



Hallam Land Management

NW Bicester

WINTERING BIRD SURVEY REPORT

November 2021

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1.0 NON-TECHNICAL SUMMARY

- 1.1 FPCR Environment & Design were commissioned by Hallam Land Management to conduct a wintering bird survey at a proposed development site to the northwest of Bicester, Oxfordshire during the winter of 2020-21. Proposals for the site include the construction of residential dwellings, employment areas, schools, an energy centre and extensive areas of green infrastructure and public open space.
- 1.2 The survey was undertaken between November 2020 and February 2021 during which time a total of 55 bird species were recorded, of which 24 were considered 'notable species'.
- 1.3 The wintering bird assemblages within the site were typical of the habitats present, comprising mainly common and widespread species. The assemblages associated with the internal fields, hedgerows and small ponds are considered of **Local** conservation importance. The site does not qualify for Local Wildlife Site designation in Oxfordshire on the basis of its wintering bird species and/or assemblage.
- 1.4 Grey wagtail was considered of **County** nature conservation importance and a further 15 species were considered to be of **Local** conservation importance given their respective conservation statuses and abundance on site during the winter months. The remaining species recorded were considered of **Site** conservation importance.
- 1.5 The current development proposals will lead to a **Minor Adverse** impact on the majority of farmland specialists recorded since although there will be a complete loss of agricultural habitat, this will be partially mitigated by the retention / creation of sizeable areas of species-rich grassland and adjacent scrub/hedgerows planting within the green infrastructure of the scheme. The impact on grey wagtail will be **Negligible** due to the creation of permanently wet areas and sustainable urban drainage systems that will serve to greatly reduce the impact on the species.
- 1.6 The current proposals will lead to a **Negligible** impact on the assemblages associated with the watercourse corridor and the hedgerows/trees since these features will be retained completely or in their vast majority. In the long-term there will be a **Local Beneficial** impact for the woodland assemblage as the proposed planting within the development establishes.
- 1.7 A range of enhancement opportunities have been suggested based on the habitats and bird species recorded to achieve biodiversity gains. These include sensitive planting schemes, creation of permanently wet sustainable urban drainage systems and specific recommendations for the most adversely affected species.

2.0 INTRODUCTION

- 2.1 FPCR Environment & Design Ltd were commissioned by Hallam Land Management to undertake a Wintering Bird Survey (WBS) on a site to the north west of Bicester (central OS grid reference SP 570 251), hereafter referred to as 'the site'. Site Location and Context
- 2.2 The site is dominated by arable cropland with species poor and improved grassland for grazing livestock, scattered scrub, hedgerows, and small woodland blocks. Three small watercourses run across the site, one close to the site's northern boundary, a second towards the southern end of the site and the third running north-south from the existing development to join the River Bure at Lords Lane. Along these watercourse corridors there is a mix of dense and scattered scrub and standard trees.
- 2.3 The site is bound by existing residential development to the north-east, the railway approaching Bicester North station to the south. The remaining perimeter of the site is bound by existing agricultural boundaries.

Site Proposals

- 2.4 The site is proposed as a mixed use development, with an extensive network of green infrastructure and public open space including which provides opportunities for habitat mitigation and enhancements.

Survey Objectives

- 2.5 The Wintering Bird Survey was carried out across four visits to site between November 2020 and February 2021. The objectives of the survey were to:
- Identify the presence and distribution of wintering birds;
 - Evaluate the conservation importance of wintering bird populations present;
 - Evaluate the importance of wintering bird populations and the anticipated residual impacts of the development, and
 - To identify areas of ornithological interest and make recommendations to minimise the potential impact of the scheme.

3.0 LEGISLATION & STATUS

Legislation

- 3.1 The Wildlife and Countryside Act 1981 (as amended) (WCA) is the principal legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law, and it is an offence, with certain exceptions, to recklessly or intentionally:
- Kill, injure or take any wild bird.
 - Take, damage, or destroy the nest of any wild bird while in use or being built; or
 - Take or destroy the egg of any wild bird.
- 3.2 Additional protection is afforded to species listed on Schedule 1 of the WCA, whereby intentional disturbance whilst building or occupying a nest or disturbance of dependent young is also considered an offence.
- 3.3 Certain species have also been identified as Species of Principal Importance (SPI) under Section 41 of the NERC Act 2006 (NERC S.41). The S.41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.
- 3.4 The site falls within the Oxfordshire Local Biodiversity Action Plan (LBAP) which identifies a number of targets for UK priority species that occur within this area, however no bird species are included.

Status

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

4.0 METHODOLOGY

Desktop Study

- 4.1 To compile existing baseline ornithological information, the following statutory and non-statutory organisations were consulted for data regarding designated sites for which birds are a qualifying feature, and protected/notable bird records:
- Natural England via the Multi Agency Geographic Information for the Countryside (MAGIC) website
 - Thames Valley Ecological Records Centre (TVERC)
- 4.2 The geographical extent of the search area for biodiversity information was related to the significance of sites and species and potential zones of influence which might arise from development within the Site, as follows:
- 15km around the Site boundary for sites of International Importance (e.g. Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites);
 - 2km around the Site boundary for statutory sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSIs)) and
 - 1km around the Site for non-statutory designated sites of County Importance (e.g. Sites of Importance for Nature Conservation (SINCs)/Local Wildlife Sites (LWSs) and protected or otherwise notable species records within the last 20 years.

Field Survey

- 4.3 To provide a reasonable level of accuracy for determining the population status of the wintering birds on the site, four surveys were undertaken between 9:00 and 16:00 in November and December 2020, and January and February 2021. A route was mapped out prior to the surveys being undertaken, paying particular attention to any open field interiors as these provide valuable winter foraging habitat for farmland birds. Linear features, such as hedgerows and watercourses, and other features such as ponds and scrub were also taken into consideration. Bird surveys were not undertaken in unfavourable conditions, such as heavy rain or persistent strong wind (conditions which can negatively affect the results). Table 1 provides details of the survey dates and weather conditions.

Table 1: Wintering Bird Survey Dates and Conditions

Survey	Date	Cloud Cover (%)	Rain	Wind (Beaufort)	Visibility
1	26.11.20	5	None	Light Air	Excellent
2	15.12.20	15	None	Calm	Excellent
3	15.01.21	60	None	Light Air	Very Good
4	09.02.21	80	None	Calm	Excellent

- 4.4 The methodology employed was broadly based on territory mapping¹ used for the British Trust for Ornithology (BTO) Common Bird Census (CBC). Standard BTO species codes and symbols for bird activities were used to identify birds and denote activity, sex and age where appropriate.

Species & Assemblage Assessment

- 4.5 The Chartered Institute of Ecology and Environmental Management (CIEEM) guidance on ecological impact assessment assesses nature conservation importance within a geographical context². To attain each level of importance, an ornithological resource or one of the features (species population or assemblage of species) should meet the criteria set out in Table 2. In some cases, professional judgment may be required to increase or decrease the allocation of importance, based upon local knowledge
- 4.6 The site has also been assessed against the selection criteria for Local Wildlife Site (LWS) for Oxfordshire³ on a number of criteria set out for breeding birds. LWSs are recognised by central government as an important tool in promoting sustainable development and protecting biodiversity.

The recent county annual bird report the *Birds of Oxfordshire 2013*⁴ was consulted to inform the assessment. Table 2: Evaluation Criteria

Nature Conservation Value	Examples of Selection Criteria
International	A species which is part of the cited interest of an SPA and which regularly occurs in internationally or nationally important numbers. A species present in internationally important numbers (>1% of international population).
National	A species which is part of the cited interest of a SSSI and which regularly occurs in nationally or regionally important numbers. A nationally important assemblage of breeding or over-wintering species. A species present in nationally important numbers (>1% UK population). Rare breeding species (<300 breeding pairs in the UK).
Regional	Species listed as being of principal importance under NERC S.41 which are not covered above, and which regularly occurs in regionally important numbers. Species present in regionally important numbers (>1% of regional population). Sustainable populations of species that are rare or scarce within a region. Species on the BoCC Red List & which regularly occur in regionally important numbers.
County	Species listed as being of principal importance under NERC S.41 which are not covered above and which regularly occurs in county important numbers Species present in county important numbers (>1% of county population). Sustainable populations of species that are rare or scarce within a county, or are listed as being of principal importance under S41 of the NERC Act. A site designated for its county important assemblage of birds (e.g. a SINC Site). Species on the BoCC Red List & which regularly occur in county important numbers.
Local	Other species of conservation interest (e.g. all other species on the BoCC Red and Amber List or species listed as being of principal importance under NERC S.41 which are not covered above) regularly occurring in locally sustainable populations. Sustainable populations of species which are rare or scarce within the locality.
Site	Species that are common and widespread

¹ Bibby, C.J., N.D. Burgess & D.A. Hill, 2000: *Bird Census Techniques*: 2nd Edition. London: Academic Press

² http://www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf

³ Thames Valley Environmental Records Centre and Buckinghamshire & Milton Keynes Environmental Records Centre [online]. Local Wildlife Sites Selection Criteria (Version 7). Available from: https://www.tverc.org/cms/sites/tverc/files/LWS%20Selection%20Criteria_v7%20Aug18.pdf

⁴ Oxford Ornithological Society 2018. *Birds of Oxfordshire 2013*.

5.0 RESULTS & EVALUATION

Desk Study

Designated Sites

- 5.1 One statutory site of some relevance to birds was present within the search area, located 400m north west of the Site.. Ardley Cutting & Quarries SSSI is primarily designated for its geological significance, but its biological interest associated with limestone grassland, scrub, ancient woodland, and wetland habitats is also highlighted, although no individual bird species are mentioned, these habitats are likely to support a range of species. The SSSI also forms part of the non-statutory Ardley & Heyford Conservation Target Area also noting considerable species interest for the area's bird assemblage in its reason for designation.

Protected/Notable Species

- 5.2 Records for eight notable species, bullfinch *Pyrrhula pyrrhula*, dunnoek *Prunella modularis*, house sparrow *Passer domesticus*, red kite *Milvus milvus*, song thrush *Turdus philomelos*, starling *Sturnus vulgaris*, and swift *Apus apus*, were located within 1km of the site within the last 20 years. There were no records from within the boundary of the site.
- 5.3 A significant number of these returned records comprised swifts from the existing developed area on the north edge of Bicester, with the site very unlikely to include habitats to support this urban specialist. The remaining seven species comprise common generalist species which the on-site habitats have potential to support.

Field Survey

- 5.4 A total of 55 bird species were recorded within the survey area (Appendix A). Of these, 24 species meet the criteria of at least one of the following pieces of legislation discussed above: Schedule 1 of the WCA; Section 41 of the NERC Act 2006; and BoCC Red or Amber lists. These species are hereafter referred to as 'notable' species.
- 5.5 Table 3 provides a summary of the notable species recorded during the Wintering Bird Survey, whilst Figure 1 shows the approximate locations where they were recorded.

Table 3: Notable Bird Species Recorded and Their Recent Status in Oxfordshire

Species	Legal / Conservation Status	Peak Count / Number of Survey Occasions Recorded	Recent Status in Oxfordshire
Mallard <i>Anas platyrhynchos</i>	Amber List	3 / 2	Very common resident
Teal <i>Anas crecca</i>	Amber List	3 / 1	Very frequent winter visitor, very rare breeder
Grey Partridge <i>Perdix perdix</i>	Red List NERC S.41	19 / 2	Regular in open farmland but declining sharply since 1960s. Numbers augmented by releases
Stock Dove <i>Columba oenas</i>	Amber List	4 + 1 flyover / 3	Numerous resident

Lapwing <i>Vanellus vanellus</i>	Red List NERC S.41	19 flyovers / 3	Once common resident but numbers of breeding pairs have declined
Snipe <i>Gallinago gallinago</i>	Amber List	2 / 1	Common winter visitor, small and declining breeding population
Black-headed Gull <i>Chroicocephalus ridibundus</i>	Amber List	71 + 2 flyovers / 2	Common winter visitor, small but increasing breeding population
Herring Gull <i>Larus argentatus</i>	Red List NERC S.41	1 flyover / 1	Winter Frequent visitor in mid-winter, occasional at other times.
Lesser Black-backed Gull <i>Larus fuscus</i>	Amber List	21 / 2	Common visitor all year, some breed
Red Kite <i>Milvus milvus</i>	Green List WCA Sch. 1	5 + 1 flyovers / 4	Established resident
Kestrel <i>Falco tinnunculus</i>	Amber List	4 / 4	Common resident
Skylark <i>Alauda arvensis</i>	Red List	32 + 3 flyovers / 4	Common resident and passage migrant
Starling <i>Sturnus vulgaris</i>	Green List NERC S.41	252 + 42 flyovers / 4	Widespread winter visitor but much reduced breeding distribution since 1980s
Song Thrush <i>Turdus philomelos</i>	Red List NERC S.41	26 / 3	Common resident, perhaps declining in suburban areas. Strong autumn immigration augments wintering population
Mistle Thrush <i>Turdus viscivorus</i>	Red List	3 / 3	Common resident
Redwing <i>Turdus iliacus</i>	Red List WCA Sch. 1	164 + 73 flyovers / 4	Common winter visitor and passage migrant
Fieldfare <i>Turdus pilaris</i>	Red List WCA Sch. 1	174 / 4	Very common winter visitor and passage migrant.
House Sparrow <i>Passer domesticus</i>	Red List NERC S.41	3 + 1 colony / 3	Abundant resident, showing signs of recent decline
Dunnock <i>Prunella modularis</i>	Amber List	14 / 4	Common and widespread resident
Grey Wagtail <i>Motacilla cinerea</i>	Red List	3 / 2	Widespread resident population, possible augmentation by passage and wintering birds
Meadow Pipit <i>Anthus pratensis</i>	Amber List	26 / 4	Scarce breeder, abundant passage migrant, common winter visitor
Bullfinch <i>Pyrrhula pyrrhula</i>	Amber List NERC S.41	4 / 1	Common resident
Linnet <i>Linaria cannabina</i>	Red List	6 / 3	Common resident, passage migrant and winter visitor
Yellowhammer <i>Emberiza citrinella</i>	Red List NERC S.41	24 + 11 flyovers / 4	Common but declining resident

Bird Survey Results Description

5.6 The majority of species recorded were typical of the range of habitats that dominate the site, being heavily influenced by the current agricultural management. The farmland habitats (arable cropland, modified grassland for grazing, field margins and managed hedgerows) generally provide good foraging resources for several scarce or declining farmland specialists including grey partridge

Perdix perdix, skylark *Alauda arvensis*, meadow pipit *Anthus pratensis*, linnet *Linaria cannabina* and yellowhammer *Emberiza citrinella*.

- 5.7 The field interiors, particularly of the larger fields, provided foraging opportunities for a number of widespread but declining species such as black-headed Gull *Chroicocephalus ridibundus*, lesser black-backed gull *Larus fuscus*, red kite *Milvus milvus*, kestrel *Falco tinnunculus*, starling *Sturnus vulgaris*, redwing *Turdus iliacus*, fieldfare *Turdus pilaris* and grey wagtail *Motacilla cinerea*. Species of low conservation concern included small flocks of golden plover *Pluvialis apricaria*, and larger numbers of corvids (*Corvidae*) and pigeons (*Columbidae*).
- 5.8 Boundary features such as hedgerows and standard trees attracted a variety of species, most of which were widespread and/or common generalists but some of which were notable, including stock dove *Columba oenas*, song thrush *Turdus philomelos*, mistle thrush *Turdus viscivorus*, redwing, fieldfare, dunnock *Prunella modularis*, house sparrow *Passer domesticus* and bullfinch *Pyrrhula pyrrhula*. Additionally, these habitats were frequented by linnet *Linaria cannabina* and yellowhammer *Emberiza citrinella* as resting or communal roosting sites.
- 5.9 The several small woodland blocks across the site and adjoining some northern sections of the site boundary were utilised as foraging and roosting habitat by several notable species : stock dove, dunnock and bullfinch, with more common and widespread species of low conservation concern, including great spotted woodpecker *Dendrocopos major*, long-tailed tit *Aegithalos caudatus*, goldcrest *Regulus regulus* and treecreeper *Certhia familiaris*.
- 5.10 The developed land surrounding Hawkwell Farm and the existing residential areas to the east of the site supported a wintering colony of house sparrows, good numbers of pied wagtails *Motacilla alba* and transient visiting tits (*Paridae*) and thrushes (*Turdidae*).
- 5.11 Mallard *Anas platyrhynchos* and Tteal *Anas crecca* were recorded in association with the watercourses whilst the adjacent grassland, was used for foraging by snipe *Gallinago gallinago*.
- 5.12 Two further notable bird species were recorded overflying the site only comprising lapwing *Vanellus vanellus* and herring gull *Larus argentatus*. Although the Site provides potential winter foraging habitat for both no observations of either using these habitats were made during any of the winter site visits.

Evaluation

Bird Assemblage

Local Wildlife Site Assessment

- 5.1 The site was assessed against published criteria for Local Wildlife Site selection³ to assess the site against the thresholds for county value.
- 5.2 The criterion relevant to wintering birds is as follows:
- “any site that frequently supports significant non-breeding numbers of any county notable species as listed in the guidelines may be considered for Local Wildlife Status under species criterion d”
- 5.3 “Supporting” may include either feeding, resting or roosting provision. “Significant numbers” vary for each species, with the threshold provided alongside the species listed in the guidelines accompanying the criteria. “Frequently” is defined as threshold numbers being recorded in at least three of the previous five seasons, having been present for at least two months each time. Grey

wagtail were recorded in numbers that meet the threshold provided in the criteria guidelines, (peak count of 3 against LWS threshold of 3) However as they have only been recorded during a single winter season, the criterion cannot be satisfied and the site therefore does not qualify as an LWS.

- 5.4 It should be noted that the 35 yellowhammers recorded at the site in January do not meet the LWS threshold number of 30, since only 24 were recorded utilising the site, with the remaining 11 flyovers and therefore not supported by the site as per the criteria definition.
- 5.5 All other notable species recorded were either not observed in significant numbers or are not considered priority species for Oxfordshire.
- 5.6 The site therefore does not meet the relevant selection criteria and consequently does not qualify for consideration as a Local Wildlife Site based solely on its wintering bird populations.

Wintering Assemblages

- 5.7 The arable fields offered suitable foraging habitat for a number of common and widespread species including moderate numbers of black-headed gulls and lesser black-backed gulls. This assemblage also included several notable farmland specialists, with moderate numbers of skylark, yellowhammer and meadow pipit and small numbers of grey partridge, snipe and linnet. Whilst numbers of grey wagtail recorded met the annual threshold for consideration under LWS criterion, the overall farmland assemblage is not considered to be of more than **Local value**, based on species range and numbers recorded.
- 5.8 Hedgerows, tree standards and woodland blocks provided foraging opportunities and shelter for a wide range of common and widespread species. Notable species within this habitat's assemblage included large numbers of starling, redwing and fieldfare, along with moderate numbers of bullfinch, dunnock, song thrush, and mistle thrush. A single winter colony of house sparrow was observed in the woodland blocks and adjoining hedgerows around Hawkwell Farm. None of these species are of particular conservation importance in the county nor occur in sufficient numbers that the site would be considered significant for their wintering populations and therefore the site is considered of no more than **Local** conservation importance for its woodland and hedgerow bird assemblage.

Individual Species

- 5.9 Table 4 summarises the seventeen bird species recorded within the site that are of at least **Local** importance.
- 5.10 Grey wagtail was recorded on site in numbers which are considered significant for the county according to the threshold numbers provided in the LWS criteria. This county significance is further supported by the Oxfordshire bird report⁵, which states that the species is widespread in the county but 75% of records are of single birds. Therefore, a peak of three individuals is notable for Oxfordshire and the Site is considered to be of **County** nature conservation value for this species.
- 5.11 Other species of at least **Local** importance are considered so on the basis of their BoCC listing making them species of conservation interest but that do not occur in county important numbers on the site.

⁵ Oxford Ornithological Society (2018). Birds of Oxfordshire 2013.

- 5.12 The other wintering bird species recorded utilising the habitats within the site were either recorded in smaller numbers and/or considered common and widespread wintering species nationally and/or locally. These species are recognised as being of only **Site** importance.

Table 4: Birds of at least Local Importance

Name		Status		Nature Conservation Value
		WCA Sch.1	NERC S.41	
BoCC Red List				
Grey Partridge	<i>Perdix perdix</i>		+	Local
Skylark	<i>Alauda arvensis</i>			Local
Song Thrush	<i>Turdus philomelos</i>		+	Local
Mistle Thrush	<i>Turdus viscivorus</i>			Local
Redwing	<i>Turdus iliacus</i>	+		Local
Fieldfare	<i>Turdus pilaris</i>	+		Local
Starling	<i>Sturnus vulgaris</i>		+	Local
House Sparrow	<i>Passer domesticus</i>		+	Local
Grey Wagtail	<i>Motacilla cinerea</i>			County
Linnet	<i>Linaria cannabina</i>			Local
Yellowhammer	<i>Emberiza citrinella</i>		+	Local
BoCC Amber List				
Stock Dove	<i>Columba oenas</i>			Local
Black-headed Gull	<i>Chroicocephalus ridibundus</i>			Local
Lesser Black-backed Gull	<i>Larus fuscus</i>			Local
Kestrel	<i>Falco tinnunculus</i>			Local
Dunnock	<i>Prunella modularis</i>			Local
Meadow Pipit	<i>Anthus pratensis</i>			Local

6.0 DISCUSSION & RECOMMENDATIONS

- 6.1 The following section provides an assessment of the potential impacts upon notable wintering birds resulting from the proposed development. Where appropriate, recommendations are provided for mitigation and enhancement that take account of the likely ecological effects. Throughout the evaluation, any recommendations for mitigation have been informed by the most up-to-date indicative layout.
- 6.2 The proposed built development will comprise significant areas of green infrastructure (GI) and public open space, both formal and semi-natural in nature, bisecting the built areas and surrounding, particularly towards the west and north including woodland open grassland which will provide buffering of the nearby existing development and ample opportunities for habitat mitigation and enhancement measures to be implemented. Hedgerows are anticipated to be retained

throughout wherever possible along with the existing small woodland blocks and will offer further opportunity for enhancement measures.

- 6.3 The recommendations below have been provided with the aim of informing development proposals on how to best maintain the conservation status of bird species present.

Impact Assessment for Wintering Birds

- 6.4 The potential impact of the loss or change of habitat upon wintering bird species arising from the effects of development is based upon an understanding of each species' ecological requirements, the type of development, number of birds recorded within the survey area, their nature conservation criteria based on legislation and current guidance, their county status according to *The Birds of Oxfordshire 2013* and professional judgement.
- 6.5 The following potential impacts to the recorded bird populations and assemblage may result from the proposals:
- Direct loss/change of wintering habitat; and/or
 - Disturbance during construction and/or operation.

Habitat Loss

- 6.6 The indicative layout of the development includes the loss of all the agricultural habitat within the site whilst almost all the existing watercourses and accompanying corridors, hedgerows (away from the extreme southeast of the site), and woodland blocks will be retained. Areas of public open space and GI are proposed within the residential development in addition to the 10ha country park, recreational fields and area of open space to the north.
- 6.7 The individual species recorded on site that are arguably the most vulnerable to impacts from the habitat loss or changes associated with this proposed development include the seventeen species considered to be of at least **Local** importance. These are notable species that are either specially protected, appear on the the BoCC Red or Amber lists and/or are listed as a NERC priority species and were recorded in at least locally important numbers.
- 6.8 The loss of agricultural land will reduce the overall availability of winter foraging resources for the following farmland specialists on site: skylark, grey partridge, stock dove, yellowhammer, linnet, kestrel and meadow pipit. However, the retention / creation of sizeable areas of grassland and scrub along the watercourse corridors and throughout the GI will maintain a limited area of suitable habitat for these species. Overall, it is therefore considered that the effects of habitat loss will have a **Minor Local** Adverse impact on these farmland specialists. This is not expected to be significant since the farmland bird assemblage on site was recorded in relatively small numbers and the severity of any adverse impact is reduced by the general abundance of similar suitable habitat in the immediate vicinity and in the wider landscape.
- 6.9 Lesser black-backed gull and black-headed gull readily forage within urban areas including recreational grounds and industrial land. The loss of agricultural habitat is therefore anticipated to result in a **Negligible** impact on a local level for these two gull species.
- 6.10 Grey Wagtail is able to overwinter in urbanised areas so long as suitable foraging habitat is available. The impact upon this species will therefore be mitigated through the retention of and enhancements to habitats associated with existing watercourses, as well as the creation of new

wetland areas and Sustainable Urban Drainage Systems. With the inclusion of such enhancements, impacts are expected to be reduced to **Negligible** for the county important population of grey wagtail.

- 6.11 The retention of the vast majority of hedgerows and standard trees and retention of all woodland blocks will ensure the development will result in a **Negligible** impact in the short-term on the generalist and woodland species recorded within the site including the locally important house sparrow, mistle thrush, song thrush, redwing, fieldfare, starling and dunnock. The proposed woodland creation and planting within the GI of the development will result in a **Local Beneficial** impact for these species long-term once the vegetation has matured sufficiently..

Habitat Mitigation

- 6.12 The creation of areas of relatively undisturbed, species-rich grassland is included within the GI of the scheme, This will provide foraging opportunities for farmland birds such as skylark, meadow pipit, linnet, yellowhammer and kestrel, mitigating some of the losses of arable habitat on site, in addition to benefitting generalist species such as goldfinch *Carduelis carduelis* Grassland areas adjacent to off-site arable land will be particularly beneficial to. The grassland should include seed mixes specifically designed to provide foraging resources for birds and be cut after mid-July at the earliest to allow plants to set seed and maximise their foraging value to birds.. The use of fertilisers and pesticides should be avoided.
- 6.13 The provision of scrub planting and/or hedgerows within the GI and bordering the amenity grassland areas, watercourse corridors, allotments and public open space will provide suitable habitat for linnet and yellowhammer, in addition to further foraging and roosting habitat for the more generalist species recorded including the locally important house sparrow, song thrush, redwing, fieldfare, starling and dunnock The planting should comprise a diversity of native species, preferably fruit and nut-bearing species, with berry bearing species being particularly valuable for redwing and fieldfare. Recommended shrub species include, but are not limited to, hawthorn *Crataegus monogyna*, dog-rose *Rosa canina* agg., blackthorn *Prunus spinosa*, holly *Ilex aquifolium*, guelder-rose *Viburnum opulus*, and dogwood *Cornus sanguinea*.
- 6.14 Retained and newly-planted hedgerows within the GI should include infrequently mown grassy margins on either side, to provide foraging for farmland birds.

Disturbance Impacts

- 6.15 Construction operations have the potential to disturb birds using the development area of the Site for roosting, foraging, and breeding. Operations likely to disturb wintering birds include noise and displacement during vegetation clearance, initial ground works and some construction activities. During the winter season disturbance may lead to the avoidance of the area and reduce the suitability of retained foraging areas, such as the retained hedgerows or woodland edge. Whilst there is some potential for winter survival to be reduced as a result, this is not expected to affect the local conservation status of the majority of the bird species using the survey area for wintering.
- 6.16 The increase in domestic animals during the operational phase, particularly cats, may lead to an increase in the predation of small birds. Recent research is inconclusive as to the actual effect that domestic cats can have on wild bird populations. The RSPB website states that there is no clear evidence that cat predation is causing bird populations to decline and it is therefore considered unlikely that the increased abundance of cats would alter the conservation status of any of the

wintering bird populations present on the Site, with retained hedgerows, scrub and grassland continuing to provide cover and screening from potential predators. It is therefore considered that any presence of domestic animals will be of **Negligible** significance.

Disturbance Mitigation

- 6.17 During the construction phase, disturbance may lead to the avoidance of winter foraging habitats. Whilst there is some potential for foraging success to be reduced, this is not expected to affect the local conservation status of the majority of the wintering bird species given the ample availability of similar habitats in the wider landscape and likely phased nature of the development.
- 6.18 During the operational phase, where feasible, consideration of the maintenance of some peripheral areas of the GI where they border arable land as more secluded, less accessible habitat without direct access would help reduce potential disturbance to wintering birds associated with the increase in human and domestic animal activity from new residential development.

Enhancements

- 6.19 The proposed woodland planting will provide further foraging and breeding habitat for the hedgerow bird assemblage recorded. The woodland planting should comprise a diverse range of native species and include fruit and nut bearing species. Species include, but are not limited to, pedunculate oak *Quercus robur*, beech *Fagus sylvestris*, ash *Fraxinus excelsior*, silver birch *Betulus pendula*, wild cherry *Prunus avium*, crab apple *Malus sylvestris*, alder *Alnus glutinosa* and rowan *Sorbus aucuparia*. The planting should include a native understorey to ensure structural diversity within the woodland as it matures. Understorey species include, but are not limited to, holly *Ilex aquifolium*, hawthorn *Crataegus monogyna*, honeysuckle *Lonicera periclymenum*, goat willow *Salix caprea*, dog rose *Rosa canina*, blackthorn *Prunus spinosa*, guelder-rose *Viburnum opulus* and dogwood *Cornus sanguinea*. Open glades and rides within the woodland should be planned as part of the planting.
- 6.20 The creation of wetland grassland within the temporarily wet / inundated parts of the existing grassland adjacent to the watercourses, along with sensitive management, will provide valuable foraging habitat, for species including grey wagtail
- 6.21 Proposed attenuation or drainage features should hold an area of permanent water, if at all feasible, to provide further habitat for grey wagtails and snipe and extend the potential range for the assemblage of species recorded along the River Bure and the existing on-site watercourse corridors. The creation of new ponds specifically for wildlife will also be beneficial. Planting these features with an appropriate native marginal vegetation mix that includes Common Reed *Phragmites australis* will provide opportunities for many species including some likely colonisers like Reed Bunting *Emberiza schoeniclus*. Non-native plants should be avoided as many are invasive. Within the temporarily wet / inundated parts of the attenuation features, together with areas adjacent to watercourses, wetland grassland should be created and sensitively managed. This will provide valuable foraging resources for grey wagtail and snipe. These recommendations would lead to a **Local Beneficial** impact on the watercourse corridor assemblage of birds.

APPENDIX A: WINTERING BIRD SURVEY RESULTS

Species: British Common Name	Species: Scientific name	Survey 1 26.11.20	Survey 2 15.12.20	Survey 3 15.01.21	Survey 4 09.02.21	Conservation Status & Protection
Mallard	<i>Anas platyrhynchos</i>	0	2	0	3	Amber List
Teal	<i>Anas crecca</i>	3	0	0	0	Amber List
Grey Partridge	<i>Perdix perdix</i>	19	0	6	0	Red List NERC S.41
Pheasant	<i>Phasianus colchicus</i>	5	5	2	2	Not Listed
Red-legged Partridge	<i>Alectoris rufa</i>	8	2	0	0	Not Listed
Stock Dove	<i>Columba oenas</i>	0	4 + 1 flyover	1 flyover	4 + 1 flyover	Amber List
Woodpigeon	<i>Columba palumbus</i>	168 + 73 flyovers	54	159 + 13 flyovers	70	Green List
Collared Dove	<i>Streptopelia decaocto</i>	14	5 + 3 flyovers	2	3 + 4 flyovers	Green List
Lapwing	<i>Vanellus vanellus</i>	0	0	19 flyovers	0	Red List NERC S.41
Golden Plover	<i>Pluvialis apricaria</i>	0	8	0	10	Green List
Snipe	<i>Gallinago gallinago</i>	2	0	0	0	Amber List
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	0	14	0	71 + 2 flyovers	Amber List
Herring Gull	<i>Larus argentatus</i>	0	0	1 flyover	0	Red List NERC S.41
Lesser Black- backed Gull	<i>Larus fuscus</i>	1 + 6 flyovers	0	0	21	Amber List
Cormorant	<i>Phalacrocorax carbo</i>	1 flyover	0	0	0	Green List
Sparrowhawk	<i>Accipiter nisus</i>	1	0	1 flyover	0	Green List
Red Kite	<i>Milvus milvus</i>	2 + 2 flyovers	1 + 1 flyovers	5 + 1 flyover	2 + 1 flyover	Green List WCA Sch. 1
Buzzard	<i>Buteo buteo</i>	3	4	4 + 1 flyover	4 + 1 flyover	Green List
Great Spotted Woodpecker	<i>Dendrocopos major</i>	1	2	4	1 flyover	Green List
Green Woodpecker	<i>Picus viridis</i>	1	0	1	0	Green List
Kestrel	<i>Falco tinnunculus</i>	4	1 flyover	1	1	Amber List
Jay	<i>Garrulus glandarius</i>	3	0	3	0	Green List

Magpie	<i>Pica pica</i>	6 + 3 flyovers	13	7	13	Green List
Jackdaw	<i>Coloeus monedula</i>	22 + 27 flyovers	36	50 + 49 flyovers	54	Green List
Rook	<i>Corvus frugilegus</i>	23	172	72 + 6 flyovers	278	Green List
Carrion Crow	<i>Corvus corone</i>	15 + 5 flyovers	5	5 + 5 flyovers	22 + 4 flyovers	Green List
Raven	<i>Corvus corax</i>	0	0	2	0	Green List
Coal Tit	<i>Periparus ater</i>	0	1	0	9	Green List
Blue Tit	<i>Cyanistes caeruleus</i>	33	25	30	21	Green List
Great Tit	<i>Parus major</i>	21	8	17	19	Green List
Skylark	<i>Alauda arvensis</i>	12 + 11 flyovers	20 + 6 flyovers	32 + 3 flyovers	8 + 2 flyovers	Red List
Long-tailed Tit	<i>Aegithalos caudatus</i>	13	11	12	0	Green List
Blackcap	<i>Sylvia atricapilla</i>	1	0	0	0	Green List
Goldcrest	<i>Regulus regulus</i>	2	1	0	1	Green List
Wren	<i>Troglodytes troglodytes</i>	18	28	11	10	Green List
Treecreeper	<i>Certhia familiaris</i>	0	0	1	2	Green List
Starling	<i>Sturnus vulgaris</i>	62 + 22 flyovers	66 + 2 flyovers	145 + 17 flyovers	252 + 42 flyovers	Green List NERC S.41
Song Thrush	<i>Turdus philomelos</i>	26	0	12	3	Red List NERC S.41
Mistle Thrush	<i>Turdus viscivorus</i>	3	2	1	0	Red List
Redwing	<i>Turdus iliacus</i>	27	19 + 21 flyovers	164 + 73 flyovers	86 + 4 flyovers	Red List WCA Sch. 1
Blackbird	<i>Turdus merula</i>	42	18	25	34	Green List
Fieldfare	<i>Turdus pilaris</i>	174	32	83 + 3 flyovers	127	Red List WCA Sch. 1
Robin	<i>Erithacus rubecula</i>	31	15 + 1 flyover	13	13	Green List
Stonechat	<i>Saxicola rubicola</i>	0	0	1	0	Green List
House Sparrow	<i>Passer domesticus</i>	3 + 1 colony	1 colony	2	0	Red List NERC S.41
Dunnock	<i>Prunella modularis</i>	14	8	3	11	Amber List

Grey Wagtail	<i>Motacilla cinerea</i>	3	2	0	0	Red List
Pied Wagtail	<i>Motacilla alba</i>	20 + 2 flyovers	9 + 1 flyover	14 + 1 flyover	6 + 1 flyover	Green List
Meadow Pipit	<i>Anthus pratensis</i>	7	26	18 + 1 flyover	6	Amber List
Chaffinch	<i>Fringilla coelebs</i>	25 + 3 flyovers	5	21 + 1 flyover	8	Green List
Bullfinch	<i>Pyrrhula pyrrhula</i>	0	0	4	0	Amber List NERC S.41
Greenfinch	<i>Chloris chloris</i>	19 + 2 flyovers	3	21	3	Green List
Linnet	<i>Linaria cannabina</i>	0	6	4 flyovers	3 flyovers	Red List
Goldfinch	<i>Carduelis carduelis</i>	22 + 8 flyovers	25 + 8 flyovers	59	52 + 7 flyovers	Green List
Yellowhammer	<i>Emberiza citrinella</i>	2	12	24 + 11 flyovers	5	Red List NERC S.41
Total No. Species: 55		42	37	37	35	

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Key

- | | |
|--------------------------------|------------------------------------|
| BoCC Red Listed Species | BoCC Amber Listed Species |
| FF Fieldfare | BH Black-headed Gull |
| P Grey Partridge | BF Bullfinch |
| GL Grey Wagtail | K Kestrel |
| HG Herring Gull | LB Lesser Black-backed Gull |
| HS House Sparrow | MA Mallard |
| L Lapwing | MP Meadow Pipit |
| LI Linnet | SN Snipe |
| M Mistle Thrush | SD Stock Dove |
| RE Redwing | T Teal |
| S Skylark | BoCC Green Listed Species |
| ST Song Thrush | KT Red Kite |
| SG Starling | |
| Y Yellowhammer | |

- Site Boundary
 → Fly over only
 ○ NERC Species of Principal Importance
 ○ Schedule 1 Species



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 project: NW Bicester, Oxfordshire
 drawing title: WINTER BIRD SURVEY RESULTS - LOCATION OF NOTABLE SPECIES
 scale: 1:7000
 drawing: OJB
 issue: 6/9/2021
 drawing / figure number: **Figure 1**
 rev: -