25 years), rare breeders, internationally important and localised species and those of unfavourable conservation status in Europe.
- Green List (low conservation concern) species fulfil none of the above criteria.

3.0 METHODOLOGY

3.1 Survey design, methodology, fieldwork and assessment has been carried out in accordance with standard guidance Bibby *et al.* 1992² and Gilbert *et al.* 1998³

DATA SEARCH

3.2 In order to compile existing baseline information, relevant ecological information was requested for a 2km radius from the centre of the site from the following organisations which for the purposes of this report, included:

- Sheffield Biological Records Centre; and
- Multi Agency Geographic Information for the Countryside (Magic) website

3.3 A 5km radius was searched for sites of International nature conservation importance, such as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), and a 2km radius was searched for statutory sites of national, regional and local importance, such as Sites of Special Scientific Interest (SSSIs) and Local Nature Reserves (LNRs), and non-statutory designated sites such as Local Wildlife Sites (LWS) and also for records of protected and notable species.

3.4 Further inspection, using colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk), was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider area.

WALKOVER SURVEYS

3.5 During survey visits predetermined transect routes were walked at a slow pace so that all birds can be located, identified and recorded using standard British Trust for Ornithology (BTO) notation. Also, three vantage points (VP`s) were located and a period of 20 minutes was spent on each VP recording bird activity in the viewable area. Binoculars were used throughout to scan the open for the presence of birds. All species are identified by their

² Bibby, C.J., N.D. Burgess & D.A. Hill (1992): Bird Census Techniques. London: Academic Press.

³ Gilbert *et. al.* (1998) Bird Monitoring Methods. RSPB. Sandy.

common name followed by their Latin equivalent. Bird species are listed with their BTO Code and their Conservation Status, UK Biodiversity Action Plan Species (UKBAP), Local Biodiversity Action Plan Species (LBAP) and BoCC species are also identified. All birds that were observed during the surveys were recorded including passing individuals and species on migration.

- 3.6 Diurnal survey visits were timed to avoid the peak in bird activity during the hour before dawn and focused on the more uniform period of activity between sunrise and midday.
- 3.7 Nesting and territorial behaviour (singing, nest building, carrying food, fighting, copulation, nest locations, alarm calling, carrying faecal sacs) were noted by standard codes, as were the age and sex of the birds concerned where observed. Non-nesting behaviour such as over-flying the site was also noted, together with the direction of movement. Birds not considered likely to be nesting on site were still noted where observed.
- 3.8 Results obtained from the walkover survey allowed breeding bird territory distribution and quantity to be estimated. This was achieved by isolating the registrations recorded for a single, selected species in each survey visit, and then plotting all of those registrations together on a single map. The resulting clusters of registrations are then interpreted by an experienced ornithologist to define distinct territories.
- 3.9 One survey per month was undertaken over the summer season from May 2017 to July 2017. Information obtained from the surveys will help towards building a picture of the of the general use of the site and its surroundings by all bird species during the breeding months.

LIMITATIONS TO SURVEY

- 3.10 Access was widely available and survey was undertaken on days with good visibility and weather conditions.

4.0 RESULTS

DESK STUDY

- 4.1 The desktop assessment indicates that there is 1 statutory site (Dearne Valley Park LNR), and two non-statutory sites of conservation interest, within 2km of the site boundary. The Phase 1 habitat survey reports on this in full. There are several wetland areas within the locality that will attract bird species and these include Wilthorpe Marsh, Fleets wetland area at Old Mill Lane LWS and Barnsley Canal at Wilthorpe LWS.

ECOLOGICAL RECORDS

- 4.2 SBRC returned 791 bird records comprising 52 species within a 2km radius of the site. The records include nine birds protected under schedule 1 part 1 of the Wildlife and Countryside Act 1981 (as amended). The majority of the protected bird species are recorded at Willthorpe Marsh, Fleets wetland area at Old Mill Lane LWS and Barnsley Canal at Wilthorpe LWS and include the following species:

- redwing *Turdus iliacus*;
- fieldfare *Turdus pilaris*;
- brambling *Fringilla montifringilla*;
- green sandpiper *Tringa ochropus*;
- hobby *Falco Subbuteo*,
- peregrine *Falco peregrinus*;
- red kite *Milvus milvus*;
- kingfisher *Alcedo attis*; and
- little ringed plover *Charadius dubius*

- 4.3 SBRC returned records of 10 species that were UK BAP Priority species, species include cuckoo *Cuculus canorus*, grasshopper warbler *Locustella naevia*, grey partridge *Perdix perdix*, lapwing *Vanellus vanellus*, lesser redpoll *Carduelis cabaret* reed bunting *Emberiza schoeniclus* tree sparrow *Passer montanus* tree pipit *Anthus trivialis*, yellowhammer *Emberiza citronella*. The majority of the records are from Wilthorpe Marsh and Barnsley Canal at Wilthorpe. There were 94 records of house sparrow

Passer domesticus recorded at various locations across the 2km buffer to the site. Lapwing and grey partridge are also Barnsley Biodiversity Action Plan priority species.

HABITATS – GENERAL SITE DESCRIPTION

- 4.4 See Extended Phase 1 Habitat Survey for a detailed description of the habitats. Habitats within the survey area include improved pasture, semi-improved neutral grassland, swamp, ephemeral/short perennial grassland, marshy grassland, a watercourse, scattered and dense scrub, hedgerows, fences, stone walls and bare ground. At the periphery there is an area of deciduous woodland to the south west of the site and an area of plantation woodland to the south, both are outside of the site boundary (third party trees), but the tree canopy overhangs the survey area.

BREEDING BIRD SURVEY 2017

- 4.5 Breeding bird surveys were undertaken over one season from May 2017 to July 2017. Details of dates and weather conditions are given below in Table 1.

TABLE 1: WALKOVER SURVEY DETAILS

Date	Time Period	Weather Conditions
09-05-2017	AM	5 NE /Cloud 8/8 ^{ths} / Dry 6 °C
16-06-2017	PM	5 W / Cloud 0/8 ^{ths} / Dry 27 °C
09-07-2017	AM	5 W /Cloud 2/8 ^{ths} /Dry 16 °C

- 4.6 40 species of bird were recorded during the course of the breeding bird surveys (See Table 2 and Species accounts). Of these species, 26 were confirmed, probable or possible breeders within the application site. See Drawing 1. Bird Territory Plan
- 4.7 There were no protected species recorded throughout the course of the surveys. Of the birds of conservation interest within the application site, **confirmed breeders** included bullfinch (1 pair), dunnock (2 pairs), house sparrow (1 pair), mistle thrush (1 pair) and common whitethroat (2 pairs).

- 4.8 Of the birds of conservation interest within the application site, **probable breeders** included an additional 3 pairs of dunnock, and 1 pair of common whitethroat.
- 4.9 Of the birds of conservation interest within the application site, **possible breeders** were; Linnet (2 pairs) song thrush (1 pair), and willow warbler (1 pair).
- 4.10 Eight non-breeding bird species of conservation importance were recorded throughout the course of the surveys, these were black headed gull, house martin, lesser black backed gull, mallard duck, stock dove, swift, starling and tawny owl. See Table 2

Table 2: Species Recorded During the Breeding Season 2017

Species	Latin name	BTO Code	No of Birds Recorded				Breeding Status	Conservation Status
			Apr	May	Jun	Jul		
Blackbird	<i>Turdus merula</i>	B		19	15	12	S, P, A, FL, FF	Green
Black Cap	<i>Sylvia atricapilla</i>	BC		4	3	1	S, P, A	Green
Black Headed Gull	<i>Larus ridibundus</i>	BH		3	9		F	Amber
Blue Tit	<i>Parus caeruleus</i>	BT		3	2	13	S, P, FL	Green
Bullfinch	<i>Pyrrhula pyrrhula</i>	BF		3	1	3	S, P, FL	NERC.S41, UKBAP Amber
Common Buzzard	<i>Buteo buteo</i>	BZ			1		F	Green
Carrion Crow	<i>Corvus corone</i>	C		15	6	7	S, H	Green
Chaffinch	<i>Fringilla coelebs</i>	CH		3	2	1	S, H, A	Green
Chiff Chaff	<i>Phylloscopus collybita</i>	CC		3	4	2	S, P, A	Green
Collared Dove	<i>Streptopelia decaocto</i>	CD		4	2	1	S, P	Green
Dunnock	<i>Prunella modularis</i>	D		7	8	11	S, P, D, A, FL	NERC S41, UKBAP, Amber
Goldfinch	<i>Carduellis carduellis</i>	GO		5	6	9	S, P, FL	Green
Great Spotted Woodpecker	<i>Dendrocopus major</i>	GS				1	S, H	Green
Great Tit	<i>Parus major</i>	GT		1	1	7	S, FL	Green
Greenfinch	<i>Carduellis chloris</i>	GR		4	6	2	S, P	Green
Grey Heron	<i>Ardea cinerea</i>	H				1	F	Green
House Martin	<i>Delichon urbica</i>	HM			1	4	F	Amber
House Sparrow	<i>Passer domestica</i>	HS		2		4	S, FL	NERC. S41, UKBAP, Red
Jackdaw	<i>Corvus monedula</i>	JD		3	2	2	S, P	Green
Kestrel	<i>Falco tinnunculus</i>	K			2	1	P, N	LBAP, Amber
Lesser Black Backed Gull	<i>Larus fuscus</i>	LB				1	F	Amber

Linnet	<i>Carduelis canabina</i>	LI		3	1		S, H	NERC s.41, UKBAP, Red
Long Tailed Tit	<i>Aegithalos caudatus</i>	LT		4		7	S, P, FL	Green
Magpie	<i>Pica pica</i>	MG		6	7	7	S, P	Green
Mallard	<i>Anas platyrhynchos</i>	MA		2			UH	Amber
Mistle Thrush	<i>Turdus viscivorus</i>	M.		2	2	2	S, ON, A, FF	Red
Pheasant	<i>Phasianus colchicus</i>	PH			1	1	S, H	No Status
Pied Wagtail	<i>Motacilla alba</i>	PW		1	1	1	S, H	Green
Red Legged Partridge	<i>Alectoris rufa</i>	RL		2		1	P	No Status
Robin	<i>Erithacus rubecula</i>	R		7	3	12	S, D, P, A, FL	Green
Song Thrush	<i>Turdus philomelos</i>	ST		5	2	2	S, P	NERC S41, UKBAP, LBAP, Red
Sparrow hawk	<i>Accipiter nisus</i>	SH		1	1		F	Green
Starling	<i>Sturnus vulgaris</i>	SG		10	30		F	NERC S41, UKBAP, Red
Stock Dove	<i>Columba oenas</i>	SD				1	U	Amber
Swift	<i>Apus apus</i>	SI			14		F	Amber
Tawny Owl	<i>Strix aluco</i>	TO			1		U	Amber
Common Whitethroat	<i>Sylvia communis</i>	WH		6	6	5	S, P, A, FL	Amber
Willow Warbler	<i>Phylloscopus trochilus</i>	WW		6	2	1	S, H	Amber
Wood Pigeon	<i>Columba palumbus</i>	WP		28	24	21	S, F, P	Green
Wren	<i>Troglodytes troglodytes</i>	WR		9	8	28	S, P, A, FL	Green

*Conservation Status

Annex 1	EC Directive (79/409/EEC) on the Conservation of Wild Birds (the 'Birds Directive')
Sch. 1	Schedule 1, Part 1 species – Wildlife & Countryside Act (1981)
NERC s.41	Natural Environment and Rural Communities Act 2006 – Section 41 Species
UKBAP	UK Biodiversity Action Plan List of Priority Species
NBAP	Local (Barnsley) Biodiversity Action Plan Species – Species of Local Importance
Red / Amber / Green	Royal Society for the Protection of Birds List of Species of High / Medium / Low Conservation Concern

BREEDING STATUS KEY

Confirmed Breeder

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

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

P	Pair in suitable nesting habitat
T	Permanent territory (defended over at least 2 survey occasions)
D	Courtship and display
N	Visiting probable nest site
A	Agitated behaviour
I	Brood patch of incubating bird (from bird in hand)
B	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

H	Observed in suitable nesting habitat
S	Singing male

Non-breeder

F	Flying over
M	Migrant
U	Summering non-breeder
UH	Observed in unsuitable nesting habitat

BREEDING SPECIES ACCOUNTS 2015

- 4.11 **Blackbird** (*Turdus merula*): **confirmed breeder**; *woodland / scrubland / hedgerows*; two pairs of birds were recorded carrying nesting materials, food in beaks, displaying mating behaviour and alarm calling, in the woodland/scrubland/hedgerows areas, at various locations around the site, during the May and June surveys; single adult birds have also been recorded at various locations throughout the site, during this same survey period; up to nineteen adult and juvenile birds were noted, at various locations around the site, during the May, June and July surveys;
- 4.12 **Blackcap** (*Sylvia atricapilla*): **confirmed breeder**; *woodland / scrub*; two pairs of adult birds were observed showing mating/breeding behaviour in the scrubland on the south east and north east of the site during the May and May surveys; single birds were also recorded singing and alarm calling at various locations throughout the site, during the May to July survey period;
- 4.13 **Black Headed Gull** (*Larus ridibundus*); **non breeder**; *farmland / wetland / industrial*; **(SCC)**; up to nine single birds recorded flying over the site during the period of the surveys;
- 4.14 **Blue Tit** (*Parus caeruleus*): **confirmed breeder**; *woodland / scrubland / hedgerows*; several pairs of adult birds were recorded displaying mating behaviour, carrying food in beaks and alarm calling during the May and June surveys. Several families of birds were recorded, at various locations throughout the site, during the July survey; single adult birds were also noted at various locations throughout the site during the survey period;
- 4.15 **Bullfinch** (*Pyrrhula pyrrhula*): **confirmed breeder**; *scrub / woodland*; **(UK BAP, NERC s.41, SCC)**; several single adult birds were recorded singing and alarm calling in the scrub / woodland / hedgerow areas, at various locations around the site, during the survey period; a single adult bird and juvenile were observed in the scrub, in the south east of the site, during the July survey;
- 4.16 **Common Buzzard**: (*Buteo buteo*); **possible breeder**; *woodland / farmland*; a single adult bird was observed flying over and around the site during the June survey;

- 4.17 **Carrion Crow** (*Corvus corone*): **possible breeder**; woodland / hedgerow / industrial area; up to fifteen adult birds were recorded, at various locations around the site, during the survey period,
- 4.18 **Chaffinch** (*Fringilla coelebs*): **probable breeder**; woodland / hedgerows; up to three adult birds were recorded at various locations throughout the site, singing and alarm calling, during the May, June and July surveys;
- 4.19 **Chiffchaff**: (*Phylloscopus collybita*): **probable breeder**; woodland / scrub; up to four adult birds were noted singing and displaying agitated behaviour, at various locations throughout the site, during the survey period;
- 4.20 **Collared Dove**: (*Streptopelia decaocto*): **probable breeder**; woodland / scrub; up to two adult male birds were heard singing in the lleylandii and scrub on the north and east of the site, during the May, June and July surveys;
- 4.21 **Dunnock** (*Prunella modularis*): **confirmed breeder**; hedgerows / woodland; (**UKBAP, NERC s.41, SCC**) one pair of adult birds were noted carrying nesting materials to a nest site in scrub in the north of the site during the June survey; a nest with several chicks was recorded in this same area, during the July survey; single adult male birds were also recorded singing and showing signs of mating/breeding displays to attract a mate, at various locations throughout the site, during the survey period;
- 4.22 **Goldfinch** (*Carduelis carduelis*): **confirmed breeder**; scrub / hedgerows; several singing male adult birds were recorded at various locations throughout the site, during the May, June and July surveys; up to nine adult and fully fledged young birds were noted, in the scrub/hedgerow, on the east of the site, during the July survey;
- 4.23 **Great Spotted Woodpecker** (*Dendrocopus major*): **non breeder**; woodland; a single adult bird was seen and heard calling, in the trees, in the north east corner of the site, during the July survey;

- 4.24 **Great Tit** (*Parus major*): **confirmed breeder**; woodland / scrubland / hedgerows; two single adult birds were seen at several locations on the site, singing and displaying mating behaviour, during the May and June surveys; a family of up to seven birds was recorded in the woodland, running along the south west side of the site, during the July visit;
- 4.25 **Greenfinch** (*Carduelis chloris*): **probable breeder**, scrub / woodland area; several single singing male adult birds were recorded at various locations throughout the site, during the May, June and July surveys; up to six birds were noted, in these same locations, during the June survey;
- 4.26 **Grey Heron** (*Ardea cinerea*): **probable breeder**; wetland; a single bird was recorded flying over the site, during the July survey;
- 4.27 **House Martin** (*Delichon urbica*); **non breeder**; industrial / urban landscape; **(SCC)**; up to four birds were recorded flying over and around the site, during the June and July surveys;
- 4.28 **House Sparrow** (*Passer domestica*): **confirmed breeder**; scrubland / woodland / urban; **(UKBAP, NERC s.41, SCC)**; a pair of birds were recorded singing/calling in the scrubland / trees in the site, during the May survey; three adult birds and a juvenile were observed in this same area, during the July visit;
- 4.29 **Jackdaw** (*Corvus monedula*): **possible breeder**; woodland; up to three adult birds were recorded calling in the scrubland / trees, at various locations around the site, during the survey period;
- 4.30 **Kestrel**: (*Falco tinnunculus*); **probable breeder**; woodland / scrub / grassland; **(SCC, NBAP)**; during the June survey, a single adult bird was observed flying to and from a probable nest site located offsite in the woodland located to the south of the site; a single bird was recorded in the scrub and feeding in the grassland in the north of the site during this same survey; the bird was noted in these same locations during the July visit;
- 4.31 **Lesser Black Backed Gull** (*Larus fuscus*); **non breeder**; farmland / wetland; **(SCC)** single bird recorded flying over the site during the July survey;

- 4.32 **Linnet** (*Arduelis cannabina*): **possible breeder**; industrial area; (**UKBAP, NERC s.41, SCC**); up to three birds were observed at various locations around the site during the May and June surveys;
- 4.33 **Long Tailed Tit** (*Aegithalos caudatus*): **confirmed breeder**; woodland / scrub / hedgerows; two pairs of adult birds were recorded, in suitable habitat, calling and displaying breeding behaviour, during the May survey, a family party of up to seven birds was recorded in the woodland on the south west corner of the site, during the July visit;
- 4.34 **Magpie** (*Pica pica*): **probable breeder**; industrial / scrub area; up to seven birds were recorded across the site during the survey period;
- 4.35 **Mallard**: (*Anas platyrhynchos*); **non breeder**; wetland; (**SCC**); a pair of adult birds were recorded feeding in the grass field, on the west of the site, during the May survey;
- 4.36 **Mistle Thrush** (*Turdus viscivorus*): **confirmed breeder**; woodland / scrub / hedgerows; (**SCC**); a pair of adult birds were observed carrying food in their beaks, to a nest site in the hawthorn bushes, on the north of the site, during the May and June surveys; two adult birds were recorded in this same area during the July survey;
- 4.37 **Pheasant** (*Phasianus colchicus*): **possible breeder**; grassland/woodland; a single male bird was seen and heard calling, in the grass field, on the west of the site, during the June and July surveys;
- 4.38 **Pied Wagtail** (*Motacilla alba*): **possible breeder**; industrial landscape / grassland; a single adult bird was noted calling and flying around the grassland, in the north west corner of the site, during the May, June and July surveys;
- 4.39 **Red Legged Partridge** (*Alectoris rufa*); **probable breeder**; grassland / scrub; a pair of adult birds were noted in the grass field, located on the west of the site, during the May survey; a single adult bird was seen in this same location, during the July visit;

- 4.40 **Robin** (*Erithacus rubecula*): **confirmed breeder**; scrub/ woodland / industrial area; several pairs of adult birds were recorded showing signs of mating behaviour, nest building and territorial disputes at various locations around the site during the May and June surveys; single adult birds were also recorded during the same period; up to twelve adult and juvenile birds were seen and noted during the July survey;
- 4.41 **Song Thrush** (*Turdus philomelos*): **possible breeder**; woodland / scrubland; (**UKBAP, NERC s.41, SCC**); up to five adult birds were seen and heard singing/alarm calling at various locations around the site, during the survey period;
- 4.42 **Sparrow Hawk** (*Accipiter nisus*): **non breeder**; scrub / woodland / grassland; a single male bird was recorded flying over and around the north of the site, during the May and June surveys;
- 4.43 **Starling** (*Sturnus vulgaris*); **non breeder**; industrial / grassland / urban; (**UKBAP, NERC S41, SCC**); up to thirty birds were recorded feeding in the grass fields on the west and east of the site during the May and June surveys;
- 4.44 **Stock Dove** (*Columba oenas*): **non breeder**; farmland / woodland; (**SCC**); a single male bird was seen and heard on the north of the site during the July survey;
- 4.45 **Swift** (*Apus apus*) **non breeder**; urban / farmland; (**SCC**); up to fourteen birds were observed flying over and around the site during the June survey;
- 4.46 **Tawny Owl** (*Strix aluco*): **non breeder**; woodland; (**SCC**); a single male bird was heard calling, during the June survey in the trees located on the north of the site;
- 4.47 **Common Whitethroat** (*Sylvia communis*): **confirmed breeder**; scrub / hedgerows; (**SCC**) three pairs of adult birds were recorded in the hedgerows/scrub on the centre and west of the site, singing, alarm calling and having territorial disputes during the May and June surveys; several single adult birds were seen and heard at various locations around the site, during the survey period; a family of five birds was recorded in the scrub, on the south west of the site, during the July visit;

- 4.48 **Willow Warbler** (*Phylloscopus trochilus*): **possible breeder**; *woodland / scrub*; **(SCC)**; a pair of adult birds were noted singing, alarm calling, on the south west of the site, during the June survey; single adult birds were recorded singing at various locations throughout the site during the survey period;
- 4.49 **Wood Pigeon** (*Columba palumbus*): **probable breeder**; *woodland / industrial / grassland*; up to twenty eight birds were recorded on and flying over and around the site during the May, June and July surveys;
- 4.50 **Wren** (*Troglodytes troglodytes*): **confirmed breeder**; *farmland / woodland / scrubland*; several pairs of adult birds were noted at various locations throughout the site; single adult birds, singing/alarming were also observed at various locations throughout the site during the three surveys; up to twenty eight adult and juvenile birds were recorded at various locations throughout the site during the July survey;

5.0 DISCUSSION

- 5.1 The majority of the development area comprises of grazed grassland fields, hedgerows, scrub, woodland and wetland. The breeding birds are to be found in the scrub and hedgerow within the application area and the woodland area (offsite) to the south.
- 5.2 In 2017 the whole of the study area was found to support 61 territories (confirmed, probable and possible) of 26 bird species. 48 of the territories were located within the proposed development site and 13 outwith the sites redline boundary.
- 5.3 Of the 40 species recorded during the course of the surveys, 17 were recognised as being of conservation concern eight of these were not breeding on site and were recorded flying over only (black headed gull, house martin, lesser black backed gull, mallard duck, stock dove, swift, starling and tawny owl). One species, kestrel was recorded as probably breeding, however the territory was offsite and the probable nest was in the woodland to the south of the site.
- 5.4 The table below (Table 3) provides a list of the birds of conservation interest confirmed breeding, probably breeding or possibly breeding within the application area and the anticipated effects of the development based on territories recorded during 2017.

Table 3: Breeding status of Birds of Conservation Interest

Species	Conservation Status	Breeding Status	Application Area	Anticipated Effects based on 2017 Territories
Bullfinch	UKBAP, NERC s.41, SCC (Amber)	Confirmed	1 Pair	Territory in habitat to be retained in open space
Dunnock <i>Prunella modularis</i>	UKBAP, NERC s.41, SCC (Amber)	Confirmed	2 pairs	1 territory to be lost to development, 1 territory to be retained in open space
		Probable	3 Pairs	1 probable territory (in central hedgerow) to be lost to development, 2 probable territories to be retained in open space
House Sparrow <i>Passer domestica</i>	UKBAP, NERC s.41, SCC (Red)	Confirmed	1 pair	Territory in habitat to be retained in open space
Linnet <i>Carduellis canabina</i>	UKBAP, NERC s.41, SCC (Red)	Possible	2 pair	1 territory to be lost to development, 1 territory in habitat to be enhanced as 10m

Species	Conservation Status	Breeding Status	Application Area	Anticipated Effects based on 2017 Territories
				wide woodland buffer
Mistle Thrush <i>Turdus viscivorous</i>	SCC (Red)	Confirmed	1 Pair	1 territory to be lost to development
Song Thrush <i>Turdus philomelos</i>	UKBAP, NERC s.41, SCC (Red)	Possible	1 Pair	1 possible territory to be lost to development
Common Whitethroat <i>Sylvia communis</i>	SCC (Amber)	Confirmed Probable	2 Pair 1 Pair	1 territory to be lost to development, 1 territory in habitat to be enhanced as 10m wide woodland buffer; 1 probable territory to be retained in open space
Willow Warbler <i>Phylloscopus trochilus</i>	SCC (Amber)	Possible	1 Pair	1 possible territory to be retained in open space

RECOMMENDATIONS FOR MITIGATION

5.5 Recommendations for mitigation include:-

- Retain and enhance a peripheral buffer where possible;
- Retain existing vegetation within open space where practical;
- Provision of new species rich hedgerow / woodland buffer strip on the northern boundary of the site to maintain habitat connectivity around the site and to provide foraging and nesting habitat for breeding birds;
- Any planting will be characteristic of the natural area. In the long-term this will provide a greater range and quantity of bird nesting and foraging opportunities to those existing.
- High intensity lighting will be avoided wherever possible and light spillage into adjacent areas will be minimised.
- Bird nesting facilities will be incorporated into the fabric of the buildings. It is recommended that 'good quality' boxes are installed into the properties. X8 Sparrow terraces will be installed (www.birdbrickhouses.co.uk / www.habibat.co.uk / or

woodcrete / Schwegler 1SP), X4 starling nest box (50mm aperture) will be installed (www.birdbrickhouses.co.uk / www.habibat.co.uk or woodcrete Schwegler 1S). AES-LTD to advise on the installation of bird boxes

TIMING OF WORKS

- 5.6 In order to protect wild birds, their nests and eggs from damage and destruction, it is proposed to undertake vegetation clearance / management, wherever possible, outside the bird breeding season. This includes all ground level vegetation as well as woodland, scrub, hedgerows and standard trees. The bird breeding season can extend from March until August (inclusive), weather and species depending, but generally birds have completed breeding by the end of July.
- 5.7 Where vegetation clearance cannot be undertaken outside the bird breeding season, it is confirmed that all such areas would be subject to a thorough walkover survey by a suitably qualified ecologist prior to any clearance or disturbance work being undertaken. It is proposed that such vegetation clearance would be carried out in sections and only further to the ecologist having undertaken a survey of the relevant area and confirmed that such works can proceed.
- 5.8 An ecological clerk of works will be appointed to undertake checking surveys prior to commencement and during peak breeding / dispersal periods.

