Loddon Garden Village

Technical Appendix 11.10 – Breeding Birds

Prepared on behalf of

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Final Report

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1. INTRODUCTION

Scope

1.1 This Technical Appendix supports **Chapter 11 (Ecology)** of the Environmental Statement (ES). It sets out the detailed methodologies and results of the survey work undertaken to inform:

- The baseline evaluation of the breeding bird assemblage supported by the Zone of Influence of the Proposed Development;
- The assessment of likely impacts on the breeding bird assemblage;
- The design of impact avoidance and mitigation measures; and
- The design of biodiversity enhancements for breeding birds.

Site and Development Description

1.2 The Site is a large area of land to the west of Wokingham, between the villages of Shinfield, Arborfield and Sindlesham. It is located outside of the Green Belt and includes the University of Reading's Thames Valley Science and Innovation Park (TVSP). It is largely made up of agricultural land and grasslands, with pockets of woodland and the River Loddon running through the centre of the Site.

1.3 The description of development for the application is as follows:

"Application for the phased development of a new community at Loddon Garden Village, comprising, in outline:

- *up to 2,800 residential units to include up to 100 custom and self-build plots;*
- *2 primary schools (up to 3 forms of entry) to include early years provision and 1 secondary school (up to 12 forms of entry);*
- *one District Centre, to incorporate up to 11,000m2 of Class E (Commercial, business and Service, to include a food store of around 2,500m2), and Class F (Local Community and Learning);*
- *one Local Centre; to incorporate up to 2,400m2 of Class E;*
- *a Sports Hub to include sports pitches and pavilion space;*
- *up to 4,250m2 of further Class E, Class F, and sui generis development to include commercial, health care and public house;*
- *comprehensive green infrastructure including a Country Park, landscaping and public open space, and ecological enhancement measures;*
- *20 gypsy and traveller pitches;*

- *comprehensive drainage and flood alleviation measures to include Sustainable Urban Drainage Systems (SUDS) and engineering measures within Loddon Valley for the River Loddon;*
- *internal road network including spine road with pedestrian and cycle connections and associated supporting infrastructure;*
- *new and modified public rights of way;*
- *associated utilities, infrastructure, and engineering works, including the undergrounding of overhead lines;*
- *Ground reprofiling to accommodate infrastructure, flood alleviation and development parcels;*
- *Up to 0.5ha of land adjoining St Bartholomew's church for use as cemetery;*
- *Electricity substation (up to 1.5ha).*

All matters reserved other than access, incorporating:

- *a new pedestrian, cycle and vehicular access to Lower Earley Way via a new 4th arm to the Meldreth Way roundabout;*
- *a new pedestrian, cycle and vehicular bridge over the M4;*
- *a new pedestrian, cycle and vehicular bridge over the River Loddon;*
- *a new vehicular access to the A327 Reading Road, via a new arm to the Observer Way roundabout;*
- *a new pedestrian, cycle and vehicular access to Thames Valley Science Park;*
- *an initial phase of internal roads with associated drainage, landscape and engineering works and ground reprofiling, between the A327 and the south eastern boundary of the site.*

Application includes full permission for the change of use of 40.4 hectares of agricultural land to Suitable Alternative Natural Greenspace (SANG), 18.35 hectares of SANG link, and provision of Biodiversity Net Gain measures, the demolition and clearance of 20,809 m2 of buildings and structures at the Centre for Dairy Research (CEDAR) and at Hall Farm, the demolition of 3 existing dwellings on Carter's Hill Lane, and the retention of specified buildings at Hall Farm."

Policy and Legislative Context

Legislation

1.4 Full details of the legislation of relevance to ecology and nature conservation are included in **Appendix 11.1**, however those of particular relevance to breeding birds are summarised below.

Wildlife and Countryside Act 1985 (as amended)

1.5 All wild birds and their nests are afforded protection under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

1.6 Additionally, Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) affords extra protection for certain species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependent young, constitutes an offence. Barn Owl are one of the species afforded protection under Schedule 1 of the Wildlife & Countryside Act 1981 (as amended).

The Conservation of Habitats and Species Regulations 2017 (as amended)

1.7 Regulation 10 of the Conservation of Habitats and Species Regulations 2017 (as amended) requires appropriate authorities and conservation bodies, in the exercise of their functions, to take such steps that they consider appropriate in order to secure "the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat (…)".

Natural Environment and Rural Communities (NERC) Act 2006 (as amended)

1.8 Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 lists a number of Species of Principle Importance, the presence of which are to be a material consideration in planning decisions. There are currently 49 bird species listed as Species of Principle Importance under S41 of the NERC Act.

Planning Policies and Biodiversity Strategies

1.9 Full details of the planning policy of relevance to ecology and nature conservation are included in **Appendix 11.1,** however those of particular relevance to breeding birds are summarised below.

National Planning Policy Framework

1.10 The National Planning Policy Framework (NPPF) (2024) sets out the Government's planning policies for England and how they should be applied. With regard to protecting the natural environment, Section 15 of the NPPF requires that planning decisions should enhance the natural environment and provide net gains for biodiversity.

Local Planning Policy

1.11 The Wokingham Borough Council Adopted Core Strategy: Development Plan Document (January 2010) sets out the framework for the development of the borough, through a series of policies and strategies. Of particular relevance to Badgers is Policy CP7 – Biodiversity.

1.12 The Wokingham Borough Local Plan Update 2023-2040 was submitted to the Secretary of State for examination by an independent Planning Inspector in February 2025. Whilst not currently enforced, consideration has been given to these emerging policies during the course of the impact assessment, and design of mitigation, compensation and enhancement strategies.

Berkshire Local Nature Recovery Strategy

1.13 The draft Berkshire Local Nature Recovery Strategy was published in February 2025, with finalisation of the strategy anticipated in the summer of 2025. Formed as a requirement of The Environment Act 2021, Local Nature Recovery Strategies aim to identify priority actions for local

biodiversity, including habitat and species, to create a collaborative landscape level approach to nature restoration. There are currently 14 species of birds listed within the draft species list (Royal Borough of Windsor and Maidenhead, 2025).

Additional Guidance

1.14 The Birds of Conservation Concern (BoCC) list (Stanbury *et al*, 2021) assigns all UK bird species a status of either Green, Amber or Red depending on a number of factors such as changes in population, size or distribution over the last 25 years. This information is determined by a partnership of nature conservation organisations including the Royal Society for the Protection of Birds (RSPB) and British Trust for Ornithology (BTO) and is updated every three to six years.

1.15 The Birds of Conservation Concern list carries no legal weight in itself but is used to set priorities for conversation and guide policy and decision making, and it provides a useful tool for assessing the value of breeding bird assemblages. Many red and amber-listed species are also listed on Section 41 of the NERC Act.

1.16 BoCC 5 (Stanbury *et al.,* 2021) also includes an assessment of the extinction risk of all bird species for Great Britain using the criteria and protocols established globally by the International Union for the Conservation of Nature (IUCN) and reference is made to this.

2. SURVEY AND ASSESSMENT METHODOLOGY

2.1 The approach to ecological impact assessment taken in this report is in line with guidance from the Chartered Institute of Ecology and Environmental Management Guidelines for Ecological Impact Assessment (CIEEM, 2018), as set out in **Appendix 11.2**.

Defining the Zone of Influence

2.2 The area over which the activities as associated with the Proposed Development are considered to potentially affect the breeding bird assemblage, the Zone of Influence (ZoI), has been predicted by considering the activities and resultant biophysical changes arising during the construction and operational phases, as summarised below.

Likely Biophysical Changes

2.3 The predicted biophysical changes of relevance to the breeding bird assemblage are as follows:

Activities and Resultant Biophysical Changes During the Construction Phase

- Noise, lighting and vibration which may cause disturbance to breeding bird assemblages, altering their natural behaviours and impacting fitness and habitat use; and
- Vegetation/habitat clearance which may injure and/or kill individuals, disturb and/or destroy bird nests, cause the loss of foraging/supporting habitats and result in habitat fragmentation.

Activities and Resultant Biophysical Changes During the Operational Phase

- Increased levels of public access which may lead to increased levels of disturbance from people and dogs;
- Increased presence of pets, increasing predation risk for breeding birds;
- Implementation of habitat management plans resulting in the creation of new, and enhancement of existing habitats for breeding birds.

2.4 Some of the changes that could potentially affect the breeding bird assemblage, such as pet predation have effects beyond the construction footprint, whilst others are likely to affect the breeding bird assemblage through localised habitats changes. With this in mind, the potential ZoI that has been considered within this Appendix includes the Site and up to approximately 400m from new residential development.

Desktop Study Methodology

2.5 A biological records search was commissioned from Thames Valley Environmental Records Centre (TVERC) in July 2024, in order to obtain existing records of protected and notable bird species within a 2km radius of the Site, thereby incorporating the potential ZoI and providing context with other breeding populations in the local area.

Field Survey Methodology

2.6 EPR carried out the initial breeding bird surveys across the entire Site between April and July 2022. Due to the size of the Site, and the habitats available the Site was separated into seven areas to ensure the entire Site could be sufficiently surveyed within the time constraints of a breeding bird survey.

2.7 Update surveys were split across 2024 and 2025. Three visits were completed between May – July 2024, and a further three visits between March – May 2025. This ensured early and late breeders were captured within update surveys. The scope of the surveys was reduced for these updates, with the bulk of the EcoValley removed from the survey area, with the exception of areas to be directly impacted by the new proposed road network. It was considered that impacts within the majority of the EcoValley would be positive, and additional information on the species baseline was not needed to fully inform the impact assessment, though update work is anticipated in the future.

2.8 Surveys were undertaken in accordance with methods set out in Gilbert *et al*. (1998), Bibby *et al.* (2000) and by the Bird Survey & Assessment Steering Group (2025). Surveyors walked the Proposed Scheme at a slow pace, covering all areas within 50m of an internal or external boundary, to enable birds to be identified and located. All birds seen or heard were recorded on large-scale maps using standard codes to denote species and behaviour.

2.9 Surveys were undertaken by experienced ornithologists Alice Holley BSc (Hons) MSc, Craig Brakes BSc MSc PhD, Gareth Knass LLB (Hons) MSc MCIEEM, Jodie Southgate BA (Hons) MSc MCIEEM, Katie Cammack BSc (Hons) MSc MCIEEM, Katrina Diedericks BSc (Hons), Mike Wall BSc (Hons) MSc and Rob Souter BSc (Hons) PhD MCIEEM.

2.10 The Bird Survey Guidelines (Bird Survey & Assessment Steering Group, 2025) recommends that six visits are undertaken over the breeding season, between late March and early July. It is considered that six visits are sufficient to demonstrate an understanding of the species assemblage within more complex habitats and therefore can be applicable to most terrestrial habitats. Birds recorded during the survey period (the core bird breeding season) are those that are likely to be breeding, with different levels of evidence enabling breeding to be classed as Proven, Probable or Possible.

2.11 Surveyors walked through the site at a slow pace during suitable weather conditions (principally in the absence of strong wind and persistent rain), to enable all birds to be identified and located. All birds seen or heard were recorded on large-scale maps using standard BTO codes to denote species and behaviour. Routes were varied during each survey visit so that different parts of the site were surveyed at different times of the day.

2.12 Dates and weather conditions for each of the surveys are provided in **Annex 1.**

Barn Owl Surveys

2.13 Checks of suitable Barn Owl roosts/nests were undertaken by Katrina Diedericks BSc (Hons) (CL29/00325). These were carried out by looking for evidence of Barn Owls *Tyto alba*, including birds, pellets, droppings, feathers and down, especially where these occurred in accumulations.

Analysis of Field Data

2.14 The results of the breeding bird surveys were amalgamated and analysed for 2022 according to the methods detailed in Gilbert *et al*. (1998) to identify clusters of two or more registrations for bird species of conservation interest, indicating likely territories. Map registrations were carefully analysed to avoid misinterpretation as the presence of some species may be misleading. For example, some migrants are only likely to be passing through on passage (especially during the early season surveys) or passing over or foraging rather than nesting within the site (e.g. Swallow *Apus apus*).

Survey Limitations and Constraints

2.15 Given that the 2024 and 2025 update surveys only covered the late and early parts of the season respectively, this must be considered when analysing the species assemblage as a whole. For example the absence of summer migrant records in the 2025 surveys would not be indicative of their absence from the Site, but rather a reflection of the survey timings.

Evaluation Methodology

2.16 The evaluation of the breeding bird assemblage has been undertaken in accordance with the Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Marine (CIEEM, 2018).

2.17 The method for describing the importance of areas for birds is based on that developed by Fuller, 1980 & 1982, which is the standard evaluation method that can be applied to EcIA. The objective is to establish the relative importance of bird populations within a geographical context which accords with the CIEEM levels of conservation importance.

2.18 The principal attributes of bird communities that are considered when evaluating the importance of an area for birds are population size, diversity and rarity, as well as the presence of any conservation priority species, as outlined below.

Conservation Priority Species

2.19 Bird species that are listed as Species of Principal Importance for Conservation under Section 41 of the NERC Act 2006, or as Red/Amber-listed Birds of Conservation Concern, are considered to be particularly vulnerable due to factors such as serious population declines or reductions in their natural range. These species are therefore given special consideration when assessing the conservation importance of breeding bird assemblages.

Rarity

2.20 The current Species List and annual reports of the Rare Breeding Bird Panel (RBBP) at www.rbbp.org.uk are a key resource when considering the rarity of a species. The RBBP splits its data into different geographical areas to provide regional context. Rarity should also be considered in a local context where possible.

2.21 Several measures of rarity can be used. Species with fewer than 1,000 breeding pairs in Britain are described as Nationally Rare (Fuller, 1980). A species with a County population of up to 25 pairs might therefore be treated as being rare in the County (depending on the species and its status).

2.22 Rarity can also be recorded by distribution rather than population size. The Breeding Bird Atlas (Balmer et al. 2013) records breeding distributions of birds in Britain and Ireland by 10x10 km grid squares. This makes it possible to describe the frequency of occurrence of individual species in terms of the proportions of squares in which they occur. A 30% level forms a useful line below which species can be described as 'Scarce', for both breeding and wintering species. This method can also be applied on a more local basis where suitable atlases exist, as it does in counties on a tetrad (2x2km) basis.

2.23 The occurrence of species which are specially protected by law or otherwise listed as threatened, although not necessarily strictly rare, can also be helpful in establishing the conservation importance of sites. Species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) or on Annex 1 of the Birds Directive are worthy of special consideration. These lists take into account measures such as population size and distribution.

Relative Population Size

2.24 This is evaluated by assessing the percentage of a population size unit (e.g. national, county) that occurs within the study area. The standard criterion upon which evaluation of population is based is that if 1% or more of the defined geographical unit of a species regularly uses a site, then the site may be important at that geographical scale. This means, for example, that if 1% of the county population occurs, then the site may be of county level importance for that species.

2.25 Sources of population data include Woodward *et al*. (2020b) and the JNCC SSSI Selection Guidelines at the UK level (though generally such sites have already been designated as SPAs or SSSI for their bird interest), the BTO's annual 'BirdTrends' reports and Wetland Bird Survey (WeBS) alerts (where relevant).

Diversity

2.26 The number of species recorded in an area (species richness) is a simple and effective measure of diversity, which can be used in the assessment of a breeding bird assemblage. **Table 2.1** below shows the thresholds commonly used to measure diversity (Fuller, 1980).

2.27 However, since the publication of the criteria in 1980, species diversity has declined significantly, and it is considered that Fuller's thresholds are too high for today's breeding bird populations. For this reason, it is therefore judged appropriate to recalibrate the categories slightly downward, as shown. This is achieved by splitting the 'local' category into two and adding a 'district' category, which also fits with the geographical scale set out in the CIEEM guidelines.

Table 2.1: Breeding bird assessment using the number of breeding bird species.

Level of Importance	Number of Breeding species	
	Fuller (1980)	Adapted criteria
Local	25-49 species	<25
District	-	25-49
County	50-69	50-60
Regional	70-84	70-84
National	85+	85+

3. ECOLOGICAL BASELINE

Desktop Study

3.1 The desktop study returned a number of species of Conservation Concern which may be utilising the Site and the Zone of Influence. This included farmland birds, such as Yellowhammer *Emberiza citrinella*, Skylark *Alauda arvensis* and Grey Partridge *Perdix perdix*, alongside wetland specialists including Snipe *Gallinago gallinago*, Bittern *Botaurus stellaris* and Oystercatcher *Haematopus ostralegus.*

3.2 A total of 136 protected and/or notable bird species records were returned, although not all of these species are considered likely to use the Site. For some species the Site would not provide suitable habitats able to support them, whilst other species recorded were migrants or occasional recordings of species which do not regularly inhabit Berkshire.

Habitat Description

3.3 The Site comprises a mix of habitats, including woodland, wetland, farmland and scrub. The broader landscape comprises a mosaic of semi-rural residential areas, agricultural land and farmland to the south and west, with the dense urban settings of Reading to the north, and Wokingham to the east.

3.4 The Site offers a variety of suitable nesting and foraging habitats for breeding birds with a range of foraging and breeding requirements. Scrub and hedgerows of varying ages provide cover for nesting, whilst the extensive number of mature and veteran trees provide opportunities for cavity dwelling species such as Blue Tit *Cyanistes caeruleus.*

3.5 Arable habitats provide limited opportunities for breeding birds, with minimal arable margins further reducing their value. Crops recorded during the course of the surveys include winter wheat and oats which do provide valuable nesting habitats for Skylark throughout the breeding season.

3.6 The majority of grasslands are improved, species-poor and tightly grazed. As such minimal invertebrate activity is associated with these habitats reducing their value to the breeding bird assemblage, although they will offer foraging opportunities for probing species, although probing species such as Starling *Sturnus vulgaris*.

3.7 The River Loddon and its associated riparian habitats provides diverse and valuable for habitats for breeding birds, including riparian and water species such as Kingfisher *Alcedo atthis*, Grey Wagtail *Motacilla cinerea* and waterfowl. The abundance of invertebrates associated with the wetland habitats, and fish populations provide a variety of food sources, whilst nesting habitats are abundant in the wet woodlands, scrub and reedbed.

Field Survey Results

3.8 During the course of the breeding bird surveys, a total of 94 species were recorded across the Site. This included 27 species Amber-listed species of conservation concern, 16 Red-listed

species and 12 Species of Principle Importance under the NERC Act (2006) (as amended). In addition, seven species listed under Schedule 1 of the Wildlife & Countryside Act 1981 (as amended) were also noted.

3.9 Of those 94 species recorded, 73 are considered to be 'breeding' species. This included 14 Red-listed and 20 Amber-lister breeding species.

3.10 A full species list is included at **Table 3.1** below. In order to provide an accurate reflection of the regular assemblage and usage of the Site by breeding birds, an estimation of occurrence has been provided based on the below:

- Consistently Recorded – species recorded on six plus visits;
- Regularly Recorded – species recorded on four/five visits;
- Occasionally Recorded - species recorded on two/three visits;
- Infrequently Recorded – species recorded once per transect, but may be recorded across multiple transects in a year; and
- Single Observation – species recorded just once per year across the Site.

3.11 The overall assemblage was highly varied, reflecting the mosaic of habitat types available. Key breeding species included widespread but declining farmland birds as well as water and wetland specialists.

Notable Species

Skylark

3.12 The Skylark population is largely concentrated on the eastern side of the River Loddon, which reflects the higher concentration of arable land in this area at the time of the surveys.

3.13 A total of 14 probable Skylark territories were recorded across the Site during the course of the 2022 breeding bird surveys. Of these, three were identified on the land to the west of the River Loddon, whilst the remaining 11 were recorded to the west.

3.14 During the 2024 surveys, 12 probable Skylark territories were recorded, all of which were recorded on the eastern side of the River Loddon.

Barn Owl

3.15 Recorded infrequently during the breeding bird surveys, Barn Owl were frequently seen during bat surveys, where they were noted on multiple occasions to be foraging in the rank grasslands alongside the River Loddon.

3.16 A Barn Owl roost/nest was known to be present within a mature tree located at the southern end of EcoValley. A pair of owls were frequently seen leaving and entering the tree during ecological surveys undertaken across the year. Before a check could be undertaken to confirm whether the tree was being used for a nest, or a roost, the tree fell during a storm in 2023.

3.17 A further tree was investigated for a potential Barn Owl nest in July 2024. The location of the tree is shown on **Map 11.10.1**. Evidence of a nest was present with old feeding signs noted. It

was determined that it has most likely supported a breeding pair where the owlets had recently fledged and was subsequently categorised as an Unoccupied Breeding Site (UBS).

Table 3.1 Species recorded during breeding bird surveys and their breeding status

Name	Scientific Name	Protected Status	Breeding Status	Approximate number of territories (2022)	2022	2024	2025	Notes
Redpoll	*Acanthis flammea*		O	-	Y			Usually a winter visitor, recorded in April 2022, likely late migrant.
Stonechat	*Saxicola rubicola*		O	-	Y			
Mute Swan	*Cygnus olor*		Po	-		Y		Single individual recorded in July 2024.
Bewick Swan	*Cygnus columbianus bewickii*		O	-	Y			Single individual recorded in May 2022. Likely to be from a feral population.
Brambling	*Fringilla montifringilla*		O	-	Y		Y	Usually a winter visitor, recorded in March 2022 and 2025, likely late migrant.
Goosander	*Mergus merganser*		O	-	Y			Usually a winter visitor, recorded in March 2022, likely late migrant
Jack Snipe	*Lymnocryptes minimus*		O	-	Y		Y	Usually a winter visitor, recorded in March 2022, likely late migrant
Mandarin Duck	*Aix galericulata*		Po	-	Y	Y	Y	Occasionally recorded across the Site.
Canada Goose	*Branta canadensis*		Po	-	Y	Y	Y	Occasionally recorded across the Site.
Greylag Goose	*Anser anser*	Amber WL	Po	-	Y	Y	Y	Occasionally recorded across the Site. Peak count of 11 birds in May 2022
Egyptian Goose	*Alopochen aegyptica*		Po	-	Y	Y	Y	Occasionally recorded across the Site.
Mallard	*Anas platyrhynchos*	Amber WDMp1	Po	-	Y	Y	Y	Regularly recorded across of the Site.
Teal	*Anas crecca*	Amber WI	O	-	Y			Single observation of 2 birds in April 2022. Considered migrant visitor.

Name	Scientific Name	Protected Status	Breeding Status	Approximate number of territories (2022)	2022	2024	2025	Notes
Garganey	*Spatula querquedula*		Po	-	Y			Single observation in April 2022.
Red-legged Partridge	*Alectoris rufa*		Po	-	Y	Y	Y	Regularly recorded across all areas of the Site.
Grey Partridge	*Perdix perdix*	Red BDp1/2	Po	-	Y		Y	Single record of singing bird in May 2022, and single record in May 2025.
Pheasant	*Phasianus colchicus*		B	-	Y	Y	Y	Consistently recorded across all areas of the Site.
Grey Heron	*Ardea cinerea*		O	-	Y	Y	Y	Infrequently recorded across the Site. No heronries recorded.
Little Egret	*Egretta garzetta*		O	-		Y		Single observation in July 2024.
Cormorant	*Phalacrocorax carbo*		O	-	Y		Y	Occasionally recorded around the River Loddon.
Sparrowhawk	*Accipiter nisus*	Amber BDMp1	Po	-	Y	Y	Y	Infrequently recorded across the Site.
Red Kite^	*Milvus milvus*		B	-	Y	Y	Y	Consistently recorded across all areas of the Site. Nest observed by The Rectory.
Buzzard	*Buteo buteo*		Po	-	Y	Y	Y	Regularly recorded across all areas of the Site.
Moorhen	*Gallinula chloropus*	Amber BDMp2	Po	-	Y	Y	Y	Occasional recordings, largely around River Loddon.
Oystercatcher	*Haematopus ostralegus*	Amber BDMp1/2	O	-		Y		Single observation of four birds in July 2024.
Lapwing*	*Vanellus vanellus*	Red BDp1/2	Po	-	Y			Two localised observations in April & June 2022.
Snipe	*Gallinago gallinago*	Amber BDMr2	Po	-	Y		Y	Infrequent recordings along floodplain. Peak count 19 individuals in March 2022.

Name	Scientific Name	Protected Status	Breeding Status	Approximate number of territories (2022)	2022	2024	2025	Notes
Black-headed Gull	*Chroicocepha-lus ridibundus*	Amber WDMp1, WI	O	-	Y	Y	Y	Occasionally recorded across the Site.
Common Gull	*Larus canus*	Amber WI	O	-	Y		Y	Infrequently recorded across the Site.
Herring Gull*	*Larus argentatus*	Red BDp2 WDp1	O	-	Y	Y	Y	Occasionally recorded across the Site.
Lesser Black-backed gull	*Larus fuscus*	Amber BL, BI	O	-	Y	Y	Y	Occasionally recorded across the Site.
Feral Pigeon	*Columba livia*		Pr	-	Y	Y	Y	Consistently recorded around the Centre for Dairy Research
Stock Dove	*Columba oenas*	Amber BI	Pr	-	Y	Y	Y	Occasionally recorded across all areas of the Site.
Woodpigeon	*Columba palumbus*	Amber BI	Pr	-	Y	Y	Y	Consistently recorded across all areas of the Site.
Collared Dove	*Streptopelia decaocto*		Pr	-	Y	Y	Y	Occasionally recorded across all areas of the Site.
Cuckoo*	*Cuculus canorus*	Red BDp1/2	Po	-	Y	Y		Single observations recorded in June 2022 and 2024.
Barn Owl^	*Tyto alba*		B	-	Y			Infrequently recorded across the Site.
Tawny Owl	*Strix aluco*	Amber BDMp1/2	Po	-	Y	Y		Infrequently recorded across the Site.
Swift	*Apus apus*	Red BDp1	Po	-	Y	Y		Regularly recorded across the Site.
Kingfisher^	*Alcedo atthis*		Po	-	Y		Y	Occasionally recorded along River Loddon and Barkham Brook.
Great Spotted Woodpecker	*Dendrocopus major*		B	-	Y	Y	Y	Regularly recorded across all areas of the Site.

Name	Scientific Name	Protected Status	Breeding Status	Approximate number of territories (2022)	2022	2024	2025	Notes
Green Woodpecker	*Picus viridis*		Pr	-	Y	Y	Y	Regularly recorded across all areas of the Site.
Kestrel	*Falco tinnunculus*	Amber BDMp1/2	Po	-	Y	Y		Infrequently recorded across the Site.
Hobby	*Falco subbuteo*		O	-		Y		Single observation in May 2024.
Peregrine^	*Falco peregrinus*		O	-	Y			Single observation in July 2022.
Jay	*Garrulous glandarius*		Pr	-	Y	Y	Y	Regularly recorded across all areas of the Site.
Magpie	*Pica pica*		Pr	-	Y	Y	Y	Consistently recorded across all areas of the Site.
Jackdaw	*Corvus monedula*		Pr	-	Y	Y	Y	Consistently recorded across all areas of the Site. Recorded in mixed corvid flocks, of up to approximately 350 birds.
Rook	*Corvus frugilegus*	Amber ERLOB	B	-	Y	Y	Y	Regularly recorded across all areas of the Site. Recorded in mixed corvid flocks, of up to approximately 350 birds. Rookery located within 'The Gorse' woodland and off-site at Carters Hill.
Raven	*Corvus corax*		O	-			Y	Single flyover observation in April 2025.
Carrion Crow	*Corvus corone*		Pr	-	Y	Y	Y	Consistently recorded across all areas of the Site. Recorded in mixed corvid flocks, of up to approximately 350 birds.
Coal Tit	*Periparus ater*		Pr	-	Y	Y	Y	Occasionally recorded across the Site.
Blue Tit	*Cyanistes caeruleus*		B	-	Y	Y	Y	Consistently recorded across all areas of the Site.
Great Tit	*Parus major*		B	-	Y	Y	Y	Consistently recorded across all areas of the Site.

Name	Scientific Name	Protected Status	Breeding Status	Approximate number of territories (2022)	2022	2024	2025	Notes
Woodlark*^	*Lullula arborea*		O	-			Y	Single observation in March 2025.
Skylark*	*Alauda arvensis*	Red BDp2	B	14	Y	Y	Y	Consistently recorded across all areas of the Site.
Swallow	*Hirundo rustica*		Po	-	Y	Y		Consistently recorded across all areas of the Site.
House Martin	*Delichon urbicum*	Red BDp1/2	Po	-		Y		Infrequently recorded across the Site.
Cetti's Warbler^	*Cettia cetti*		Pr	3	Y	Y	Y	Regularly recorded around the River Loddon.
Long-tailed Tit	*Aegithalos caudatus*		B	-	Y	Y	Y	Regularly recorded across all areas of the Site.
Spotted Flycatcher	*Muscicapa striata*	Red BDp1	Po	-		Y		Single observations in May & June 2024.
Chiffchaff	*Phylloscopus collybita*		Pr	-	Y	Y	Y	Frequently recorded across all areas of the Site.
Willow Warbler	*Phylloscopus trochilus*	Amber BDMp1/2	Pr	-		Y		Single observation in July 2024.
Sedge Warbler	*Acrocephalus schoeno-baenus*	Amber BDMp2	Pr	3	Y	Y		Occasionally recorded around the River Loddon.
Reed Warbler	*Acrocephalus scirpaceus*		Pr	-	Y	Y		Occasionally recorded around the River Loddon.
Blackcap	*Sylvia atricapilla*		B	-	Y	Y	Y	Consistently recorded across the Site.
Garden Warbler	*Sylvia borin*		Pr	-	Y	Y		Infrequently recorded across the Site.
Whitethroat	*Curruca communis*	Amber BDMp2	Pr	21	Y	Y	Y	Consistently recorded across the Site.

Name	Scientific Name	Protected Status	Breeding Status	Approximate number of territories (2022)	2022	2024	2025	Notes
Firecrest^	*Regulus ignicapillus*		Pr	-		Y	Y	Single observations in June 2024 and March 2025
Goldcrest	*Regulus regulus*		Pr	-	Y	Y	Y	Regularly recorded across all areas of the Site.
Wren	*Troglodytes troglodytes*	Amber BI	B	-	Y	Y	Y	Consistently recorded across all areas of the Site.
Nuthatch	*Sitta europaea*		B	-	Y	Y	Y	Regularly recorded across all areas of the Site.
Treecreeper	*Certhia familiaris*		Pr	-	Y	Y	Y	Occasionally recorded across the Site.
Starling*	*Sturnus vulgaris*	Red BDp1/2	Po	-	Y	Y	Y	Regularly recorded across all areas of the Site.
Blackbird	*Turdus merula*		B	-	Y	Y	Y	Consistently recorded across all areas of the Site.
Fieldfare^	*Turdus pilaris*	Red BDp1/2 BDr1	O	-	Y		Y	Usually a winter visitor, recorded in April 2022 and March 2025, likely late migrant.
Redwing^	*Turdus iliacus*	Amber BDMr1/2, BR	O	-	Y		Y	Usually a winter visitor, recorded in April 2022 & March 2025, likely late migrant.
Song Thrush*	*Turdus philomelos*	Amber BDMp2	B	25	Y	Y	Y	Consistently recorded across all areas of the Site.
Mistle Thrush	*Turdus viscivorus*	Red BDp2	Pr	3	Y	Y		Occasionally recorded across the Site.
Robin	*Erithacus rubecula*		B	-	Y	Y	Y	Consistently recorded across all areas of the Site.
Nightingale	*Luscinia megarhynchos*	Red BDp1/2	Po	-	Y			Single observation in April 2022.
Redstart	*Phoenicurus phoenicurus*	Amber BDMp2	Po	-		Y		Single observations in May 2024.

Name	Scientific Name	Protected Status	Breeding Status	Approximate number of territories (2022)	2022	2024	2025	Notes
House Sparrow*	*Passer domesticus*	Red BDp2	B	-	Y	Y	Y	Regularly recorded across all areas of the Site.
Dunnock*	*Prunella modularis*	Amber BDMp2	Pr	20	Y	Y	Y	Consistently recorded across all areas of the Site.
Grey Wagtail	*Motacilla cinerea*	Amber BDMp2	Pr	2	Y	Y	Y	Consistently recorded along the River Loddon.
Pied Wagtail	*Motacilla alba*		Pr	-	Y	Y	Y	Regularly recorded across all areas of the Site.
Meadow Pipit	*Anthus pratensis*	Amber BDMp2	O	-	Y		Y	Infrequently recorded in March & April 2022, and March 2025. Considered migrant visitor.
Chaffinch	*Fringilla coelebs*		Pr	-	Y	Y	Y	Consistently recorded across all areas of the Site.
Bullfinch*	*Pyrrhula pyrrhula*	Amber BDMp2	Pr	-	Y	Y	Y	Infrequently recorded around arable land.
Greenfinch	*Carduelis chloris*	Red BDp1/2	Pr	13	Y	Y	Y	Regularly recorded across all areas of the Site.
Linnet*	*Linaria cannabina*	Red BDp2	Pr	-	Y			Occasionally recorded across all areas of the Site.
Goldfinch	*Carduelis carduelis*		Pr	-	Y	Y	Y	Consistently recorded across all areas of the Site.
Yellow-hammer*	*Emberiza citronella*	Red BDp2	Pr	2	Y		Y	Occasionally recorded across all areas of the Site.
Reed Bunting*	*Emberiza schoeniclus*	Amber BDMp2	Pr	2	Y	Y	Y	Occasionally recorded along the River Loddon.

Key

B	Breeding confirmed (nest or young seen)
Pr	Breeding probable (holding territory, e.g. singing male)
Po	Breeding possible (present during breeding season in suitable habitat)

O	Observed during breeding season, but no evidence of breeding (i.e. raptors flying over, herons with no evidence of heronry, ducks summering on an urban pond)
N	Not breeding: wintering, transients or passage
*	Listed under Section 41 of the NERC Act 2006
^	Listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)

Bird of Conservation Concern (BoCC) codes:

Red-list criteria

HD	Historical Decline in breeding population
BDp1/2	Severe breeding population decline over 25 years/longer term
BDr1/2	Severe breeding range decline over 25 years/longer term
WDp1/2	Severe non-breeding population decline over 25 years/longer term
WDr1	Severe non-breeding range decline over 25 years
IUCN	Globally Threatened – CR (critically endangered) EN (endangered) VU (vulnerable)

Amber-list criteria

HDrec	Historical Decline in breeding population – recovery
BDMp1/2	Moderate breeding population decline over 25 years/longer term
WDMp1/2	Moderate non-breeding population decline over 25 years/longer term
BDMr1/2	Moderate breeding range decline over 25 years/longer term
WDMr1	Moderate non-breeding range decline over 25 years
BR/WR	Breeding/non-breeding rarity
BL/WL	Breeding/non-breeding localisation
BI/WI	Breeding/non-breeding international importance
ERLOB	Threatened in Europe – CR (critically endangered) EN (endangered) VU (vulnerable)

4. EVALUATION

4.1 If based on species diversity alone, the breeding bird assemblage would be considered to be of regional importance, in line with Fuller's threshold as set out in **Section 2** above. However, the total number of breeding species is at the lower end of the regional range. Alongside this, a number of breeding species were not regularly recorded across the Site, with only low numbers or individual observations.

4.2 With reference to the evaluation criteria set out in **Section 2**, the assemblage of breeding bird species within the ZoI of the Site is therefore considered to be of **County** level importance. This is largely on account of the overall species diversity supported by the Site, the number of Conservation Priority species recorded and the abundance of a number of notable species.

5. REFERENCES

Bibby, C.J.; Burgess, N.D.; Hill, D.A. & Mustoe, S.H., (2000) *Bird Census Techniques*. Second Edition, Academic Press, London.

Bird Survey & Assessment Steering Group. (2025). *Bird Survey Guidelines for assessing ecological impacts,* https://birdsurveyguidelines.org

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3 updated September 2024.* Chartered Institute of Ecology and Environmental Management, Ampfield.

Fuller, R.J. (1982) *Bird Habitats in Britain*, T & AD Poyser, London.

Fuller, RJ. (1980) *A method of assessing the ornithological interest of sites for nature conservation*. Biological Conservation 17:229-239.

Gilbert, G.; Gibbons, D.W. & Evans, J. (1998) *Bird Monitoring Methods: A manual of techniques for key species*. RSPB/BTO/JNCC/WWT/ITE/The Seabird Group RSPB/BTO, Sandy.

Godden, R., Walford, M., Tomczynski, A. & Wearing, S. (2024) The Birds of Berkshire: Annual Report for 2020. Berkshire Ornithological Club.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D. and Win, I (2021). *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114, 723-747.

MAP 11.10.1 Barn Owl Nest Location

KEY

Site boundary

Barn Owl nest location

SCALE: 1:11,000 at A3

0 100 200 300 400 500 Metres

N

EPR

CLIENT: University of Reading

PROJECT: Loddon Garden Village

DATE: 30 July 2025

Y:\Loddon Garden Village, Shinfield 2201\GIS\Planning Application\Technical Appendices\Birds\Map11.10.1_BarnOwlNestLocation_P2342_3965_300725.aprx

Aerial Image: Maxar, Microsoft

Annex 1

Survey Meta data

2022

Transect	Date	Start Time	Sunrise / Sunset	End Time	Temperature (^{o}C)	Cloud Cover (%)	Wind (Beaufort Scale)	Rain
1	31/3/22	06:30	06:39	09:00	2 - 3	60 - 85	2 - 3	Dry
	14/04/22	06:30	06:08	09:00	2	60	1 - 2	Dry
	24/05/22	18:45	20:59	22:00	16 – 13	15	0 - 1	Dry
	14/06/22	05:00	04:44	07:30	10 - 17	0	0 - 1	Dry
	28/06/22	05:10	04:46	08:00	9 - 13	10	0 - 1	Dry
	11/07/22	Not recorded	04:57	Not recorded	12.5	5	0 - 1	Dry
2	30/03/22	06:40	06:41	09:30	7.5 - 9	100	0 - 1	Dry
	27/04/22	Not recorded	05:41	Not recorded	10	Not recorded	1 - 2	Dry
	24/05/22	19:00	20:59	22:00	14 - 10	50	0 - 1	Dry
	14/06/22	05:15	04:44	08:15	8.5	0	0 - 1	Dry
	29/06/22	5:20	04:47	08:40	14	100	1 - 2	Dry
	11/07/22	05:10	04:57	08:00	13	5	0 - 1	Dry
3	30/03/22	06:40	06:41	10:00	7	100	0 - 1	Dry
	14/04/22	05:50	06:08	09:30	7 – 11	5-95	0 - 1	Mist for first hour
	24/05/22	19:00	20:59	22:00	18 - 9	50	1-2	Dry

	13/06/22	05:10	04:44	08:40	13.5	100	0-1	Rain clear by 05:20 then dry and sunny by end of survey
	14/06/22	05:26	04:44	08:15	9	0	0-1	Dry
	11/07/22	05:00	04:57	08:00	12	0	0-1	Dry
4	29/03/22	06:30	06:44	09:00	7.5 - 9	100	0 - 1	Rain before survey + first 15 mins
	20/04/22	05:45	05:55	08:20	7.5 - 11	0	0 - 1	Dry
	26/05/22	06:30	04:56	08:00	13	90	0 - 1	Dry
	13/06/22	Not recorded	04:44	Not recorded	18	40	1 - 2	Dry
	07/07/22	05:20	04:53	08:20	17	80	3 - 4	Dry
	12/07/22	05:20	04:58	07:20	16	80	0 - 1	Dry
5	29/03/22	06:44	06:44	09:50	8	100	1 - 2	Raining
	21/04/22	06:00	05:53	08:45	8 – 14	0	0 - 1	Dry
	29/05/22	05:00	04:53	09:00	12	50	2 - 3	Dry
	13/06/22	19:14	04:44	22:80	18	30	1 - 2	Dry
	28/06/22	05:15 – 06:45	04:46	07:30 – 08:00	9 - 16	30	1 - 2	Dry
	12/07/22	05:10	04:58	08:00	17	80	0 - 1	Dry
6	29/03/22	09:00 (Late start due to surveyor sickness.	06:44	10:30	8 - 9	100	0 - 1	Dry

		Birds still active)						
	21/04/22	05:30	05:53	08:00	7.8 – 14.2	50	0 - 1	Dry
	25/05/22	05:26	04:57	08:04	9	20	0 - 1	Dry
	13/06/22	19:00	04:44	22:21	19	25	1 - 2	Dry
	28/06/22	05-10	04:46	08:10	9.5	15	0 - 1	Dry
	12/07/22	05:00	04:58	08:00	16	90	0 - 1	Dry
7	29/03/22	06:45	06:44	08:30	7.5 - 9	100	0 - 1	Rain before survey
	26/04/22	05:15	05:43	08:00	5 – 8	100	2 - 3	Dry
	25/05/22	05:20	04:57	08:10	9	20	1 - 2	Dry
	13/06/22	19:20	04:44	22:20	19	40	0 - 1	Dry
	28/6/22	05:20	04:46	08:00	9	15	0 - 1	Dry
	14/07/22	05:00	05:00	08:00	14.5	40	1 - 2	Dry
North of M4	25/05/22	07:15	04:57	09:00	10	10	0 - 1	Dry
	14/06/22	05:15	04:44	07:15	9 - 15	0	0	Dry
	23/06/22	06:30	04:44	08:00	12 - 14	80	0	Dry and then spots of rain from 07:20
	11/07/22	9:20	04:57	Not recorded	Not recorded	0	0 - 1	Dry

2024

Transect	Date	Start Time	Sunrise	End Time	Temperature (^{o}C)	Cloud Cover (%)	Wind (Beaufort Scale)	Rain

2	29/5/24	07:05	04:52	09:40	15	50	1 - 2	Dry
	28/06/24	07:00	04:46	09:00	13	50	2 - 3	Dry
	09/07/24	07:30	04:55	09:00	16 - 18	100 - 50	0 - 1	Dry
4	24/5/24	05:10	04:57	07:45	6 – 10	20 - 70	2 - 3	Dry
	27/06/24	05:00	04:46	07:15	14 - 16	30 – 100	1 - 2	Dry
	08/07/24	05:25	04:54	08:00	9.5 - 15	10 - 30	0 - 1	Dry with early mist
5	29/05/24	05:15	04:52	07:40	15	100	1 - 2	Dry at start with light rain
	12/06/24	05:15	04:44	09:15	9.5 - 13	90 - 60	0 - 1	Dry
	11/07/24	05:15	04:57	08:15	10	0	0 - 1	Dry
6	31/05/24	05:15	04:50	08:30	10 - 14	50 - 70	3 - 5	Dry
	07/06/24	05:00	04:46	09:00	5.4 - 15	20	1	Dry
	14/06/24	05:15	04:43	09:00	11.5 - 13	100 - 90	1 - 4	Dry
	15/07/24	05:35	05:02	08:30	10 - 16	30 - 100	0 - 1	Dry
7	03/05/24	05:10	05:29	07:15	11	100	0 - 1	Drizzle
	27/06/24	04:42	04:46	Not recorded	16 - 20	10 - 100	0 - 2	Dry
	11/07/24	05:20	04:57	07:40	10 - 14	0 - 80	0 - 2	Dry
North of M4	29/05/24	05:15	04:52	06:42	15	80 - 50	1 - 2	Dry
	28/06/24	05:15	04:46	06:45	12	20	1	Dry
	12/07/24	06:20	04:58	08:20	10 - 15	50 - 30	0 - 1	Dry

2025

Transect	Date	Start Time	Sunrise	End Time	Temperature (^{o}C)	Cloud Cover (%)	Wind (Beaufort Scale)	Rain
2	09/04/25	06:30	06:31	08:45	0 - 4	0	0 - 1	Dry
	29/04/25	05:50	05:39	08:10	6-12	12	0-1	Dry
	06/06/25	05:00	04:49	07:15	12-13	100	1-2	Light at times
4	07/03/25	06:30	06:36	09:50	6 - 12	0	1 - 2	Dry
	15/04/25	06:15	06:08	09:15	9-14	100	1	Dry
	01/05/25	05:30	05:36	08:00	5	0	0	Dry
5	19/03/25	06:30	06:06	10:15	-1 - 11	0 - 40	0 - 1	Dry
	29/04/25	06:00	05:40	08:45	8-18	0	0	Dry
	06/05/25	06:20	05:27	09:45	3.5-10.5	50	1-3	Dry
6	19/03/25	06:10	06:06	10:00	4 - 11	40 - 20	0 - 1	Dry
	30/04/25	06:00	05:38	08:45	5-15	0	0	Dry
	07/05/25	06:00	05:25	09:45	4-12	25	2	Dry
7	11/03/25	06:20	06:27	09:20	5 - 4	0	1 - 2	Dry
	16/4/25	06:30	06:06	09:20	8-13	25	4	Dry
	09/05/25	05:26	05:22	08:30	3	100	0 – 1	Dry
North of M4	27/03/25	05:55	05:50	08:00	4 - 8	0	0 - 1	Dry
	22/04/25	06:05	05:54	08:30	4 – 8	12	0 – 1	Dry
	12/06/25	05:00	04:47	07:00	13 – 15	25	1 – 2	Dry