

Airfield Farm



Environmental Statement - Annexes

FF.13 Breeding Birds Survey

1.0 INTRODUCTION

1.1 Breeding bird surveys were undertaken at the Market Harborough site, between May and June 2009. The objectives of the surveys were to: -

- Identify the presence and distribution of birds on the site;
- Evaluate the importance of local bird populations;
- Evaluate the conservation importance of the site.

1.2 This report describes the survey methods used and summarises the numbers and distribution of birds found during the surveys.

2.0 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 nest 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 it is 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.

2.3 In addition to statutory protection, British bird species can be classified according to their conservation status including their position on the Red and Amber lists of *Birds of Conservation Concern 3* (BoCC) in the UK (Eaton *et al*, 2009) and whether they have been identified as Priority Species on the UK Biodiversity Action Plan (UKBAP). The Biodiversity Action Plan is a government initiative, which aims to achieve the recovery of the UK's most threatened species and habitats.

3.0 METHODOLOGY

3.1 The survey methodology employed was broadly based on that of territory mapping (Bibby et al 1992) as used for the British Trust for Ornithology's (BTO) Common Bird Census. 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 Committee (EOAC 1979) and are grouped into three categories: possible breeder (e.g. birds observed in suitable habitat or singing male recorded), probable breeder (e.g. pair in suitable habitat, territory defended, agitated behaviour or nest building) and confirmed breeder (e.g. recently fledged young observed, adult birds carrying food for young). Birds that were considered to be not using the site for breeding were categorised as 'non-breeders' (e.g. flying over the site, migrant, habitat not suitable).

3.2 To provide a reasonable level of accuracy for determining the population status of the breeding birds on the site, three visits were completed. Surveys were carried out between 05.00 and 11.00 and were completed during May-June 2009. Bird surveys were not undertaken in unfavourable conditions such as heavy rain or strong wind, which may negatively affect the results.

3.3 Survey dates and conditions were as follows:

Table 1 - Survey dates and conditions

Date	Cloud Cover	Rain	Wind	Visibility
12 May 09	33 – 66%	None	Light	Good
5 June 09	66 – 100%	None	Light	Good
30 June 09	None	None	None	Very good

4.0 RESULTS (see Appendix 1 for a full species list)

4.1 A total of 41 species were recorded on site, 16 of which are 'notable' either appearing on the BoCC Red or Amber lists; or listed as UKBAP Priority Species as follows (refer to Table 2 for further details):

Red-listed

4.2 House sparrow *Passer domesticus*, linnet *Carduelis cannabina*, skylark *Alauda arvensis*, song thrush *Turdus philomelos*, starling *Sturnus vulgaris*, yellow wagtail

Motacilla flava, yellowhammer *Emberiza citrinella* - all seven Red-listed species are also UKBAP Priority Species.

4.3 Two of the seven recorded species, skylark *Alauda arvensis* and yellowhammer, were confirmed breeding on site, with house sparrow and starling both being confirmed as having bred outside of the site boundary. Of the remaining three species, linnet and song thrush were classed as probable breeders. Yellow wagtail was observed in suitable nesting habitat though with no further evidence indicating breeding the species was classed as possibly breeding.

Amber-listed

4.4 Bullfinch *Pyrrhula pyrrhula*, dunnock *Prunella modularis* and reed bunting *Emberiza schoeniclus* - also UKBAP Priority Species. House martin *Delichon urbica*, meadow pipit *Anthus pratensis*, mistle thrush *Turdus viscivorus*, stock dove *Columba oenas*, swallow *Hirundo rustica*, whitethroat *Sylvia communis*.

4.5 Two Amber listed species, bullfinch and dunnock were confirmed as breeding on site. Five others, meadow pipit, mistle thrush, reed bunting, stock dove and whitethroat were considered to be probably breeding on site. The two remaining species, house martin and swallow were classed as possibly breeding.

Other species

4.6 Twenty-two Green-listed species were recorded, six of which (refer to Appendix 1) were confirmed as breeding on site.

4.7 Little owl (confirmed breeder), pheasant and red-legged partridge are introduced species and therefore have no listed Conservation Status.

Table 2. UKBAP, Red and Amber listed bird species recorded at Market Harborough during breeding bird surveys 2009, and their recent status within Leicestershire.

Species	UK Conservation status	Breeding status on site	Current status in Leicestershire*
House Sparrow	UKBAP, Red	Confirmed off site	Common resident breeder, recent decline.
Linnet	UKBAP, Red	Probable	Common resident breeder and passage migrant, less

Species	UK Conservation status	Breeding status on site	Current status in Leicestershire*
			common in winter.
Skylark	UKBAP, Red	Confirmed	Common resident breeder, autumn migrant and winter visitor.
Song Thrush	UKBAP, Red	Probable	Common resident breeder, recent decline; winter visitor.
Starling	UKBAP, Red	Confirmed off site	Abundant resident breeder, passage migrant and winter visitor.
Yellow wagtail	UKBAP, Red	Possible	Uncommon migrant breeder, fairly common passage migrant; declining.
Yellowhammer	UKBAP, Red	Confirmed	Common resident breeder, recent decline.
Bullfinch	UKBAP, Amber	Confirmed	Common resident breeder.
Dunnock	UKBAP, Amber	Confirmed	Abundant resident breeder, winter visitor.
Reed Bunting	UKBAP, Amber	Probable	Common resident breeder, recent decline.
House Martin	Amber	Possible	Common migrant breeder, declining.
Meadow Pipit	Amber	Probable	Common passage migrant, fairly common winter visitor, uncommon breeder.
Mistle thrush	Amber	Probable	Common resident breeder.
Stock dove	Amber	Probable	Fairly common to common resident breeder.
Swallow	Amber	Possible	Common migrant breeder.
Whitethroat	Amber	Probable	Common migrant breeder.

* Taken from "The Leicestershire and Rutland Annual Bird Report 2006" published by The Leicestershire and Rutland Ornithological Society.

Very rare - Fewer than ten records ever

Rare - More than ten records ever, but less than annual

Scarce - Fewer than ten birds occurring or pairs breeding annually

Uncommon - Between ten and 100 birds occurring or pairs breeding annually

Fairly common - Between 100 and 1000 birds occurring or pairs breeding annually

Common - Between 1000 and 10,000 birds occurring or pairs breeding annually

Abundant - More than 10,000 birds occurring or pairs breeding annually

5.0 DISCUSSION

Key habitats in relation to use of the site by birds have been identified and are detailed below (refer to Figure 2: Phase 1 Habitat Plan):

- 5.1 Species typically associated with dense scrub were recorded along the western boundary of the site adjacent to the Grand Union canal, these included residents such as blackbird *Turdus merula*, blue tit *Parus caeruleus*, bullfinch, dunnock and wren *Troglodytes troglodytes*, as well as summer visiting warblers such as whitethroat and blackcap *Sylvia atricapilla*.
- 5.2 The arable fields encompassing the majority of the central/southern section of the site and area to the west provided breeding and foraging habitat for the ground nesting species recorded in these areas; reed bunting, skylark and meadow pipit.
- 5.3 To the north of the site, the habitat mosaic of semi-improved grassland, bare ground, scrub and tall ruderal provided suitable nesting habitat and foraging opportunities for many summer warbler and resident passerine species recorded during the survey.
- 5.4 The hedgerows and tree lines present on site provided suitable nesting habitat for resident passerine and corvid species with yellowhammer, dunnock and magpie *Pica pica* being confirmed as breeding in these areas.
- 5.5 The area of waste ground with scattered scrub to the north-east of the site provided good foraging habitat for a number of finch species particularly linnet and goldfinch *Carduelis carduelis* and also for the house sparrow colony associated with residential dwellings adjacent to the site boundary.

Impacts of Habitat Loss

- 5.6 The impact on bird species to the potential effects of development is based upon an understanding of each species' ecological requirements, the type of development, number of birds recorded on site, their nature conservation criteria based on legislation and current guidance, their most recent county status as described by *The Leicestershire and Rutland Annual Bird Report 2006* and professional judgement.
- 5.7 Using this information impact levels can be classed as High, Medium or Low for each species.
- 5.8 The species recorded on site that are arguably the most vulnerable to impacts are the 16 'notable' species that either appear on the BoCC Red or Amber lists as declining; or are listed as UKBAP Priority Species.
- 5.9 The habitat requirements and site specific notes on these species are summarised in Table 3, along with the expected impacts of development.

Table 3. Impact of the development on BAP, Red and Amber listed species recorded at Market Harborough.

Species	Habitat and resource requirements	Species notes in relation to site	Impact
House sparrow	Usually lives on cultivated land near houses and other buildings, also in towns, parks, gardens, farmyards and industrial areas with open ground.	One colony was recorded along the site boundary utilising the site for foraging.	Low
Linnet	Nests in areas of dense scrub or hedgerows. Feeds on small to medium sized seeds. Particularly dependent on weeds of open country and waste ground.	Recorded in high numbers, maximum of 32, primarily within waste ground to the north-eastern edge where scattered scrub provided suitable breeding habitat.	Medium
Skylark	Ground nesting birds favouring open farmland habitats where short, grassy or sparse vegetation provides nesting cover and foraging opportunities.	A maximum of 13 individuals were recorded during the June survey within arable fields to the west of the site and semi-improved grassland habitats. Although only a single juvenile bird was recorded, with six singing males observed in suitable breeding habitat across the site, it is estimated that at least six pairs are probable breeders on site.	Medium
Song Thrush	Birds can exist anywhere where trees or bushes accompany open grassland or patches of dead leaves supporting ample invertebrates. Will readily take to hedgerows, railway embankments and small gardens.	A maximum of four birds recorded in June. Mainly associated with scrub areas and tree lines during the summer, where breeding is probable.	Low

Species	Habitat and resource requirements	Species notes in relation to site	Impact
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.	Small flocks of up to six individuals were recorded foraging on or flying over the site. Although an adult starling was observed carrying food, it was flying away from the site. No direct evidence of breeding was recorded on site and most starling movements were to and from areas east and west of the site boundary particularly over the canal to the east, where breeding in buildings is likely. Potential breeding habitat does exist however in natural tree cavities around the site.	Low
Yellow wagtail	Summer visitor. Found in lowland pastures, water meadows, marshes, riversides and arable fields, including those growing potatoes and peas.	Two individuals were recorded during the third survey. A singing male was observed perched on a telegraph wire at the northern-most point of the site. The second was heard calling from within the large arable field situated at the southern boundary of the site it was then observed flying west.	Medium
Yellowhammer	Breeds in areas of grass and arable fields with hedges and banks, railway embankments, commons and heaths.	A maximum of 11 individuals were recorded during any one survey, including one juvenile. All individuals recorded were associated with hedgerows which provided suitable nesting habitat.	Medium

Species	Habitat and resource requirements	Species notes in relation to site	Impact
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.	A pair were observed carrying food along the dense scrub adjacent to the canal at the eastern boundary of the site confirming breeding.	Low
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.	Up to 10 birds were recorded during the breeding season, associated with areas of woodland and scrub across the site where breeding was confirmed.	Low
Reed Bunting	Traditional habitat is that of prolific fairly low vegetation, mainly associated with intense soil moisture. Increasingly found in cultivated drier habitats.	Low numbers (2 birds in June) were recorded during the breeding season, associated with the large arable field at the southern boundary of the site. A male bird was recorded carrying nesting material indicating that breeding was probable.	Medium
House Martin	Nests predominantly on manmade structures, especially under eaves of houses or under bridges.	Three individuals were observed flying over the southern half of the site in the direction of the canal and residential area beyond. Although limited breeding habitat does exist on site, no evidence that the species was using the site for breeding purposes was recorded.	Low

Species	Habitat and resource requirements	Species notes in relation to site	Impact
Meadow Pipit	Chooses as a ground dweller open areas of rather low fairly complete vegetation cover. Feeds mainly on invertebrates with some seeds taken in autumn and winter.	All individuals observed were associated with the large arable fields partitioned by the western boundary of the site, where breeding was probable.	Medium
Mistle thrush	Requires open woodland and other places where there are tall trees for nesting and song posts, and also areas of short grass for feeding.	During survey one, two individuals were observed foraging within semi-improved grassland at the centre of the site. A single bird was observed foraging in the same area during the third survey. Two birds were also recorded in suitable nesting habitat to the east of the site.	Low
Stock dove	Breeds in parkland with old trees, wooded farmland, edges of larger wood and open forest, also found where there are cliffs or quarries or around old buildings.	A maximum of two birds were recorded. One individual was observed flying towards suitable nesting habitat situated within buildings at the centre of the site.	Low
Swallow	Prefers pasture grazed by large animals, meadows, and farm crops, especially where open structures such as barns provide suitable nest sites.	A maximum of two birds were foraging in the northern section of the site in May. Limited suitable breeding habitat exists on site for this species.	Low

Species	Habitat and resource requirements	Species notes in relation to site	Impact
Whitethroat	Breeds in thick hedges, scrub, young plantations, along woodland edges, in glades with thick bushes, brambles, nettles or gorse and other places where there is tangled vegetation. It will sometimes venture into parks if there is thick vegetation.	Up to eight singing males were holding territories across the site, concentrated in areas of tall ruderal and scrub such as that to the east and north of the site.	Low

- 5.10 It is considered that the proposed development will have a 'Medium' impact on the following species; linnet, skylark, yellow wagtail, yellowhammer, reed bunting and meadow pipit.
- 5.11 The loss of optimal breeding habitat for the above species, including hedgerow (yellowhammer), scrub (linnet), semi-improved grassland and arable fields (skylark, yellow wagtail, reed bunting and meadow pipit) will negatively impact on the breeding potential of these species on site.
- 5.12 Habitat surrounding the site is predominantly arable farmland which, depending on crop type, may have the capacity to provide compensation for those species displaced by the development.
- 5.13 Impacts of development for all other 'notable' species recorded on site will be low.
- 5.14 Lodging species such as house sparrow, starling and house martin, currently utilising the site for foraging and possible breeding purposes, may potentially benefit from the proposed development of residential dwellings. These species will readily nest in manmade structures particularly under the eaves or in apertures of buildings.

Construction Impacts

- 5.15 Construction operations could disturb bird species of nature conservation interest using the site for roosting, foraging, breeding and loafing. Disturbance during the breeding season may lead to nest desertion or the avoidance of the area. All birds, their nests and eggs are protected by law and it is an offence, with certain exceptions to intentionally:
- Kill, injure or take any wild bird.
 - Take damage or destroy the nest of any wild bird while it is in use or being built.
 - Take or destroy the egg of any wild bird.
- 5.16 The construction works likely to disturb and impact on nesting/breeding birds include the initial ground works, vegetation clearance and construction activities which result in noise and vibration. Increased activity adjacent to areas where species may breed (e.g. grassland for skylark and meadow pipit, scrub for dunnock and linnet) may result in disturbance to the species.

5.17 To avoid disturbance to breeding birds, any vegetation removal will occur prior to the main bird breeding season (March to September inclusive). If this is not possible, vegetation will be checked prior to removal by an experienced and suitably qualified ecologist. If active nests are found, vegetation will be left untouched and suitably buffered from works until all birds have fledged. Specific advice will be provided prior to undertaking the clearance. This would be a statutory requirement due to the protection of all nesting birds and their nests under the Wildlife and Countryside Act 1981 (as amended).

References:

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

Brown, A. & Grice, P. (2005) *Birds in England*, T & AD Poyser, London

Eaton MA, Brown AF, Noble DG, Musgrove AJ, Hearn R, Aebischer NJ, Gibbons DW, Evans A and Gregory RD (2009) Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 102, pp296–341.

The Leicestershire and Rutland Ornithological Society *The Leicestershire and Rutland Annual Bird Report 2006*.

Snow, D.W. and Perrins, C.M (1998) *The Birds of the Western Palearctic*. Concise Edition. New York: Oxford University Press.

Appendix 1 - Breeding Bird Survey Results – Market Harborough

Species	Latin	Survey 1 12.05.09	Survey 2 05.06.09	Survey 3 30.06.09	Conservation Status	Breeding status on site
Blackbird	<i>Turdus merula</i>	23	16	24 + 5 juv	Green list	Confirmed
Blackcap	<i>Sylvia atricapilla</i>	2	1	2	Green list	Probable
Blue Tit	<i>Parus caeruleus</i>	5	15 + 6 juv	15 + 2 juv	Green list	Confirmed
Bullfinch	<i>Pyrrhula pyrrhula</i>			2	Amber list, UK BAP	Confirmed
Carrion Crow	<i>Corvus corone</i>	11	3	12	Green list	Probable
Chaffinch	<i>Fringilla coelebs</i>	7	2	7	Green list	Probable
Chiffchaff	<i>Phylloscopus collybita</i>	1			Green list	Possible
Coal Tit	<i>Parus ater</i>			1	Green list	Possible
Common Tern	<i>Sterna hirundo</i>			1	Green list	Non-breeder
Dunnock	<i>Prunella modularis</i>	10	6	9	Amber list, UK BAP	Confirmed
Garden Warbler	<i>Sylvia borin</i>	1			Green list	Possible
Goldfinch	<i>Carduelis carduelis</i>	1		18	Green list	Probable
Great Spotted Woodpecker	<i>Dendrocopos major</i>		1		Green list	Possible
Great Tit	<i>Parus major</i>	11	5 + 3 juv	12 + 8 juv	Green list	Confirmed
Greenfinch	<i>Carduelis chloris</i>	9	6	21 + 1 juv	Green list	Confirmed
Grey Heron	<i>Ardea cinerea</i>			1	Green list	Non-breeder
House Martin	<i>Delichon urbica</i>	3			Amber list	Possible
House Sparrow	<i>Passer domesticus</i>	1 x col	1 x col	1 x col	Red list, UK BAP	Confirmed off site
Jackdaw	<i>Corvus monedula</i>	6		10	Green list	Possible
Lesser Whitethroat	<i>Sylvia curruca</i>		1	1	Green list	Possible
Linnet	<i>Carduelis cannabina</i>	32	6	18	Red list, UK BAP	Probable
Little Owl	<i>Athene noctua</i>			2 juv	Introduced	Confirmed

Magpie	<i>Pica pica</i>	7	3	7 + 2 juv	Green list	Confirmed
Meadow Pipit	<i>Anthus pratensis</i>	2	2	3	Amber list	Probable
Mistle Thrush	<i>Turdus viscivorus</i>	4		2	Amber list	Probable
Pheasant	<i>Phasianus colchicus</i>	1		1	Introduced	Possible
Pied Wagtail	<i>Motacilla alba</i>	3		1	Green list	Possible
Red-legged Partridge	<i>Alectoris rufa</i>	2	1		Introduced	Possible
Reed Bunting	<i>Emberiza schoeniclus</i>	1	2	1	Amber list, UK BAP	Probable
Robin	<i>Erithacus rubecula</i>	8	1	2	Green list	Probable
Rook	<i>Corvus frugilegus</i>	1	2		Green list	Non-breeder
Skylark	<i>Alauda arvensis</i>	8	12	12 + 1 juv	Red list, UK BAP	Confirmed
Song Thrush	<i>Turdus philomelos</i>	2	4	3	Red list, UK BAP	Probable
Starling	<i>Sturnus vulgaris</i>	13		6	Red list, UK BAP	Confirmed
Stock Dove	<i>Columba oenas</i>		1	2	Amber list	Probable
Swallow	<i>Hirundo rustica</i>	2	1	1	Amber list	Possible
Whitethroat	<i>Sylvia communis</i>	8	5	7	Amber list	Probable
Wood Pigeon	<i>Columba palumbus</i>	7	26	35	Green list	Possible
Wren	<i>Troglodytes troglodytes</i>	5	13	15 + 2 juv	Green list	Confirmed
Yellow Wagtail	<i>Motacilla flava</i>			2	Red list, UK BAP	Possible
Yellowhammer	<i>Emberiza citrinella</i>	2	7	10 + 1 juv	Red list, UK BAP	Confirmed
Total Species	41	32	26	35		

Breeding Status evidence can be broken down into four sections, each with their own codes:

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 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

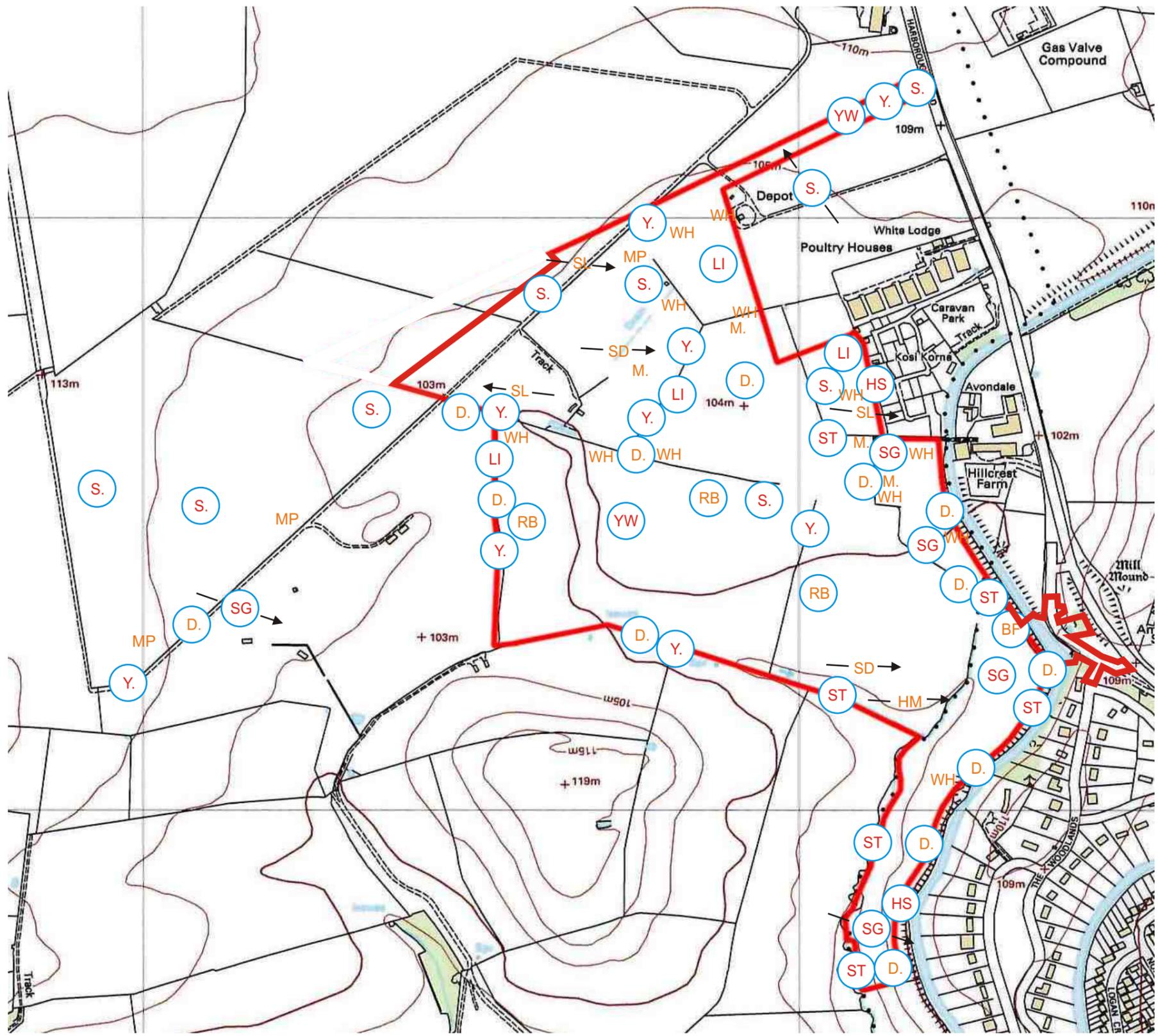
Non-breeder

F – flying over

M – migrant

U – summering non-breeder

UH – observed in unsuitable nesting habitat



-  Site Boundary
-  UK BAP Species
-  Bird only seen to fly over at this location

BOCC RED LISTED BIRDS:

- | | | | |
|--|---------------|--|----------------|
|  HS | House sparrow |  SG | Starling |
|  LI | Linnet |  YW | Yellow wagtail |
|  S | Skylark |  Y | Yellowhammer |
|  ST | Song thrush | | |

BOCC AMBER LISTED BIRDS:

- | | | | |
|--|---------------|--|--------------|
|  BF | Bullfinch |  RB | Reed bunting |
|  D | Dunnock |  SD | Stock dove |
|  HM | House martin |  SL | Swallow |
|  MP | Meadow pipit |  WH | Whitethroat |
|  M | Mistle thrush | | |

William Davis and Hallam Land Management Limited

Airfield Farm, Market Harborough

Notable Species Plan

Figure 1

Not to scale @ A3 October 2010