

## **Appendix 9.6**

# **BREEDING BIRD SURVEY**

**FORT HALSTEAD, KENT**  
**BREEDING BIRD SURVEY**

A Report to: CBRE Ltd

Report No: RT-MME-127947-06 Rev A

Date Final Issued: October 2018  
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## REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”.

Report Version	Date	Completed by:	Checked by:	Approved by:
Rev A	12/09/2019	Hannah Train GradCIEEM (Senior Ecological Consultant)	Tom Docker MSc CEcol MCIEEM (Associate Director, EIA)	Dr Philip Fermor CEnv MCIEEM (Managing Director)
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The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

## DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

## VALIDITY OF DATA

The findings of this study are valid for a period of 24 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, and to inform a review of the conclusions and recommendations made.

## NON-TECHNICAL SUMMARY

Middlemarch Environmental Ltd was commissioned by CBRE Ltd to undertake a Breeding Bird Survey at Fort Halstead in Kent. This assessment is required to inform a hybrid planning application associated with the proposed redevelopment of the site, which will involve the demolition of the majority of existing industrial buildings and the construction of a new employment-led mixed-use village. It is understood that the new village will comprise business areas (Use Classes B1a/b/c with energetic testing operations), development of up to 750 residential dwellings, a village centre (Use Classes A1/A3/A4/A5/B1a/D1/D2), a one form entry primary school, use of the Fort Area and bunkers as an Historic Interpretation Centre (Use Class D1), together with amenity space, landscape and ecological enhancements both on the site and on the adjacent land within the Applicants ownership.

The desk study revealed records of 33 species of bird that are protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) within 2 km of the survey area, including barn owl *Tyto alba*, brambling *Fringilla montifringilla*, fieldfare *Turdus pilaris*, goshawk *Accipiter gentilis*, hen harrier *Circus cyaneus*, hobby *Falco Subbuteo*, honey-buzzard *Pernis apivorus*, marsh harrier *Circus aeruginosus*, merlin *Falco columbarius*, osprey *Pandion haliaetus*, peregrine *Falco peregrinus*, red kite *Milvus milvus* and redwing *Turdus iliacus*.

The desk study also revealed records of 31 species of bird that are listed as Species of Principal Importance within 2 km of the survey area, including corn bunting *Miliaria calandra*, cuckoo *Cuculus canorus*, house sparrow *Passer domesticus*, lesser spotted woodpecker *Dendrocopus minor*, marsh tit *Parus palustris*, skylark *Alauda arvensis*, song thrush *Turdus philomelos*, starling *Sturnus vulgaris*, tree sparrow *Passer montanus*, turtle dove *Streptopelia turtur*, willow tit *Parus montanus*, yellow wagtail *Motacilla flava* and yellowhammer *Emberiza citronella*, which are also on the RSPB Red List, and bullfinch *Pyrrhula pyrrhula*, dunnock *Prunella modularis*, nightjar *Caprimulgus europaeus* and reed bunting *Emberiza schoeniclus*, which are also on the RSPB Amber List.

The desk study also returned records of numerous other species on the RSPB Red List and RSPB Amber List found within 2 km of the survey area.

The survey visits were undertaken between 24<sup>th</sup> May 2018 and 20<sup>th</sup> July 2018 by Jamie Fletcher (Ecological Consultant). Findings of the survey are summarised in Table A.

<b>Total Number of Confirmed/Probable Breeding Species</b>	44
<b>Confirmed / Probable Breeding Species of Principal Importance in England</b>	Bullfinch, dunnock, linnet, marsh tit, skylark, song thrush, spotted flycatcher and yellowhammer.
<b>Confirmed / Probable Breeding Local BAP Species</b>	Bullfinch, linnet, skylark, song thrush, spotted flycatcher and yellowhammer.
<b>Confirmed / Probable Breeding RSPB Red List Species</b>	Linnet, marsh tit, mistle thrush, nightingale, skylark, song thrush, spotted flycatcher and yellowhammer.
<b>Confirmed / Probable Breeding RSPB Amber List Species</b>	Bullfinch, dunnock, kestrel, stock dove and tawny owl.
<b>Significant Concentrations of Confirmed / Probable Breeding Species</b>	0

**Table A: Summary of Breeding Bird Survey Findings**

A further 11 species were recorded using the site, but were not considered to have bred.

The total of 44 confirmed/probable breeding species identified during the field surveys indicates that the site is likely to be of district value in terms of its breeding bird interest. The majority of species recorded on site are considered to be fairly common and widespread generalist species, with a selection of woodland and scrub specialists.

The breeding bird survey undertaken has identified that the vast majority of territories on site are associated with habitats due to be retained or enhanced as part of the proposed development, including woodland, scrub and hedgerows. It is therefore anticipated that the current array of species identified will continue to have access to extensive areas of suitable habitat that will allow them to continue to breed on site during the construction phase of the works.

During construction, it is anticipated that the site will be subject to extensive disturbance as a result of demolition of existing buildings, extensive ground works, some vegetation clearance and the movement of construction apparatus and contractors within the site.

A series of recommendations have been made in Chapter 6 which have been designed to maximise the site's future value to breeding birds and ensure compliance with associated wildlife legislation.

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## 1. INTRODUCTION

### 1.1 PROJECT BACKGROUND

Middlemarch Environmental Ltd was commissioned by CBRE Ltd to undertake a Breeding Bird Survey at Fort Halstead in Kent. This assessment is required to inform a hybrid planning application associated with the proposed redevelopment of the site, which will involve the demolition of the majority of existing industrial buildings and the construction of a new employment-led mixed-use village. It is understood that the new village will comprise business areas (Use Classes B1a/b/c with energetic testing operations), development of up to 750 residential dwellings, a village centre (Use Classes A1/A3/A4/A5/B1a/D1/D2), a one form entry primary school, use of the Fort Area and bunkers as an Historic Interpretation Centre (Use Class D1), together with amenity space, landscape and ecological enhancements both on the site and on the adjacent land within the Applicants ownership.

A suite of baseline surveys have been completed by Waterman Group between 2006 and 2013, the results of which are provided in an Ecological Appraisal (Report EED12715-102.R.2.3.7.LM) and Protected Species and Habitat Survey (Report EED12715-102.R.3.3.6.LM), and summarised in the ecology chapter of an EIA associated with a previous application, for which outline planning consent was granted.

Due to the amount of time that has elapsed since the previous surveys were completed, updated ecological surveys were required for the current planning application.

In addition, Middlemarch Environmental Ltd has been commissioned to undertake the following assessments:

- Preliminary Ecological Appraisal (Report RT-MME-127947-01);
- Preliminary Bat Roost Assessment (Report RT-MME-127947-02);
- Nocturnal Emergence and Dawn Re-entry Bat Surveys (Report RT-MME-127947-03);
- Bat Activity Surveys (Report RT-MME-127947-04);
- Badger Survey (Report RT-MME-127947-05);
- Botanical Survey (Report RT-MME-127947-07);
- Terrestrial Invertebrate Survey (Report RT-MME-127947-08);
- Reptile Survey (Report RT-MME-127947-09);
- Dormouse Survey (Report RT-MME-127947-10);
- Winter Bird Survey (Report RT-MME-127947-11);
- Pre-development Arboricultural Survey (Report RT-MME-128206-01); and,
- Arboricultural Impact Assessment (Report RT-MME-128206-02).

This report assesses the suitability of the habitat at the site for breeding birds, and presents the findings of a Breeding Bird Survey undertaken by experienced field ornithologists. The site is evaluated for its breeding bird interest and the potential impacts of the proposed development are assessed.

### 1.2 SITE DESCRIPTION AND CONTEXT

The site is located off Star Hill Road in Halstead, Kent, centred at National Grid Reference TQ 4970 5922. It is an irregular shaped parcel of land that measures 131.89 ha in size.

At the time of the survey, the site comprised a defence research facility which contained a number of buildings with associated areas of hardstanding, surrounded by parcels of semi-natural and plantation woodland. Areas of neutral grassland, calcareous grassland and amenity grassland were also present, as well as patches of scrub and tall ruderal vegetation.

The site was bordered by the A224 Polhill to the north-east and Star Hill Road to the south-west. A mixture of arable and pastoral fields, pockets of woodland and farm buildings surround the site. The wider landscape was dominated by a rural setting, consisting of agricultural land interspersed with pockets of woodland and small settlements.

**1.3 DOCUMENTATION PROVIDED**

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.1.

Document Name / Drawing Number	Author
Fort Halstead – Design and Access Statement: 00556I	John Thompson and Partners
Site Location Plan: 00556I_S01 Rev D5	John Thompson and Partners
Land Use and Green Infrastructure Plan: 00556I_PP01 Rev D10	John Thompson and Partners
Building Heights Plan: 00556I_PP02 Rev D10	John Thompson and Partners
Access and Movement: 00556I_PP03 Rev D9	John Thompson and Partners
Demolition Plan: 00556I_PP04 Rev D8	John Thompson and Partners
Ecological Appraisal: EED12715-102.R.2.3.7.LM	Waterman Group
Protected Species and Habitats Survey: EED12715-102.R.3.3.6.LM	Waterman Group
Environmental Statement - Ecology and Nature Conservation	Waterman Group
Decision Notice (planning application number SE/15/00628/OUT)	Sevenoaks District Council

**Table 1.1: Documentation Provided by Client**



## 2. METHODOLOGY

### 2.1 DESK STUDY

As part of the Preliminary Ecological Appraisal (Report RT-MME-127947-01) an ecological desk study was undertaken. The consultees for the desk study were:

- Natural England - *MAGIC* website for statutory conservation sites; and,
- Kent and Medway Biological Records Centre.

Middlemarch Environmental Ltd then assimilated and reviewed the desk study data provided by these organisations. Relevant bird data are discussed in Chapter 3. In compliance with the terms and conditions relating to its commercial use, the full desk study data are not provided within this report.

### 2.2 FIELDWORK METHODOLOGY

The breeding bird survey was conducted in line with specifications detailed by the British Trust for Ornithology (Gilbert, 1998), although the methodology was tailored to site conditions. The methodology is a 'scaled down' version of the Common Bird Census (CBC) approach defined in Gilbert, with four site visits deemed appropriate. The CBC methodology involved walking the entire survey site and passing within 50 m of every point (where vegetation and access allowed). The route was chosen so as to sample all habitats recorded within the survey area.

For each survey visit, the study area is walked at a slow pace in suitable weather conditions to locate and identify all individual bird species within the survey boundaries. Registrations of birds were plotted onto suitably scaled maps on each site visit and all activities were noted i.e. singing, alarm calling, nest-building, feeding young and other behaviours indicative of breeding activities. Subsequent analysis of field maps enabled the approximate territories of species to be calculated and the number of territories of individual species worked out. As specified by the CBC methodology all morning visits were undertaken between 0600 and 0700 British Standard Time (BST), and no later than 0900 BST, avoiding the first hour before sunrise. Timing of the survey visits was also dictated by weather conditions. Therefore, the site was examined only in appropriate weather conditions. None of the visits were conducted in cold weather, heavy rain, poor visibility or strong winds. All surveys were undertaken by experienced field ornithologists.

### 3. DESK STUDY

#### 3.1 RELEVANT NATURE CONSERVATION SITES

The desk study exercise included a search for statutory and non-statutory nature conservation sites of ornithological interest. A search radius of 10 km was used for European statutory sites, 5 km for UK statutory sites and 2 km for non-statutory sites. No sites for which the citations include information regarding bird species were found within the search area.

#### 3.2 SPECIES RECORDS

The desk study revealed records of 33 species of bird that are protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) within 2 km of the survey area, including barn owl *Tyto alba*, brambling *Fringilla montifringilla*, fieldfare *Turdus pilaris*, goshawk *Accipiter gentilis*, hen harrier *Circus cyaneus*, hobby *Falco Subbuteo*, honey-buzzard *Pernis apivorus*, marsh harrier *Circus aeruginosus*, merlin *Falco columbarius*, osprey *Pandion haliaetus*, peregrine *Falco peregrinus*, red kite *Milvus milvus* and redwing *Turdus iliacus*.

The desk study also revealed records of 31 species of bird that are listed as Species of Principal Importance within 2 km of the survey area, including corn bunting *Miliaria calandra*, cuckoo *Cuculus canorus*, house sparrow *Passer domesticus*, lesser spotted woodpecker *Dendrocopus minor*, marsh tit *Parus palustris*, skylark *Alauda arvensis*, song thrush *Turdus philomelos*, starling *Sturnus vulgaris*, tree sparrow *Passer montanus*, turtle dove *Streptopelia turtur*, willow tit *Parus montanus*, yellow wagtail *Motacilla flava* and yellowhammer *Emberiza citronella*, which are also on the RSPB Red List, and bullfinch *Pyrrhula pyrrhula*, dunnock *Prunella modularis*, nightjar *Caprimulgus europaeus* and reed bunting *Emberiza schoeniclus*, which are also on the RSPB Amber List.

The desk study also returned records of numerous other species on the RSPB Red List and RSPB Amber List found within 2 km of the survey area.

#### 3.3 PREVIOUS SURVEYS

During the breeding bird survey undertaken by Waterman Group in 2012, a total of 45 bird species were identified over the course of the four survey visits. Bird species were recorded utilising woodland, scrub, grassland, mature trees and building habitats. Of these species, 27 species were confirmed as breeding or likely to be breeding with one or more of the following observations; sightings of nests or fledged individuals, territorial aggression and singing or repeated alarm calls from a single position over an extended period.

Species confirmed as breeding or likely to be breeding include; black cap *Sylvia atricapilla*, blackbird *Turdus merula*, blue tit *Cyanistes caeruleus*, carrion crow *Corvus corone*, chaffinch *Fringilla coelebs*, chiffchaff *Phylloscopus collybita*, coal tit *Parus ater*, common whitethroat *Sylvia communis*, dunnock, garden warbler *Sylvia borin*, goldcrest *Regulus regulus*, great tit *Parus major*, greater spotted woodpecker *Dendrocopus major*, green woodpecker *Picus viridis*, house sparrow, jay *Garrulus glandarius*, long-tailed tit *Aegithalos caudatus*, magpie *Pica pica*, mistle thrush *Turdus viscivorus*, nuthatch *Sitta europaea*, pied wagtail *Motacilla alba*, robin *Erithacus rubecula*, rook *Corvus fruilagus*, song thrush, woodpigeon *Columba palumbus*, wren *Troglodytes troglodytes* and yellowhammer.

The bird species most frequently recorded were wren, robin, blackbird, blue tit, chaffinch, chiffchaff, rook and song thrush. During the surveys no Schedule 1 species that receive protection under the WCA were recorded at any time.

## 4. BREEDING BIRD SURVEY RESULTS

### 4.1 INTRODUCTION

The survey visits were undertaken between 24<sup>th</sup> May 2018 and 20<sup>th</sup> July 2018 by Jamie Fletcher (Ecological Consultant). Survey dates and weather conditions are listed in Table 4.1.

Date	Parameter			
	Temperature (°C)	Cloud (%)	Wind (Beaufort)	Precipitation
24/05/2018	17	25%	F1	Nil
08/06/2018	18	25%	F1	Nil
21/06/2018	19	75%	F1	Nil
20/07/2018	18	50%	F1	Nil

**Table 4.1: Dates and Weather Conditions of Breeding Bird Surveys at Fort Halstead**

### 4.2 SURVEY CONSTRAINTS

Due to the presence of steep vegetated banks along the area of broadleaved semi-natural woodland located along the sites north-eastern and eastern boundary abutting Polhill/A224 it was not possible to fully access these areas for reasons of health and safety. Despite this, bird vocalisations could be heard from the aforementioned inaccessible areas from areas that could be accessed and as such the inability to access these areas was not considered to be a significant survey constraint.

### 4.3 SURVEY RESULTS

During the survey visits a total of 55 bird species were recorded using this site. Of these species, 44 were either confirmed to have bred or probably did so based on habitat suitability and observed patterns of behaviour. Confirmed and probable breeding species are listed in Table 4.2, and approximate territory locations are plotted on Drawing C127947-06-01 in Chapter 7.

Species	Scientific Name	Conservation Status	No. of Territories
Blackbird	<i>Turdus merula</i>	-	37
Blackcap	<i>Sylvia atricapilla</i>	-	27
Blue Tit	<i>Cyanistes caeruleus</i>	-	42
Bullfinch	<i>Pyrrhula pyrrhula</i>	RSPB Amber; SPI England; LBAP	10
Carrion Crow	<i>Corvus corone</i>	-	6
Chaffinch	<i>Fringilla coelebs</i>	-	8
Chiffchaff	<i>Phylloscopus collybita</i>	-	24
Coal Tit	<i>Parus ater</i>	-	17
Collared Dove	<i>Streptopelia decaocto</i>	-	3
Common Buzzard	<i>Buteo buteo</i>	-	1
Common Whitethroat	<i>Sylvia communis</i>	-	10
Dunnock	<i>Prunella modularis</i>	RSPB Amber; SPI England	6
Garden Warbler	<i>Sylvia borin</i>	-	2
Goldcrest	<i>Regulus regulus</i>	-	4
Goldfinch	<i>Carduelis carduelis</i>	-	6
Great Spotted Woodpecker	<i>Dendrocopos major</i>	-	5
Great Tit	<i>Parus major</i>	-	26
Green Woodpecker	<i>Picus viridis</i>	-	2
Greenfinch	<i>Chloris chloris</i>	-	4

**Table 4.2: Confirmed and Probable Breeding Species Recorded at Fort Halstead (cont)**

Species	Scientific Name	Conservation Status	No. of Territories
Blackbird	<i>Turdus merula</i>	-	37
Blackcap	<i>Sylvia atricapilla</i>	-	27
Blue Tit	<i>Cyanistes caeruleus</i>	-	42
Bullfinch	<i>Pyrrhulla pyrrhulla</i>	RSPB Amber; SPI England; LBAP	10
Carrion Crow	<i>Corvus corone</i>	-	6
Chaffinch	<i>Fringilla coelebs</i>	-	8
Chiffchaff	<i>Phylloscopus collybita</i>	-	24
Coal Tit	<i>Parus ater</i>	-	17
Collared Dove	<i>Streptopelia decaocto</i>	-	3
Common Buzzard	<i>Buteo buteo</i>	-	1
Common Whitethroat	<i>Sylvia communis</i>	-	10
Duncock	<i>Prunella modularis</i>	RSPB Amber; SPI England	6
Garden Warbler	<i>Sylvia borin</i>	-	2
Goldcrest	<i>Regulus regulus</i>	-	4
Goldfinch	<i>Carduelis carduelis</i>	-	6
Great Spotted Woodpecker	<i>Dendrocopos major</i>	-	5
Great Tit	<i>Parus major</i>	-	26
Green Woodpecker	<i>Picus viridis</i>	-	2
Greenfinch	<i>Chloris chloris</i>	-	4
Jackdaw	<i>Corvus monedula</i>	-	9
Jay	<i>Garrulus glandarius</i>	-	3
Kestrel	<i>Falco tinnunculus</i>	RSPB Amber	1
Linnet	<i>Carduelis cannabina</i>	RSPB Red; SPI England; LBAP	6
Long-Tailed Tit	<i>Aegithalos caudatus</i>	-	7
Magpie	<i>Pica pica</i>	-	12
Marsh Tit	<i>Poecile palustris</i>	RSPB Red; SPI England; LBAP	2
Mistle Thrush	<i>Turdus viscivorus</i>	RSPB Red	5
Nightingale	<i>Luscinia megarhynchos</i>	RSPB Red	1
Nuthatch	<i>Sitta europaea</i>	-	11
Pheasant	<i>Phasianus colchicus</i>	-	7
Pied Wagtail	<i>Montacilla alba</i>	-	7
Red-Legged Partridge	<i>Alectoris rufa</i>	-	2
Robin	<i>Erithacus rubecula</i>	-	35
Rook	<i>Corvus frugilegus</i>	-	10
Skylark	<i>Alauda arvensis</i>	RSPB Red; SPI England; LBAP	1
Song Thrush	<i>Turdus philomelos</i>	RSPB Red; SPI England; LBAP	13
Sparrowhawk	<i>Accipiter nisus</i>	-	1
Spotted Flycatcher	<i>Muscicapa striata</i>	RSPB Red; SPI England; LBAP	1
Stock Dove	<i>Columba oenas</i>	RSPB Amber	4
Tawny Owl	<i>Strix aluco</i>	RSPB Amber	5
Treecreeper	<i>Certhia familiaris</i>	-	4
Woodpigeon	<i>Columba palumbus</i>	-	44
Wren	<i>Troglodytes troglodytes</i>	-	36
Yellowhammer	<i>Emberiza citronella</i>	RSPB Red; SPI England; LBAP	2

Table 4.2 (cont'd): Confirmed and Probable Breeding Species Recorded at Fort Halstead (cont)

<p><b>Key:</b>                  SPI England: Species of Principal Importance in England.                  LBAP: Kent Biodiversity Action Plan Priority Species</p> <p><b>Notes for RSPB Red List Criteria</b>                  Species that meet any of the following criteria are red listed:  <b>IUCN:</b> Global Conservation Status. Species listed by Birdlife International as being Globally Threatened using IUCN criteria.  <b>HD:</b> Historic Decline. A severe decline in the UK between 1800-1995, without substantial recent recovery.  <b>BDp:</b> Breeding Population Decline. Severe decline in the UK breeding population size, of more than 50% over the last 25years (BDp1) or the entire period used for assessments since the first BoCC review, starting in 1969 ("longer term") (BDp2).  <b>WDp:</b> Non-breeding Population Decline. Severe decline in the UK non-breeding population size, of more than 50%, over 25 years (WDp1) or the longer term (WDp2).  <b>BDR:</b> Breeding Range Decline. Severe decline in the UK range, of more than 50%, as measured by number of 10 km squares occupied by breeding birds, over 25 years (BDR1) or the longer term (BDR2).</p> <p><b>Notes for RSPB Amber List Criteria</b>                  Species that meet any of the following criteria, but none of the red listed criteria, are amber listed:  <b>SPEC:</b> European Conservation Status. Categorized as a Species of European Conservation Concern.  <b>Hdrec:</b> Historic Decline – Recovery. Red listed for Historical Decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years).  <b>BDMp:</b> Breeding population Decline. As for red list criteria BDp1 and BDp2 but with moderate decline (by more than 25% but less than 50%).  <b>WDMp:</b> Non-breeding population Decline. As for red list criteria WDp1 and WDp2, but with moderate decline (by more than 25% but less than 50%).  <b>BDMr:</b> Breeding Range Decline. As for red list criteria BDR1 and BDR2 but with moderate decline (by more than 25% but less than 50%).  <b>BR and WR rarity.</b> UK breeding population of less than 300 pairs (BR), or non-breeding population of less than 900 individuals (WR).  <b>BL and WL Localisation.</b> At least 50% of the UK breeding (BL) or non-breeding (WL) population found in 10 or fewer sites.  <b>BI and WI International Importance.</b> At least 20% of the European breeding (BI) or non-breeding (WI) population found in the UK.</p>
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**Table 4.2 (cont'd): Confirmed and Probable Breeding Species Recorded at Fort Halstead**

The remaining species recorded using the site are not considered to have bred, and were using the site as a temporary foraging resource or passing through at the time of the survey visits. Non-breeding species recorded during the survey are listed in Table 4.3.

Species	Scientific Name	Conservation Status
Black-Headed Gull	<i>Chroicocephalus ridibundus</i>	RSPB Amber
Common Gull	<i>Larus canus</i>	RSPB Amber
Feral Pigeon	<i>Columba livia</i>	-
Grey Heron	<i>Ardea cinereal</i>	-
Herring Gull	<i>Larus argentatus</i>	RSPB Red; SPI England
House Martin	<i>Delichon urbicum</i>	RSPB Amber
Peregrine Falcon	<i>Falco peregrinus</i>	-
Red Kite	<i>Milvus milvus</i>	-
Starling	<i>Sturnus vulgaris</i>	RSPB Red; SPI England
Swallow	<i>Hirundo rustica</i>	-
Swift	<i>Apus apus</i>	RSPB Amber

**Table 4.3: Non-breeding Species Recorded at Fort Halstead**

## 5. DISCUSSION AND CONCLUSIONS

### 5.1 SUMMARY OF PROPOSALS

The proposals for the site are as follows:

*Hybrid planning permission comprising:*

*In detail:*

- *Demolition of existing buildings;*
- *Change of use and works to buildings Q13 and Q14 (including landscaping and public realm);*
- *Primary and secondary accesses.*

*In outline:*

- *Development of business space (use classes B1a/b/c) of up to 27,659 sq m GEA;*
- *Works within the 'X' enclave relating to energetic testing operations, including fencing, access, car parking;*
- *Development of up to 750 residential dwellings;*
- *Development of a mixed-use village centre (use classes A1/A3/A4/A5/B1a/D1/D2);*
- *Development of a one form entry primary school;*
- *Change of use of Fort Area and bunkers to Historic Interpretation Centre (use class D1) with workshop space;*
- *Roads, pedestrian and cycle routes, public transport infrastructure, car parking, utilities infrastructure, drainage;*
- *Landscaping, landforming and ecological mitigation works.*

### 5.2 SUMMARY OF DESKTOP STUDY FINDINGS

The desk study data included records of the following bird species within a 2 km radius of Fort Halstead: mallard, moorhen, coot, grey wagtail, tufted duck, hobby, bittern, turtle dove, ring-necked parakeet, barn owl, lesser whitethroat, and house sparrow. Of these species, however, several can be discounted as having potential to breed at Fort Halstead as a result of their niche habitat requirements:

- Species such as mallard, moorhen, coot, grey wagtail and tufted duck require aquatic habitats, particularly open waterbodies with associated areas of suitably vegetated margins. No suitable habitat for any of these species occurs on or adjacent to the site. Despite this, site proposals indicate that ponds are to be created within existing areas of grassland on site, with such areas to be subsequently managed for wildlife and recreation. Should such habitat be created on site and appropriate management be undertaken, then suitable habitat will be present on site for some, or potentially all of the above species to occur and potentially breed on site, depending on the specifications and future usage of the habitat created.
- Hobby is a migratory breeding species of falcon which specialises in preying on hirundines and dragonflies and often nests in mature broadleaved woodland. With such habitat and prey species abundant both on site and within the wider area it is entirely possible that this species will occur or breed on site in the future.
- Bittern is a species of extensive reedbed habitats, with no such habitat present on site or adjacent to site. As such it is considered highly unlikely that bittern will ever occur on site.
- Turtle dove is a species that has experienced a population decline of 94% in the UK since 1995. Formerly a common and widespread breeding species of farmland, woodland edge and scrub, turtle doves are now seldom found across much of their former range. Despite this, an abundance of suitable habitat remains on site and within the wider area and as such the potential for turtle dove to occur on site in future remains.
- Ring-necked parakeet is a non-native species that is rapidly expanding its range and population throughout the UK, with high concentrations in and around London and the Thanet area of Kent. The species tend to favour mature broadleaved woodland and parkland habitats that provide an abundance of mature trees. With an abundance of such habitat on site and the species continued expansion in to new areas it is considered highly likely that the site will be colonised in the near future.

- Barn owl require significant areas of rough tussocky grassland in which to hunt for small mammals or other associated prey species. The site provides extensive areas of grassland in the west and east, with the wider area also providing a wealth of suitable foraging and nesting habitat in the form of arable fields, rough grazing pasture and farm buildings. The provision of a barn owl nest box or boxes on site may help encourage barn owls to colonise the site in future, with large areas of suitable foraging habitat already available.
- Lesser whitethroat is a bird of scrub and hedgerows, with the western and south-eastern parts of the site providing suitable habitat for the species. It is considered likely that the species will occur on site in future if such habitat is retained and appropriately managed.
- House sparrow is closely associated with human habitation, favouring gardens and hedgerows. The proposed development on site has the potential to significantly increase the sites suitability for house sparrows and as such it is considered likely that the species will colonise the site in future.

During the breeding bird survey undertaken by Waterman Group in 2012, a total of 45 bird species were identified over the course of the four survey visits. Bird species were recorded utilising woodland, scrub, grassland, mature trees and building habitats. Of these species, 27 species were confirmed as breeding or likely to be breeding. The bird species most frequently recorded were wren, robin, blackbird, blue tit, chaffinch, chiffchaff, rook and song thrush. During the surveys no Schedule 1 species that receive protection under the WCA were recorded at any time.

### 5.3 SURVEY FINDINGS AND EVALUATION

#### 5.3.1 Breeding Species

The breeding bird surveys highlighted the presence of a wide range of reasonably common and widespread bird species closely associated with woodland and scrub habitats.

The woodland on site supported a number of woodland specialist species, including marsh tit, tawny owl, great spotted woodpecker, nuthatch and treecreeper, whilst a wide range of generalist species were also recorded within woodland habitat on site. Areas of mature broadleaved semi-natural woodland dominating the main and wider site boundaries supported the widest diversity of species and abundance of birds, likely due to the very low levels of human disturbance and the varied and complex woodland structure present in these areas.

Within the areas of woodland present within the survey area five species of tit were recorded breeding, marsh tit, blue tit, great tit, coal tit and long-tailed tit. Of the five tit species recorded breeding on site marsh tit is considered to be the most notable due to its status as an RSPB Red Listed Species of Conservation Concern, a Species of Principal Importance in England and a Kent Biodiversity Action Plan species, owing to an observed population decline in Britain of 73% between 1966-2013. The species has a strong preference for large areas of broadleaved woodland, with areas of oak *Quercus spp.* and beech *Fagus sylvatica* typically favoured, with both tree species being abundant in the areas of broadleaved semi-natural woodland on site. Two marsh tit territories were recorded on site, both occurring in the western part of the site in undisturbed areas of broadleaved semi-natural woodland. Of the other tit species recorded nesting on site, both blue tit and great tit were found to be exploiting the many holes and gaps within buildings throughout the site in addition to using natural nest cavities within trees. Coal tit and long-tailed tit territories were recorded throughout the areas of woodland on site, with long-tailed tits exploiting the dense understorey found in many areas and coal tits favouring areas of broadleaved and mixed plantation woodland.

A single spotted flycatcher territory was recorded within the 'upper' X area, which was abutted by undisturbed semi-natural broadleaved woodland to the east and had an abundance of mature scattered trees throughout. The presence of spotted flycatcher on site is considered significant due to its status as an RSPB Red Listed Species of Conservation Concern, a Species of Principal Importance in England and a Kent Biodiversity Action Plan species owing to a population decline in the UK of 89% between 1966-2010. The species can be found in a variety of habitats including woodland, parkland and churchyards, with the presence of suitable perches from which flying insects can be caught being a specific requirement. The 'upper' X area in which the spotted flycatcher territory was found on site provides ideal foraging and nesting conditions for the species, with the area replicating a woodland glade and abutting an extensive area of undisturbed broadleaved semi-natural woodland to the east.

Notably high populations of both song thrush and mistle thrush were recorded within areas of woodland and mature scattered trees on site, with thirteen and five territories recorded respectively. Song thrush are listed as an RSPB Red Listed Species of Conservation Concern, a Species of Principal Importance in England and a Kent Biodiversity Action Plan species, with mistle thrush also listed as an RSPB Red Listed Species of Conservation Concern, with the population of both species declining by over 50% in the UK in the past 25 years. The presence of such high numbers of territories, in relation to the size of the site and the suitable habitat available, indicates the site provides excellent foraging and nesting habitat for both species and can be considered to be an important site locally for both species. Whilst the woodland, scrub and mature scattered trees on site provide high quality nesting habitat, the presence of large areas of grassland and fruit bearing street trees also offer excellent foraging opportunities, particularly for mistle thrush.

Three species of raptor and one species of owl were recorded holding territories within the areas of woodland on site, namely common buzzard, sparrowhawk, kestrel and tawny owl. Both kestrel and tawny owl are listed as RPSB Amber Listed Species of Conservation Concern due to a moderate population decline of between 25-49% in the past 25 years. A single common buzzard territory was recorded within an area of semi-natural broadleaved woodland in the western part of the site, with birds regularly recorded foraging/hunting over areas of grassland in the western and eastern parts of the site. A single sparrowhawk territory was noted within an area of semi-natural broadleaved woodland abutting the Downs Range to the north in the southern part of the site. Sparrowhawks are highly secretive birds that can be found in a variety of habitats, though typically breed in mature woodland. They are highly adapted to hunting in densely wooded areas and primarily prey upon other birds. The south-western part of the site, in an area of semi-natural broadleaved woodland on the southern side of the security fence, supported a single kestrel territory, with birds regularly recorded hunting over areas of grassland in southern, eastern and western parts of the site. Kestrels will hunt a variety of prey species however typically depend upon small mammals for the majority of their diet. As such they require areas of rough grassland which can support high populations of field voles and other small mammals in order to successfully provision young and sustain themselves, especially through the winter months. Five tawny owl territories were recorded within areas of semi-natural broadleaved woodland on site, with the high number of territories recorded demonstrating the high value of the woodland habitat on site to both tawny owls and other prey species.

Warbler species recorded holding territories on site included blackcap, chiffchaff, common whitethroat and garden warbler. High numbers of blackcap and chiffchaff territories were recorded throughout the site, twenty-seven and twenty-four respectively, in areas of woodland and scrub, demonstrating the species' generalist behaviour in respect of habitat requirements. Ten common whitethroat territories were recorded on site, with areas of scrub in the south-eastern and southern parts of the site and woodland edge in the western part of the site supporting the territories noted. Two garden warbler territories were recorded on site, with both territories recorded within dense scrub/understory located along woodland edges in the southern and western parts of the site. Both common whitethroat and garden warbler have a strong preference for dense scrub, with such habitat present in well-connected undisturbed pockets in the southern, eastern and western parts of the site.

A single nightingale territory was recorded within bramble scrub in the southern part of the site, within an area of semi-improved neutral grassland south of the Fort Halstead security fence, with a single bird heard singing during May. Nightingales are an RSPB Red Listed Species of Conservation Concern and a Kent Biodiversity Action Plan species owing to a 90% population decline in the UK over the past 40 years. The presence of undisturbed pockets of dense scrub surrounded by broadleaved semi-natural woodland, particularly in the southern part of the site to the south of the Fort Halstead security fence, provides ideal nesting and foraging habitat for nightingales which favour dense scrub and woodland with dense understories.

Five species of finch were recorded on site, namely bullfinch, linnet, goldfinch, greenfinch and chaffinch. Of the five species of finch recorded on site bullfinch and linnet are the most notable due to their status as species of high conservation concern. Bullfinch are listed as an RSPB Amber Listed Species of Conservation Concern, a Species of Principal Importance in England and a Kent Biodiversity Action Plan species due to a UK population decline of 36% since the late 1960s. Ten bullfinch territories were recorded on site, with the such territories present in areas of semi-natural broadleaved woodland with dense understories in the north-west, west and south of the site and within areas of dense scrub in the south and south-east of the site. The presence of ten breeding territories on site demonstrates the level of high-quality habitat present for bullfinches and a range of other species reliant on scrub and a dense and complex woodland structure. Linnet are listed as an RSPB Red Listed Species of Conservation Concern and a Species of Principal



Importance in England as a result of a 57% population decline in the UK between 1970-2014. Although closely associated with farmland, linnets typically favour dense scrub and mature hedgerows to nest in, with the six territories recorded on site corresponding to this habitat requirement. The six territories recorded on site all occurred within close proximity to each other within patches of dense scrub in the area of semi-improved neutral grassland located to the south of the Fort Halstead security fence. The goldfinch and greenfinch territories recorded on site, numbering six and four respectively, all occurred within patches of the dense scrub in the southern and eastern parts of the site, with the eight chaffinch territories recorded located throughout the semi-natural broadleaved woodland and mixed plantation woodland around the site boundary.

In addition to linnet, two other birds closely associated with farmland, namely skylark and yellowhammer, were also recorded holding territories on site. Both skylark and yellowhammer are listed as RSPB Red Listed Species of Conservation Concern, Species of Principal Importance in England and Kent Biodiversity Action Plan species due to UK population declines of 61% and 56% between 1967-2008 respectively. A single skylark territory was recorded on site in the area of unimproved calcareous grassland, which was being grazed by sheep during the survey period, located to the south-east of the Fort Halstead security fence. Skylark are a ground nesting species which require large open fields with suitably dense and tall sward or arable crop coverage in which to create their extremely well-hidden nests. Two yellowhammer territories were recorded on site, with one territory occurring within a patch of dense scrub on the Downs Range part of the site abutting the security fence to the south and south-east and one occurring within a section species poor defunct hedgerow abutting Star Hill Road at the site's extreme south-eastern boundary outside of the Fort Halstead security fence.

Additional widespread species recorded holding territory within the survey area included goldcrest, jay, magpie, rook, jackdaw, carrion crow, red-legged partridge, pheasant, woodpigeon, stock dove, collared dove, green woodpecker, wren, robin, dunnoek, blackbird and pied wagtail. Of these species both stock dove and dunnoek are listed as RSPB Amber Listed Species of Conservation Concern, with dunnoek also being categorized as a Species of Principal Importance in England. Four stock dove territories were recorded within semi-natural broadleaved woodland in the southern and south-eastern parts of the site. Six dunnoek territories were recorded on site, with all such territories located within patches of scrub in the southern, south-eastern and western parts of the site.

Current site proposals indicate the vast majority of woodland, grassland and scrub on site will be retained post development, with the majority of development on site occurring within areas of already developed land. As such it is considered that the continued presence of extensive areas of woodland, grassland and scrub on site will allow the existing array of breeding species to be maintained, with the increase in human disturbance post development thought to be the most likely cause of a potential reduction in breeding bird species on site. It is therefore essential that effective management of human activity in the form of responsible footpath creation, carefully designed recreational facilities and considerate proximity of development to existing areas of high-quality habitat is implemented to ensure human disturbance to breeding bird species on site is minimised.

### 5.3.2 Non-breeding Species

In addition to the species recorded as breeding or holding territory, a range of additional species were recorded using the site, but are not considered to be breeding within it. This includes some species that are likely to be breeding within the surrounding area, some species that are using the site for foraging purposes and some of species that are considered to be passage migrants.

Two raptor species, namely red kite and peregrine falcon were recorded flying over the site during the survey period. Whilst suitable nesting habitat exists on site for red kite no evidence of nesting was recorded within or adjacent to the site, with the bird observed flying over the site considered to be a wandering sub-adult bird. The observation of peregrine falcon on site is thought to be associated with a likely nest site located within a neighbouring quarry site to the east of the survey area. Peregrine falcons were recorded flying over the site and vocalising during each survey visit, with the hunting of woodpigeons also observed over the area of unimproved calcareous grassland in the south-eastern part of the survey area.

Three species of gull were recorded either flying over or foraging on site during the survey period, namely black-headed gull, common gull and herring gull. All three species were recorded in areas of grassland in the southern and western parts of the site, with the site being considered unsuitable for nesting considering the three species breeding requirements. It is possible that the birds observed had come from either Chipstead

Lakes or Sevenoaks Wildfowl Reserve, with both sites being located a relatively short distance from Fort Halstead.

Aerial feeding species recorded foraging over the site included house martin, swallow and swift, with all three species largely or exclusively requiring manmade structures to nest. Whilst such structures are present abundantly on site no evidence of nesting was recorded, and it is instead considered likely that all three species were nesting in close proximity to the site and were using the site for foraging purposes.

Starlings were also recorded foraging in areas of grassland in the southern and eastern parts of the site, though no evidence of nesting was recorded. Starlings are cavity nesters that typically nest in loose colonies, with holes in buildings often exploited. It is thought that the starlings recorded nesting on site were nesting in close proximity to the site and were using the site for foraging purposes.

### 5.3.3 Evaluation

In terms of evaluating the site for its breeding bird significance the following criteria have been taken into account:

- The species richness of the bird assemblage of the site, i.e. how many different types of species the site supports.
- The presence of species listed as being of Principal Importance in England, species on local and national Biodiversity Action Plans (BAPs) and Red or Amber listed Species of Conservation Concern.
- The occurrence of significant concentrations of a bird species, particularly if these comprise a significant proportion (1% or more) of the national breeding population.

Table 5.1 presents a summary of the above criteria based on the current field survey data for Fort Halstead.

<b>Total Number of Confirmed/Probable Breeding Species</b>	44
<b>Confirmed / Probable Breeding Species of Principal Importance in England</b>	Bullfinch, dunnock, linnet, marsh tit, skylark, song thrush, spotted flycatcher and yellowhammer.
<b>Confirmed / Probable Breeding Local BAP Species</b>	Bullfinch, linnet, skylark, song thrush, song thrush, spotted flycatcher and yellowhammer.
<b>Confirmed / Probable Breeding RSPB Red List Species</b>	Linnet, marsh tit, mistle thrush, nightingale, skylark, song thrush, spotted flycatcher and yellowhammer.
<b>Confirmed / Probable Breeding RSPB Amber List Species</b>	Bullfinch, dunnock, kestrel, stock dove and tawny owl.
<b>Significant Concentrations of Confirmed / Probable Breeding Species</b>	0

**Table 5.1: Summary of Breeding Bird Evaluation Criteria, Fort Halstead**

Fuller (1980) describes a method for assessing the ornithological interest of sites, whereby the importance is defined by the assemblage of breeding species present. Table 5.2 provides a summary of the geographical valuation criteria identified by Fuller. For the purposes of this assessment, Fuller's geographical levels have been adapted, so that Fuller's "local" importance is assumed to correspond to District importance as described in CIEEM's Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018). Since the publication of the evaluation criteria in 1980, declines have been observed in many bird populations, and for this reason it is therefore judged appropriate to recalibrate the categories slightly to reflect this change.

Level of Importance	Number of Breeding Species	
	Fuller (1980)	Adapted Criteria
Local	25-49 Species	<25
District	-	25-49
County	50-69	50-69
Regional	70-84	70-84
National	85+	85+

**Table 5.2: Breeding Bird Assemblage Evaluation Criteria Based on Fuller (1980)**

The total of 44 confirmed/probable breeding species identified during the field surveys indicates that the site is likely to be of district value in terms of its breeding bird interest. The majority of species recorded on site are considered to be fairly common and widespread generalist species, with a selection of woodland and scrub specialists.

No significant concentrations of breeding species in either a local or national context were recorded. It is considered that the current plans to maintain the vast majority of woodland, grassland and scrub on site as part of the proposed development should allow the favourable conservation status of the breeding bird assemblage to be maintained, providing appropriate design in relation to human disturbance in areas of existing high-quality habitat and suitable construction phase controls are implemented. Furthermore, the enhancement of the existing habitat on site, creation of new habitats and installation of mitigation or biodiversity enhancement features could see the breeding bird assemblage on site increase post development with particular focus on species including house sparrow, house martin, swallow, swift and starling.

The potential impacts of the proposed development on breeding birds are considered further in Section 5.3.

#### **5.4 POTENTIAL IMPACTS ON BREEDING BIRDS FROM PROPOSED DEVELOPMENT**

It is understood that Fort Halstead is to be the subject of a hybrid planning application associated with the proposed redevelopment of the site, which will involve the demolition of the majority of existing industrial buildings and the construction of a new employment-led mixed-use village. It is understood that the new village will comprise a business area (Use Classes B1 and B2 with potential ancillary energetic material testing), approximately 650 residential units, a hotel (Use Class C1), a village centre (Use Classes A1 and A3, B1a, D1 and D2), use of the Fort and bunkers as an Historic Interpretation Centre (Use Class D1), together with amenity space, landscape and ecological enhancements both on the site and on the adjacent land within the applicants ownership. Existing site plans indicate that the majority of woodland, grassland and scrub on site is to be retained and/or ecologically enhanced as part of the proposed development. Potential impacts on breeding birds during the construction and operational phases of the development are considered below.

##### Construction Phase Impacts

Specific details relating to the construction phase of the proposed development are not yet known however typical construction phase impacts associated with such developments are anticipated.

The construction phase of the proposed development will result in the demolition of the majority of existing buildings on site, with a small number of buildings due to be retained or converted for historical, residential and/or commercial use. Due to the relatively poor state of repair of many of the buildings on site, cracks, holes and cavities present within many of the buildings have been and will continue to be exploited by a range of bird species for nesting purposes, including blue tit, great tit and pied wagtail. The loss of these features will potentially result in a reduction of such species on site, with birds having to seek alternative nest sites within the wider ownership boundary or completely off site as a consequence. Suitable mitigation features in the form of nest boxes should be implemented on site in order to ensure adequate nest sites remain available for the aforementioned species during the construction phase of the proposed development, with areas of retained habitat also offering suitable nesting opportunities.

It is anticipated that some tree removal will occur during the construction phase of the proposed development, resulting in the potential loss of nest sites and foraging resources for a range of species including woodpigeon, nuthatch and great spotted woodpecker. Despite these losses, the site will continue to offer suitable habitat for these species in the areas of woodland and scattered trees that are not due to be impacted by the proposed development.

The breeding bird survey undertaken has identified that the vast majority of territories on site are associated with habitats due to be retained or enhanced as part of the proposed development, including woodland, scrub and hedgerows. It is therefore anticipated that the current array of species identified will continue to have access to extensive areas of suitable habitat that will allow them to continue to breed on site during the construction phase of the works.

During construction, it is anticipated that the site will be subject to extensive disturbance as a result of demolition of existing buildings, extensive ground works, some vegetation clearance and the movement of construction apparatus and contractors within the site.

#### Operational Phase Impacts

The redevelopment of the site as a new employment led mixed-use village will result in a significant increase in human activity and associated disturbance on site during the operational phase of the development. Associated factors include likely increases in noise, air, litter and light pollution from vehicular, residential and commercial activities, with such factors having the potential to adversely impact bird movement, nesting activities, nocturnal behaviour and species distribution and abundance on site. Further human disturbance is likely to occur on site and within the wider area as a result of an increase in recreational activities, including dog and cat ownership, dog walking, mountain biking/cycling, walking/jogging, use of electronic or motorised devices including drones and dirt bikes, picnics/barbeques and sporting activities. All such activities have the potential to impact birds on site in a variety of different ways, including disturbance of nesting, roosting and foraging activities, damage, destruction or deterioration of areas of suitable habitat and an increase in the risk of predation and/or injury from domestic animals.

During the operational phase of the development it is considered that appropriate habitat management will be important to ensure that habitats continue to be of the greatest possible value to breeding birds. Of particular importance is the maintenance of a woodland/scrub/coarse grass ecotone, as many of the species recorded on site will utilize 'edge' habitats. Additionally, the continued presence and effective management of areas of undisturbed broadleaved woodland will be essential in order to ensure the continued presence of species including marsh tit, spotted flycatcher and tawny owl on site. A recommendation regarding long-term habitat management is made in Chapter 6. It is recommended that a Landscape Ecological Management Plan will be produced for the site, and habitat management proposals should be incorporated into this document. A recommendation is made in Chapter 6.

## 6. RECOMMENDATIONS

All recommendations provided in this section are based on Middlemarch Environmental Ltd's current understanding of the site proposals, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

**R1** An Ecological Mitigation Strategy should be compiled for the site, including proposals to maintain the ornithological value of the site.

**R2** Implement nesting features wherever possible in new buildings on site for species including house sparrow, starling, swift, swallow, house martin and pied wagtail. Features should be incorporated during the construction phase of the development and should include integrated nesting features in addition to externally fitted nest boxes that will be required for both swallow and house martin.

Implement a suitable nest box strategy throughout the site in areas of retained habitat for species including blue tit, great tit, coal tit, marsh tit, treecreeper, dunnoek, wren, robin, stock dove, great spotted woodpecker and tawny owl. The creation of a suitable nest box strategy within areas of retained habitat will ensure suitable nesting features are available to a range of woodland and generalist species post development as a result of the anticipated loss during the construction phase of the proposed development of existing nesting features in buildings and trees scheduled for demolition or removal, and will aid any post development breeding bird monitoring works undertaken.

Install nest boxes for both kestrel and barn owl within or adjacent to retained areas of non-amenity grassland, notably in the western and south-eastern parts of the site. Nest boxes should be either fitted to existing mature trees, with a clear flight line to the adjacent open habitat or mounted upon suitable purpose designed poles.

**R3** A Landscape Ecological Management Plan should be produced for the site, and habitat management proposals should be incorporated into this document.

**R4** Existing site proposals indicate ponds are to be created within existing areas of grassland in the north-eastern and western sections of the site as part of the proposed development. The design of these ponds should aim to maximise their value to wildlife with a focus on the associated habitat requirements of common and/or widespread bird species including mallard, coot, moorhen, grey wagtail, reed warbler and grey heron.

Native species rich hedgerows should be planted on site wherever possible including hawthorn *Crateagus monogyna*, blackthorn *Prunus spinosa*, holly *Ilex aquifolium*, yew *Taxus baccata*, guelder rose *Viburnum opulus*, field maple *Acer campestre*, spindle *Euonymus europaeus*, wild privet *Ligustrum vulgare* and buckthorn *Rhamnus cathartica*. Native species rich hedgerows will be used by a wide range of birds and other species in order to nest, feed and shelter.

Native plant species should be incorporated into landscaping designs, including gardens, amenity and recreational space, street trees and shrub borders. Native tree species could include English oak *Quercus robur*, beech *Fagus sylvatica*, wild cherry *Prunus avium*, wild service *Sorbus torminalis*, rowan *Sorbus acuparia* and whitebeam *Sorbus aria*. Native border/shrub species could include dogwood *Cornus sanguinea*, hazel *Corylus avellana*, wayfaring tree *Viburnum lantana*, dog rose *Rosa canina*, gorse *Ulex europaeus*, spindle *Euonymus europaeus*, wild privet *Ligustrum vulgare* and guelder rose *Viburnum opulus*. Native plant species will be used by a wide range of birds and other species in order to nest, feed and shelter.

**R5** An area measuring at least one hectare should be set aside within the area of sheep grazed unimproved calcareous grassland in the south-eastern part of the site for skylarks. Skylarks favour large open areas of tussocky grassland in which to nest, with the current sheep grazing regime limiting the areas suitability for the species and other ground nesting birds.

- R6** A fruit orchard should be incorporated into the landscape design on site including apple, pear, plum and cherry trees, to mitigate for the loss of existing street fruit trees that are likely to be felled during the proposed development. The fruit orchard will provide suitable feeding opportunities for a range of species including mistle thrush, song thrush, blackbird, redwing, fieldfare and bullfinch, with fallen fruit being an important and readily exploited food source for many species during the winter months. A suitable management regime should be implemented for the orchard in order to ensure fallen fruit remains in-situ for birds to feed on the ground. The use of pesticides and herbicides as a management tool should also be avoided.
- R7** The use of chemical pesticides and herbicides as part of the landscape management on site should be avoided pre, during and post development, with organic controls used as an alternative. This will help maintain and enhance invertebrate populations, which form an essential part of many species diets and are the only food source many species use to feed chicks, thus demonstrating the importance of healthy invertebrate populations.
- R8** Recreational activities with the potential to cause significant disturbance to nesting birds including ball games, operation of electronic or motorized devices and/or barbeques should be prohibited in areas identified as supporting high numbers of breeding species and/or species susceptible to disturbance including marsh tit, spotted flycatcher, nightingale, bullfinch, yellowhammer, skylark and linnet.
- R9** The development or installation of buildings or features likely to generate high levels of nighttime light spillage should be avoided around areas of broadleaved semi-natural woodland and large areas of non-amenity grassland in order to prevent disturbance to nocturnal species including tawny owl and barn owl.
- R10** To ensure compliance with the Wildlife and Countryside Act 1981 (as amended), vegetation clearance or any demolition of buildings/structures should be undertaken outside of the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive. If this is not possible then any vegetation that is to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally.

## 7. DRAWINGS

Drawing C127947-06-01 – Breeding Bird Survey



Legend

- Scattered scrub
- Scattered trees
- Fence
- Native species-rich hedge and trees
- Species-poor defunct hedgerow
- Species-poor intact hedgerow
- Amenity grassland
- Semi-improved neutral grassland
- Semi-improved calcareous grassland
- Unimproved calcareous grassland
- Bracken
- Tall ruderal
- Broad-leaved semi-natural woodland
- Broad-leaved plantation woodland
- Coniferous plantation woodland
- Mixed plantation woodland
- Poor semi-improved grassland
- Other habitat: Built-up area with scattered trees present in abundance throughout site
- Site boundary

Project	Fort Halstead		
Drawing	Breeding Bird Survey		
Client	CBRE Ltd		
Drawing Number	C127947-06-01	Revision	00
Scale @ A3	1:8000	Date	October 2018
Approved By	JF	Drawn By	CD

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- Red lists species**
  - ST Song thrush
  - M Mistle thrush
  - SF Spotted flycatcher
  - S Skylark
  - Y Yellowhammer
  - LI Linnet
  - N Nightingale
  - MT Marsh tit
- Amber lists species**
  - TO Tawny owl
  - SD Stock dove
  - BF Bullfinch
  - D Dunnock
  - K Kestrel
- Other species**
  - MG Magpie
  - WP Woodpigeon
  - CC Chiffchaff
  - BC Blackcap
  - NH Nuthatch
  - GS Great spotted woodpecker
  - C Carrion crow
  - CH Chaffinch
  - GC Goldcrest
  - TC Treecreeper
  - J Jay
  - CD Collared dove
  - JD Jackdaw
  - G Green woodpecker
  - GR Greenfinch
  - RO Rook
  - WH Whitethroat
  - GO Goldfinch
  - GW Garden warbler
  - PH Pheasant
  - RL Red-legged partridge
  - R Robin
  - WR Wren
  - B Blackbird
  - CT Coal tit
  - BT Blue tit
  - GT Great tit
  - LT Long-tailed tit
  - PW Pied wagtail
  - SH Sparrowhawk
  - BZ Buzzard





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## APPENDIX 1

### LEGISLATION

The Conservation of Habitats and Species Regulations 2010 (as amended) places a duty on public bodies to take measures to preserve, maintain and re-establish habitat for wild birds.

Nesting and nest building birds are protected under the Wildlife and Countryside Act WCA 1981 (as amended).

Subject to the provisions of the act, if any person intentionally:

- kills, injures or takes any wild bird;
- takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- takes or destroys an egg of any wild bird, he shall be guilty of an offence.

Some species (listed in Schedule 1 of the WCA) are protected by special penalties. Subject to the provisions of the act, if any person intentionally or recklessly:

- disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird, he shall be guilty of an offence.

Several bird species are Species of Principal Importance for Nature Conservation in England, making them capable of being material considerations in the planning process.