

West Burton Solar Project

Environmental Statement Appendix 9.8: Breeding Bird Survey Report

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BREEDING BIRD SURVEY REPORT
WEST BURTON SOLAR PROJECT

carried out by



commissioned by

WEST BURTON SOLAR PROJECT LTD.

DECEMBER 2022



BREEDING BIRD SURVEY REPORT

WEST BURTON SOLAR PROJECT

CONTENTS

1	INTRODUCTION.....	4
1.1	OVERVIEW.....	4
1.2	REPORT AIMS AND LIMITATIONS	4
1.3	DESCRIPTION OF THE SURVEY AREA.....	4
1.4	QUALITY ASSURANCE.....	5
2	SURVEY METHODOLOGIES.....	7
2.1	DESK STUDY	7
2.2	FIELD SURVEY	7
2.3	DATA ANALYSIS	11
2.4	ECOLOGICAL ASSESSMENT	11
3	LIMITATIONS.....	13
3.1	DESK STUDY	13
3.2	FIELD SURVEY	13
3.3	DATA ANALYSIS	13
4	RESULTS	14
4.1	DESK STUDY	14
4.2	FIELD SURVEY RESULTS: BREEDING BIRD SURVEYS.....	16
5	ECOLOGICAL EVALUATION	40
	APPENDIX A: SURVEYS AND ASSESSMENT METHODOLOGY ADDENDUM	45
	APPENDIX B: WILDLIFE LEGISLATION & SPECIES INFORMATION	47
	APPENDIX C: ECOLOGICAL EVALUATION CRITERIA	49
	APPENDIX D: FIELD SURVEY RESULTS.....	51
	APPENDIX E: DESK STUDY RESULTS	66



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The information, data and advice which has been prepared and provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions. This report and its contents remain the property of Clarkson and Woods Ltd. until payment has been made in full.



1 INTRODUCTION

1.1 Overview

- 1.1.1 Clarkson and Woods Ltd. was commissioned by West Burton Solar Project Ltd to complete breeding bird surveys for the West Burton Solar Project. The Scheme comprises three Sites: West Burton 1, West Burton 2 and West Burton 3. These are referred to hereafter either collectively as 'the Sites' or, where appropriate, using the individual abbreviated Site references (WB1, WB2, WB3). The Scheme comprises of the construction and operation of a Nationally Significant Infrastructure Project-scale solar park, including solar energy production and storage components.
- 1.1.2 A series of breeding bird surveys were carried out in Summer 2021 and Spring/Summer 2022 following good practice survey guidelines and methodology set out within Section 2 below.
- 1.1.3 Unless the client indicates to the contrary, information on the presence of species will be passed to the county biological records centre to augment their records for the area.

1.2 Report Aims and Limitations

- 1.2.1 The surveys were required to ascertain a baseline of the breeding bird assemblage across a Survey Area chosen to encompass all long-term development zones within the Scheme. This report details the methods and results of the surveys and provides a brief overview of the potential impacts that could result from the proposals, so as to inform the layout of the Scheme.
- 1.2.2 This information will be used within the eventual West Burton Solar Project Environmental Statement to inform the ecological evaluation of the habitats used by breeding birds throughout the nesting season and to characterise the impacts on them considered likely to result from the Scheme.
- 1.2.3 While the installation of below-ground electrical cabling will be required beyond the boundaries of the Scheme in order to connect the disparate land parcels, both to one another and to the National Grid, ecological baseline information for this cable route element will be presented within a separate document.

1.3 Description of the Survey Area

- 1.3.1 Due to refinement of the Scheme extent and design following the completion of the breeding bird surveys, the final Survey Area covers a larger area than the red line boundary of the proposed solar and battery elements of the Scheme (but not including the cable route or 'external' construction access routes). All areas within the extent of the solar and battery elements have been subject to survey for breeding birds. The total Survey Area measures approximately 800 hectares (ha).
- 1.3.2 The Sites are located within the West Lindsey District of Lincolnshire, close to the settlements of Broxholme (West Burton 1), Ingleby (West Burton 2) and Brampton (West Burton 3), as shown in Figure 1 below. All Sites are situated within 8km of each other (approx. central OS grid reference SK879788).
- 1.3.3 West Burton 1, 2 and 3 predominantly comprise large, open flat arable fields with arable margins of varying widths, characterised (at the time of survey) by winter-sown cereal crops interspersed with fallow fields and fields of permanent pasture (e.g., West Burton 2). A network of hedgerows and ditches formed field boundaries.
- 1.3.4 These Sites habitats are very much typical of the surrounding landscape, which is dominated by arable farmland and occasional pasture grassland, interspersed with pockets of woodland, small settlements and farmsteads linked by minor, private farm tracks. The surrounding landscape is mostly flat, however to the east of the Sites lies the 'Lincoln Cliff', a significant north-south escarpment situated 3km east of West Burton 1.
- 1.3.5 The River Trent is located west of each Site. It is located approx. 1.4km from West Burton 3 at its closest point and flows north towards the Humber Estuary, over 40km from the Scheme. Whilst few areas of woodland were present within the Scheme boundary, several small stands of managed and unmanaged woodland are present adjacent and in the surrounding landscape, some with evidence of use for game sports.

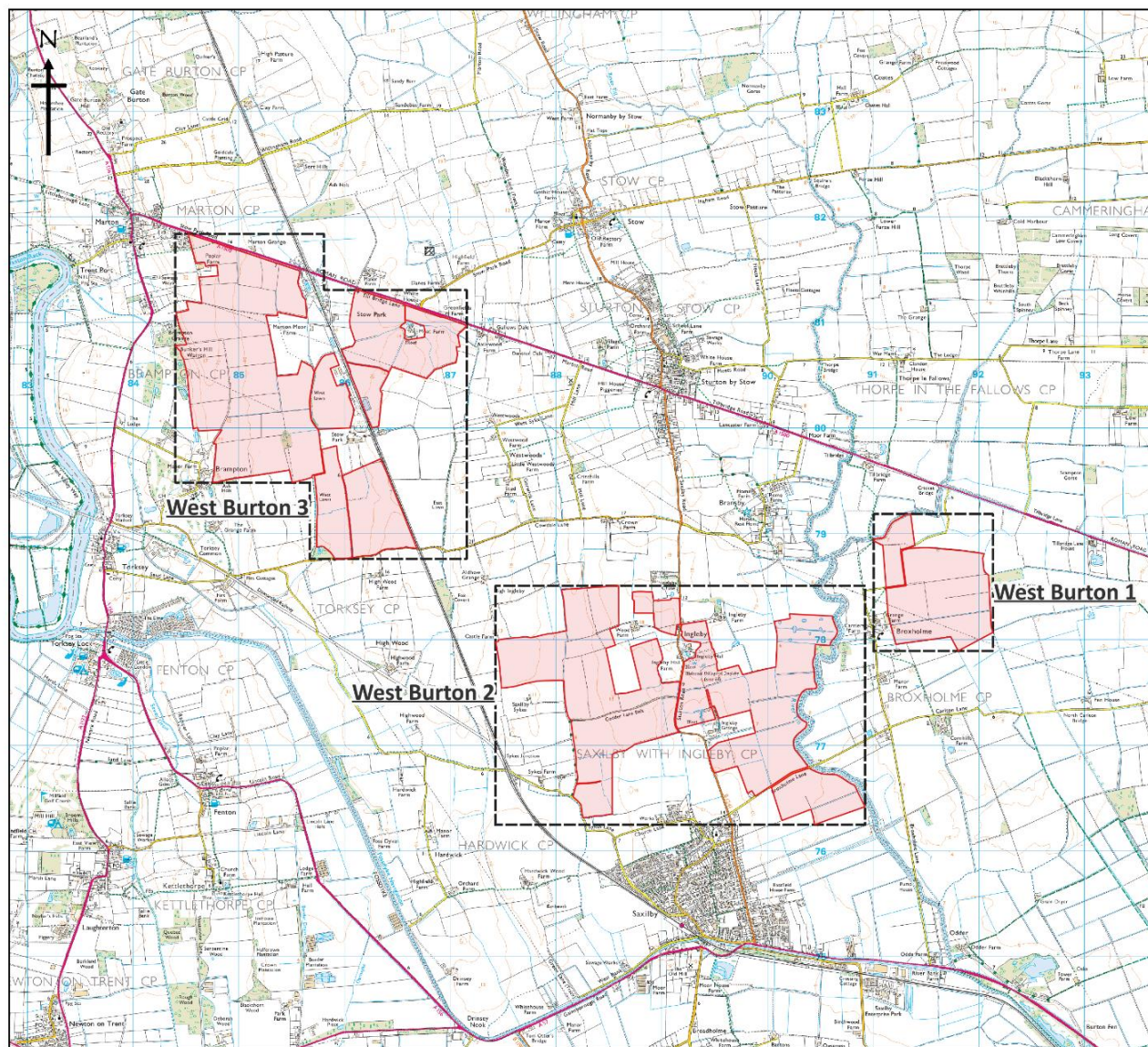


1.3.6 Standing water within the Sites was limited, with some agricultural pools/pits, decoy ponds or managed recreational fisheries adjacent to Site boundaries, occasionally within the same fields. The River Till runs adjacent to the eastern boundary of West Burton 2 and 0.4km west of West Burton 1, whereas the River Trent runs 1.4km west of West Burton 3. Various watercourses managed as agricultural drainage ditches of varying size/depths were present either within or adjacent to the Sites. A range of wet and seasonally dry ditches recorded across Site.

1.4 Quality Assurance

1.4.1 This report has been prepared in accordance with the relevant British Standard: *BS42020: 2013 – Biodiversity: Code of Practice for Planning and Development*¹. It has been prepared by experienced ecologists employed by Clarkson and Woods who are members of the Chartered Institute of Ecology and Environmental Management (CIEEM). The report has also been subject to a two-stage quality assurance review by appropriately experienced ecologists who are full members of CIEEM.

¹ The British Standards Institution (2013). *BS42020: 2013 – Biodiversity: Code of Practice for Planning and Development*. BSI Standards Ltd.



Key:

- Site red line boundaries
- Site bounding box



Project
Lincolnshire NSIP

Title
Figure 1 - West Burton sites

Project Number Date
7479 **14/09/2022**

Scale
0 1 2 km

Figure 1: Location of West Burton 1 – West Burton 3



2 SURVEY METHODOLOGIES

2.1 Desk Study

- 2.1.1 The Lincolnshire Environmental Record Centre (LERC) was consulted for records of bird species within 2km of Site.

Legislation

- 2.1.2 Statutory legislation relating to the protection of wild birds within the UK includes the Wildlife and Countryside Act 1981 (as amended).

- 2.1.3 All sites statutorily designated for their bird conservation interest and within proximity of the application Site (30km for International sites, 5km for National sites and 2km for Local sites) were identified using the Natural England/Defra web-based MAGIC database (<https://magic.defra.gov.uk/>) and cross-checked against data received from LERC and Nottinghamshire Biological and Geological Record Centre (NBGRC).

Local Conservation Strategies

- 2.1.4 Relevant Local Authority plans and strategies with biodiversity focus were consulted for aspects relevant to birds and their breeding habitats, including priority species listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006).

Landscape-scale Conservation Strategies, Initiatives and Records

- 2.1.5 Bird conservation strategies used to monitor population trends and determine target areas for conservation were identified to aid assessment and mitigation recommendations for breeding birds at risk of impact from the Scheme. For example, the Bird Conservation Targeting Project (BCTP) has been informed by historic datasets and is used to advise targeted mitigation measures at a site level, e.g. agri-environmental schemes, at a site level.

- 2.1.6 The Birds of Conservation Concern (BoCC) list was also consulted, which provides categorisation of bird species according to their conservation status based on the assessment criteria. It considers both temporal and spatial trends across their distribution ranges and incorporates the use of a simple traffic light system with red, amber or green categories used to illustrate those birds most at risk. Red-listed species of high conservation concern are most at risk, reducing onto amber and green.

- 2.1.7 Local county bird group data was also consulted where accessible to identify any local conservation concerns and disparities between national and local trends².

- 2.1.8 Where relevant, Ordnance Survey maps (1:25,000) and online aerial images of the Site were examined online to assess habitat connectivity (e.g. [REDACTED]).

2.2 Field Survey

- 2.2.1 All individual fields were mapped and surveyed with the individual Sites split into four or less areas to enable surveyors to complete surveys within the target timeframe.

- 2.2.2 Within each of the three Sites the entire area of farmed habitats was surveyed within each respective proposed red-line boundary, following transect routes through the fields and adjacent to boundary habitats. Where areas of woodland were located within a redline boundary, only the woodland periphery was walked and birds recorded. All Site boundaries (i.e. hedgerow, ditches, rivers etc.) were walked during each survey at a distance of no more than 50m from the boundary feature.

Breeding Bird Survey Methodology

- 2.2.1 To provide a reasonable level of accuracy for determining the breeding status of bird species and relative use of each habitat recorded across the Survey Area during the breeding season, each Site was surveyed

² Casey, C., Clarkson, J.R., Espin, P. and Hyde, P.A. (20210) *The Birds of Lincolnshire*. Lincolnshire Bird Club: Louth



for breeding bird activity a total of six visits. Surveys were carried out in two survey seasons, with four visits occurring between May and July 2021 and the final two visits between April and May 2022.

- 2.2.2 All surveys were conducted in accordance with good practice guidelines³. Daytime surveys commenced within approx. 60 minutes following sunrise with a target of being completed within approx. three to five hours to record the peak of breeding bird activity. All surveys were only carried out in favourable weather conditions avoiding strong winds (Beaufort 5 and above), persistent rain more than a light drizzle, or where visibility was compromised by low cloud/foggy conditions. Detailed weather conditions of each survey have been included within **Error! Reference source not found.**, Appendix C.
- 2.2.3 The field methodology broadly followed BTO Common Birds Census guidance and Bird Survey Guidelines. Each Site was divided into sections measuring approximately 60-80ha, each containing a transect route aiming to reach within approx. 50m of all points on each survey section. Each transect was walked by an experienced bird surveyor once per survey visit. Surveyors would periodically stop to scan habitats of particular interest, such as trees, field margins or ditches, as well as opportunistically throughout each field. In some instances, this distance was increased (e.g. within large fields such as those >20 hectares) but not more than 100m to ensure that birds were observed and heard, which also allowed for the increased distances at which ground nesting birds, such as skylark, are likely to be disturbed and recorded.
- 2.2.4 The standard methodology was modified to account for the large area of the Sites to ensure focus on the activity of conservation priority species, i.e. amber- and red-listed BoCC and Schedule 1 species. Therefore, rather than individual registrations being made, the eight most common and widespread species were tallied and summarised within a separate table, including presence, abundance and breeding status. This included woodpigeon, herring gull, blackbird, blue tit, chaffinch, great tit, robin and wren (NB, the BoCC protection status of wren changed from green to amber during completion of surveys – see limitations).
- 2.2.5 For some Sites, a survey visit comprised transects which were completed across more than one day due to surveyor availability, weather, and to ensure that all surveys were completed during periods of optimal bird activity. Where split across days, the surveys were completed on consecutive days wherever possible or as soon as both weather and surveyor capacity allowed. Table A1 included within Appendix A details all survey dates.
- 2.2.6 The location and activity/behaviour of birds was recorded on large-scale survey maps following standard BTO Common Bird Census (CBC) codes. Particular attention was paid to birds exhibiting breeding behaviour, for instance birds in full song, exhibiting antagonistic behaviour/calling, carrying nest material, carrying food, and returning to nesting sites. Individual maps were created for each survey visit (Figure 2 below provides an example), with data recorded onto QGIS mapping software to illustrate distribution/territories of particular species. Data recorded within QGIS was exported for use and interpretation in table form.

Nocturnal Bird Survey Methodology

- 2.2.7 The early morning surveys were complemented by a single dusk survey at each Site during August 2021 to include sufficient survey effort for nocturnal species or those more vocal at night or early evening, in particular quails *Coturnix coturnix* and owls. The presence and activity of these species was also recorded on an ad hoc basis or where found on other surveys.
- 2.2.8 During dusk surveys, the surveys were carried out in optimal conditions for quail calls to be audible and visibility/daylight sufficient to record birds in flight. These surveys took place across each land parcel, commencing approx. one hour before sunset and continuing until approx. one hour after sunset. Routes were not predetermined but established by each surveyor, to ensure adequate coverage across open field habitats and field margins, plus other features potentially used by sheltering and foraging owls (e.g. mature trees, buildings).

³ Bird Survey & Assessment Steering Group. (2022). *Bird Survey Guidelines for assessing ecological impacts, v.0.1.0*. [online] [Accessed: 05/07/2022]



Survey Dates and Surveyors

- 2.2.9 All surveys were carried out by surveyors with prior experience of Breeding Bird Surveys. To ensure quality assurance, all in-house surveyors had been formerly shadowed by experienced in-house ornithologists whilst external sub-contractors shared documented evidence of professional experience for approval prior to surveys and their competence assessed by Clarkson and Woods with respect to the CIEEM Competencies for Species Survey (CSS). All ecologists employed by Clarkson and Woods are registered members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow the Institute's Code of Professional Conduct when undertaking ecological work. The total number of surveyors within the team extended to 15 surveyors throughout the entire season.

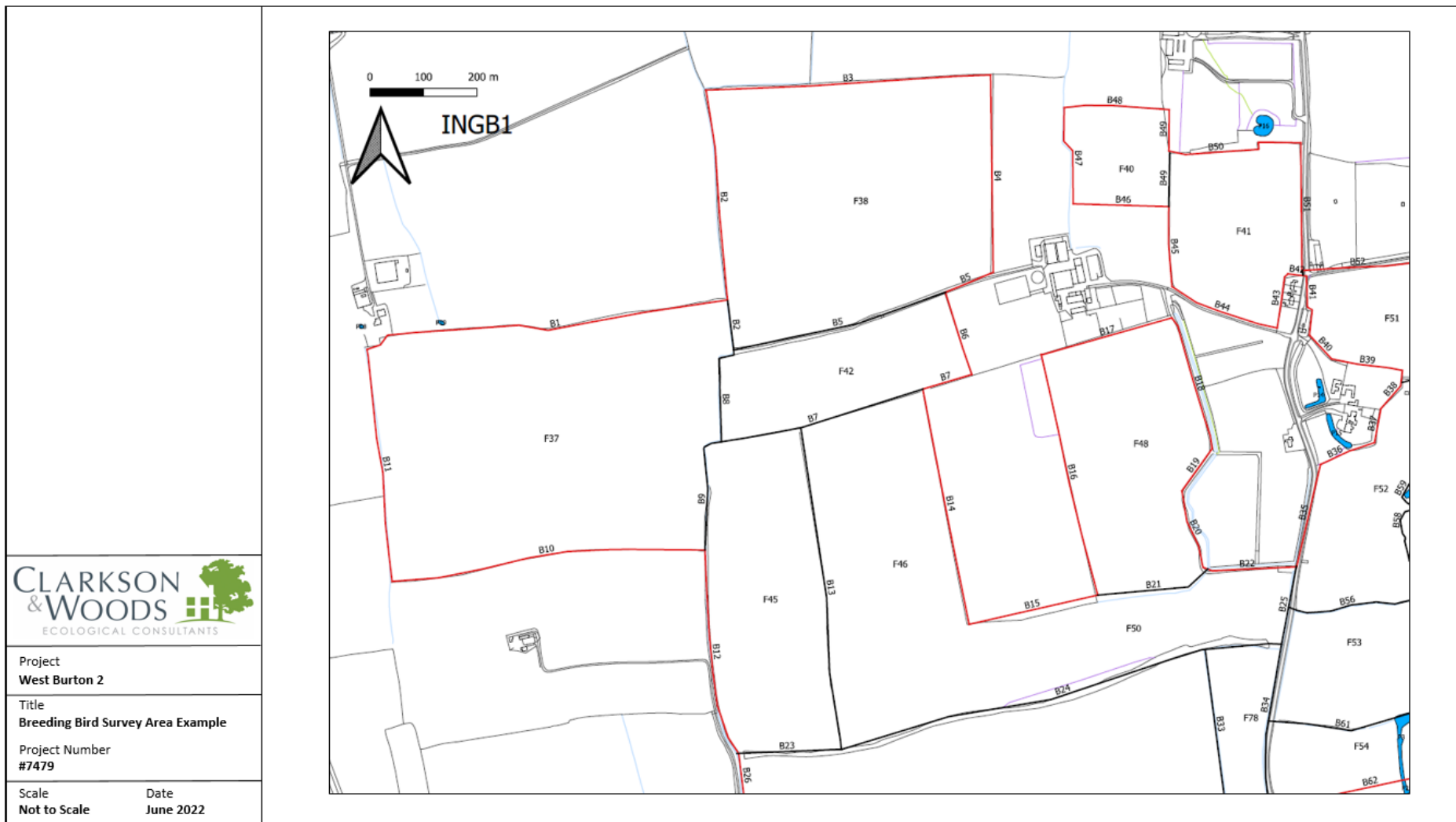


Figure 2: Example Breeding Bird Survey Area Map – West Burton 2



2.3 Data Analysis

- 2.3.1 To enable the identification of the location and estimation of the number breeding territories, the following steps were taken:
- i. In the field; each surveyor followed a standardised approach, as described above, to ensure consistency across surveys and so that records relating to the same individuals were recorded as such to avoid duplication;
 - ii. Mapping; all bird registrations were mapped using QGIS software including their behaviour, abundance and confirmed evidence of nesting with data. Where relevant, this information was collated from each visit and considered together to estimate minimum and maximum number of breeding territories for some species.
 - iii. Data interpretation; field results were analysed to determine the breeding status of recorded species which included the following categories: unconfirmed, possible, probable and confirmed in accordance with the following BTO categories⁴. The territory-mapping approach set out within the BTO Common Bird Census instructions⁵ was also consulted and professional expertise by contributing ecologists exercised where needed.
- 2.3.2 For (ii) above, the estimation of territory numbers was carried out for the species considered to be at most risk of impact from development, i.e. their breeding ecology includes open field habitat. For all other species (iii), any wader or waterfowl flushed from suitable breeding habitat was considered to be at least possibly breeding. The survey scope did not set out to identify nests or to confirm nesting for each species (although this was recorded where observed), but to infer their breeding status from collated data and the suitability and context of surrounding habitats.
- 2.3.3 To enable assessment of impacts, the species have also been categorised based on their principal ecological requirements and habitat use recorded on Site during the breeding season, as follows:
- Open habitats including use of open, arable, fallow or grassland/pasture fields;
 - Boundary habitats including hedgerow/scrub, arable margins etc. and species that rely on such boundary habitats in combination with adjacent farmland (e.g. yellowhammers utilising field margins and arable fields);
 - Waterbodies, such as ponds, rivers, and ditches where species are largely reliant on aquatic or marginal vegetation during the breeding season;
 - Mature trees and buildings; and
 - Woodlands.
- 2.3.4 For species associated with more than one category of habitat (e.g. common quail which aggregate in open habitat however breed close to field margins) these were allocated to the habitat category considered to have the greatest risk of impacts to ensure appropriate ecological assessment.
- 2.3.5 The field reference numbers included within the species descriptions below refer to the overall field numbering system of the Survey Area.

2.4 Ecological Assessment

- 2.4.1 To enable assessment within the Environmental Statement of the impacts of the Scheme on any given breeding bird species, and to measure the significance of impacts resulting from loss or change to their breeding habitats, the 'importance' of each species was defined. This was done through consideration of

⁴ BTO (2022) *Breeding Evidence* [Online] Available at:

Accessed: 20/07/2022]

⁵ Marchant (1983) *Common Bird Census Instructions*. [online] Available at: [Accessed 05/09/2022]



their conservation status and value, together with the survey results and an application of professional judgment based on local knowledge.

- 2.4.2 The conservation status of any given species was established by their categorisation on the Birds of Conservation Concern (BoCC) list, local county bird group records (where available) and if afforded any enhanced legal protection.
- 2.4.3 The conservation value of each species was determined by applying the criteria provided within the CIEEM guidelines for Ecological Impact Assessment (2018)⁶ and the Criteria for Nature Conservation Evaluation described by Ratcliffe (1977)⁷ (Appendix C refers). This enabled the conservation value of any species to be established and considered within a geographical context. This ensures appropriate assessment of potential cumulative impacts of the Scheme at a landscape scale, given that some species are recognised as district level importance or above.
- 2.4.4 The results of the breeding bird surveys provided local context information which, combined with professional judgement and local knowledge, enabled reassessment of each species values based on local knowledge.
- 2.4.5 If further information was required to determine the true importance of a species or habitat present the importance of the feature is marked as 'unknown'.

⁶ CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal*, Sept 2018. Chartered Institute of Ecology and Environmental Management. [REDACTED]

⁷ Ratcliffe, D.A. (1977). *A Nature Conservation Review*, Cambridge University Press



3 LIMITATIONS

3.1 Desk Study

3.1.1 The data search was obtained in 2021 providing an up-to-date record of the bird species, complemented by the results of field surveys completed in 2021 and 2022. The dataset will only provide those records where information exists and should not be relied upon as a complete dataset.

3.2 Field Survey

3.2.1 The initial breeding bird surveys were started in May 2021, preventing a complete season's worth of visits from being completed within the same year. Additional visits were completed between late March and May 2022 to provide a full dataset. Although this resulted in visits being completed over two separate years, the survey results are considered to be representative of breeding bird activity as annual crop rotations will typically influence bird diversity, abundance and productivity in any given year. Surveys completed over two separate years will also mitigate for some of the annual variations for each species.

3.2.2 The surveys are intended as a series of 'snapshots' of bird activity recorded on the Site, but cannot take into account species that occur at other times of the day and at other times. At the same time a lack of signs of any particular species does not confirm its absence, merely that there was no indication of its presence during this survey.

3.2.3 Weather conditions were optimal for the majority of surveys, with the rare occurrence of rain for short periods, and are considered unlikely to have dissuaded bird activity or reduced the overall picture of the bird community within the Site.

3.3 Data Analysis

3.3.1 The identification of territories does present some ambiguity where field results vary between visits, e.g. where territory sizes range over a large area or where species were only seen on few occasions. Therefore, an estimated minimum number of territories has been included for species associated with open field habitats.

3.3.2 The conservation status of some species changed during the survey period, namely barn swallow *Hirundo rustica* and wren *Troglodytes troglodytes*. Data collected for wren will not be representative of abundance and distribution across Site as they were not recorded by all surveyors in accordance with the modified methodology to enable completion of surveys within the optimal time period. Where affected, this limitation has been highlighted within the Field Results section for affected species.



4 RESULTS

4.1 Desk Study

Legislation, Local Plans and Policies

National Wild Bird Legislation

- 4.1.1 The Wildlife and Countryside Act 1981 is the principal legislation relating to the protection of all wild birds within the UK. In addition to the legal protection this affords, Schedule 1 species (their nests, eggs and dependant young) have additional protection during their breeding season – refer to Appendix A for detailed information.
- 4.1.2 Section 41 of the Natural Environment and Rural Communities Act (2006) in England requires all statutory authorities to produce a list of protected habitats and species, both at a national and county level. These lists continue to be revised and modified from those originally produced as UK BAPs (Biodiversity Action Plans) and detail lists of habitats and species of principal importance for conservation action (i.e. SPI or Species of Principal Importance).
- 4.1.3 Table 1 below includes habitats and species present within the Lincolnshire Biodiversity Action Plan (2011)⁸ with birds species associated with these habitats given additional weight within the ecological evaluation of bird species associated within these habitats.

Table 1: Relevant Local BAP Priority Habitats and Species

Broad habitat type	Habitat	Species
Farmland and grassland	Arable field margins	Farmland birds
	Grazing marsh	
	Lowland calcareous grassland	
	Lowland neutral grassland	
	Lowland meadow	
	Lowland dry acid grassland	
	Parkland and wood pasture	
Waterbodies	Ponds, lakes and reservoirs	
	Rivers, canals, drains	
Boundaries	Hedgerows and hedgerow trees	
Trees and woodlands	Lowland mixed deciduous woodland	
	Mixed ash-dominated woodland	
	Oak-birch woodland	
	Planted coniferous woodland	
	Wet (broadleaved) woodland	

Designated Sites

- 4.1.4 Taken from the local environmental data searches, the following table includes details of the designated sites with bird habitats considered to be a qualifying feature. This includes internationally designated sites situated within 30km of the Scheme, nationally protected sites within ≤ 5 km and locally designated sites where present within ≤ 2 km.

⁸ Lincolnshire Biodiversity Partnership (2011) *Lincolnshire Biodiversity Action Plan 2011-2020 (3rd Edition)* [online]. Available at: <http://www.southkesteven.gov.uk/CHttpHandler.ashx?id=7371&p=0> [Accessed 24/11/2021]



Table 2: Summary of Designated Sites for Nature Conservation of Relevance to Breeding Birds

Protected Site Name	Land parcel	Distance and Direction from Site	Reason for Designation
Internationally Designated Sites (<30km)			
Humber Estuary SPA	Scheme	Approx. 28km from the closest Site (WB3)	Second largest coastal plain estuary in the UK (approx. 37,000ha) supporting important breeding populations of bittern, marsh harrier, avocet and little tern during summer as well as important number of overwintering geese, ducks and waders.
Doddington Clay Woods SSSI	WB2	4.7km south	Old Hag and Little Sale Woods comprise ancient semi-natural woodland with a large heronry at Old Hag Wood and supports other breeding birds including woodcock and five species warbler
Locally Designated Sites (<2km)			
Torksey Marsh LWS	WB3	0.7km south	A range of habitats including ponds and open ground supporting birds and other wildlife
Trent Port Wetland LWS	WB3	0.9km west	Area of floodplain to the east of the River Trent with large expanses of shallow water and wetland vegetation

Conservation Strategies, Landscape Initiatives and Bird Records

Bird Conservation Strategies

- 4.1.5 The status of Birds of Conservation Concern (BoCC) Red List for Birds has been included within results tables where appropriate.

Landscape-level Initiatives

- 4.1.6 The UK Farmland Bird Indicator (UKFBI) list⁹ prepared annually by RPSB and BTO and used as a proxy to assess the overall biodiversity status of agricultural landscapes, was also consulted to identify the key species largely reliant on farmed landscapes and agricultural practices. These species have been highlighted within results tables where relevant.
- 4.1.7 Table 3 below also provides reference to the location of target areas of landscape-scale initiatives in relation to the Site, which may be used to inform the suitability of proposed mitigation within any given land parcel. The data is taken from RSPB's Bird Conservation Targeting Project (BTCP) (accessible on Defra's interactive Magic mapping portal and includes a sub-set of all data and based on the following species) and informed by the breeding distribution of farmland birds and with relevance at a local level.

⁹ RSPB (2021) *The Farmland Bird Indicator* [online]. Available at: [REDACTED] [Accessed 24/11/2021]



Table 3: Farmland Priority Species featured in Targeted Bird Conservation Initiatives (within 5km of Site)

Species	Distance between target bird conservation areas and each land parcel		
	WB1	WB2	WB3
Corn bunting <i>Emberiza calandra</i>	Site	<1km	<1.5km
Curlew <i>Numenius arquata</i>	Site	Site	Site
Grey partridge <i>Perdix perdix</i>	Site	Site	Site
Lapwing <i>Vanellus vanellus</i>	Site	Site	Site
Redshank <i>Tringa totanus</i>	-	<2km	Site
Snipe <i>Gallinago gallinago</i>	-	<2km	Site
Tree sparrow <i>Passer montanus</i>	Site	Site	Site
Turtle dove <i>Streptopelia turtur</i>	<1km	Site	Site
Yellow wagtail <i>Motacilla flava</i>	Site	Site	Site

Local Bird Records

- 4.1.8 The bird records obtained from the records centre were interrogated for the presence of protected and notable bird species. Numerous records were returned, therefore Table E1, Appendix E only includes red-listed BoCC or Schedule 1 species that were not recorded during surveys, despite suitable habitat being present, but included in the data search or only with a peak count of 10 or less (across two or more land parcels) during survey visits.
- 4.1.9 Full data tables can be access within the PEA Report prepared for this Site.¹⁰

4.2 Field Survey Results: Breeding Bird Surveys

- 4.2.1 The results of the field surveys are discussed in the paragraphs below for each species in turn, with species organised by sub-heading according to their habitat associations, further subdivided by their conservation status. Appendix D should be referred to for relevant detailed distribution mapping and results tables.
- 4.2.2 Table 4, below, provides an accessible overview of each recorded species' conservation status and distribution across the Survey Area among the different survey events. This is discussed in more detail in the subsequent paragraphs, which describe the findings according to species group.

¹⁰ Clarkson and Woods Ltd (2021) *Preliminary Ecological Appraisal: West Burton Solar Project*; Blackford, Somerset



Table 4: Overview and Peak Count of each Species and Breeding Status Across All Survey Visits - West Burton

The following abbreviations refer to the breeding status of each species, in accordance with BTO good practice guidance¹¹. Any variations from this approach are described separately within the relevant species section.

Co. – confirmed breeding (e.g. nest located, fledglings or adults seen with food for young); **Pr.** – probable breeding (e.g. pair observed in breeding season, repeated territorial behaviour, nest building etc.); **Po.** – possible breeding (e.g. evidence indicates bird species could be but less conclusive than that obtained for probable breeders); **Un.** (or non-breeding) – not considered likely to breed on Site (e.g. flying over, summer non-breeder).

* values included for rook, wren and woodpigeon are not complete – refer to specific species sections below.

Species	Conservation Status	West Burton 1			West Burton 2			West Burton 3		
		No. of surveys species found (/6)	Peak count* on any single visit	Breeding status	No. of surveys species found (/6)	Peak count* on any single visit	Breeding status	No. of surveys species found (/6)	Peak count* on any single visit	Breeding status
Birds predominantly associated with open arable/grassland fields										
Curlew	Red BoCC, S41, UKFBI	1/6	1	Un.	2/6	1	Po.	0/6	-	-
Lapwing	Red BoCC, S41, UKFBI	0/6	-	-	3/6	4	Co.	3/6	25	Po.
Meadow pipit	Amber BoCC	2/6	3	Po.	6/6	28	Co.	6/6	14	Co.
Skylark	Red BoCC, S41, UKFBI	6/6	38	Co.	6/6	117	Pr.	6/6	135	Co.
Yellow wagtail	Red BoCC, S41, UKFBI	4/6	3	Pr.	6/6	7	Pr.	6/6	25	Co.
Birds predominantly associated with arable field margins and hedgerows/scrub boundaries										
Bullfinch	Amber BoCC, S41	0/6	-	-	1/6	1	Po.	5/6	7	Pr.
Common whitethroat	Amber BoCC, UKFBI	6/6	22	Co.	6/6	52	Co.	6/6	70	Co.
Cuckoo	Red BoCC S41	0/6	-	-	0/6	-	-	2/6	3	Po.
Duncock	Amber BoCC, S41	6/6	6	Pr.	6/6	14	Co.	6/6	15	Pr.
Goldfinch	UKFBI	5/6	8	Pr.	6/6	28	Pr.	6/6	47	Pr.
Greenfinch	Red BoCC, UKFBI	0/6	-	-	2/6	2	Po.	5/6	3	Pr.
Grey partridge	Red BoCC S41	4/6	6	Pr.	5/6	30	Pr.	5/6	14	Pr.
Linnet	Red BoCC, S41, UKFBI	6/6	31	Pr.	6/6	75	Pr.	6/6	99	Pr.
Tree sparrow	Red BoCC, S41, UKFBI	0/6	-	-	0/6	-	-	3/6	2	Po.
* Wren	Amber BoCC	2/6	n/a	Po.	3/6	28	Pr.	5/6	28	Co.
Yellowhammer	Red BoCC, S41, UKFBI	6/6	23	Co.	6/6	35	Co.	6/6	67	Co.
Birds predominantly associated with ditches, plus near/within waterbodies and associated habitats (e.g. reeds, burrows)										
Cetti's Warbler	Sch1	0/6	-	-	0/6	-	-	1/6	1	Un.
Gadwall	Amber BoCC	1/6	2	Po.	2/6	2	Po.	0/6	-	-
Greylag goose	Amber BoCC	2/6	2	Un.	4/6	24	Po.	5/6	52	Co.
Mallard	Amber BoCC	3/6	4	Pr.	5/6	20	Pr.	6/6	27	Pr.
Moorhen	Amber BoCC	1/6	1	Po.	3/6	1	Po.	2/6	6	Co.
Reed bunting	Amber BoCC, UKFBI	6/6	9	Co.	6/6	34	Co.	6/6	31	Co.

¹¹ BTO (2022) *Breeding Evidence (Breeding Evidence Codes)* [online]. Available at: [redacted] [Accessed 16/09/2022]



Species	Conservation Status	West Burton 1			West Burton 2			West Burton 3		
		No. of surveys species found (/6)	Peak count* on any single visit	Breeding status	No. of surveys species found (/6)	Peak count* on any single visit	Breeding status	No. of surveys species found (/6)	Peak count* on any single visit	Breeding status
Sedge warbler	Amber BoCC	2/6	1	Po.	5/6	6	Co.	2/6	4	Po.
Shelduck	Amber BoCC	0/6	-	-	1/6	3	Un.	5/6	5	Po.
Birds predominantly associated with mature trees/woodland										
Hobby	Sch1	1/6	2	Co.	0/6	-	-	2/6	2	Co.
Jackdaw	UKFBI	2/6	4	Po.	6/6	15	Pr.	4/6	6	Po.
Kestrel	Amber BoCC, UKFBI	2/6	1	Un.	5/6	4	Co.	6/6	3	Co.
Mistle thrush	Red BoCC	0/6	-	-	1/6	4	Po.	2/6	3	Po.
* Rook	Amber BoCC, UKFBI	2/6	2	Po.	6/6	187	Co.	4/6	29	Pr.
Song thrush	Amber BoCC, S41	6/6	3	Pr.	6/6	6	Pr.	6/6	17	Pr.
Sparrowhawk	Amber BoCC	3/6	1	Po.	0/6	-	-	1/6	2	Po.
Stock dove	Amber BoCC, UKFBI	3/6	1	Pr.	5/6	16	Pr.	4/6	12	Pr.
Tawny owl	Amber BoCC	0/6	-	-	1/6	1	Po.	1/6	1	Co.
Willow warbler	Amber BoCC, S41	4/6	1	Pr.	3/6	3	Pr.	6/6	13	Pr.
* Woodpigeon	Amber BoCC, UKFBI	0/6	-	Po.	2/6	220	Pr.	2/6	90	Pr.
Birds predominantly associated with buildings										
Barn owl	Sch1	0/6	-	-	3/6	2	Co.	3/6	2	Co.
House martin	Red BoCC	1/6	1	Po.	2/6	4	Po.	1/6	4	Po.
House sparrow	Red BoCC, S41	0/6	-	-	5/6	22	Pr.	3/6	4	Pr.
Peregrine	Sch1	0/6	-	-	0/6	-	-	3/6	2	Pr.
Starling	Red BoCC, S41, UKFBI	0/6	-	-	5/6	40	Pr.	4/6	21	Pr.
Swift	Red BoCC	1/6	2	Un.	1/6	2	Un.	2/6	3	Un.
Other Conservation Species which typically breed in other habitats e.g. marshland, extensive reedbeds, uplands etc										
Black-headed gull	Amber BoCC	0/6	-	-	2/6	2	Un.	1/6	3	Un.
Common gull	Amber BoCC	0/6	-	-	0/6	-	-	1/6	1	Un.
Lesser black-backed gull	Amber BoCC	0/6	-	-	1/6	3	Un.	0/6	-	-
Marsh harrier	Amber BoCC, Sch1	1/6	2	Un.	0/6	-	-	0/6	-	-
Wheatear	Amber BoCC	0/6	-	-	2/6	1	Un.	2/6	3	Un.



Breeding Birds Typically Associated with Open Arable/Grassland Habitats

Table 5: Estimated Minimum Number of Breeding Territories (across the Scheme) for Species Associated with Open Field Habitats

Species	Conservation Status*	Total no. individuals across all visits (peak count/single visit)	Estimated min. no. breeding territories
Curlew <i>Numenius arquata</i>	Red BoCC, S41, UKFBI	3 (1)	1
Lapwing <i>Vanellus vanellus</i>	Red BoCC, S41, UKFBI	10 (3)	3
Skylark <i>Alauda arvensis</i>	Red BoCC, S41, UKFBI	1205 (125)	200
Yellow wagtail <i>Motacilla flava</i>	Red BoCC, S41, UKFBI	107 (23)	15

Schedule 1 Species

Common Quail

- 4.2.3 No common quail were recorded across the Scheme.

Red-listed Birds of Conservation Concern

Curlew

- 4.2.4 Curlew were recorded at West Burton 1 and West Burton 2 only. At West Burton 1, a single individual was recorded calling during late May from within Field Q3 – a large arable field situated approx. 500m south-east of a drain of the main river, the River Till.
- 4.2.5 At West Burton 2 an individual was recorded on two occasions; once calling in mid-May (18/05/2021) approx. 200m north of the redline boundary at the north-east aspect of Site and immediately adjacent to the River Till. Although recorded outside of the redline boundary, Field N25 contained suitable breeding habitat comprised of grassland with a longer sward and numerous wet ponds/depressions. A curlew was also recorded flying across this Site one week later.
- 4.2.6 Curlew were considered to be possibly breeding at West Burton 2 or in close proximity, potentially within wetter areas situated within the floodplain.
- 4.2.7 Curlew are listed as Near Threatened on the IUCN red-list due to concerning global reductions in breeding populations (20-30%), including the most profound declines during the last three decades. Their historical breeding range typically included meadows, marshland and arable fields but with notable contraction within the UK thought to include upland moorland and farmland on moorland edge. However, they have also been known to breed within arable and silage/grass ley¹². They require invertebrate-rich grassland with a longer sward that also allows the nest to be hidden whilst maintaining visibility and a good food resource for foraging young.

Lapwing

- 4.2.8 Lapwing were recorded at West Burton 2 and West Burton 3 only with an estimated minimum of three breeding territories.
- 4.2.9 At West Burton 2, a total of eight individuals were recorded across three visits, including one completed in the following survey season (i.e. 2022). This included two juveniles and a calling adult within an arable field

¹² RPSB (2022) *Curlew Conservation* [online]. Available at: [REDACTED] [Accessed 01/07/2022]



(Field N26 situated within the north-east corner of Site), immediately south of poor semi-improved grassland containing numerous ponds. This has been assessed as confirmed breeding, although there is a possibility that the birds bred off-site and were on a foraging excursion within the redline boundary. The majority of remaining records were within 1km, including individuals travelling overhead in close proximity to the River Till and a single calling lapwing. This individual was recorded close to an area of unmanaged grassland within a field corner and immediately adjacent to grazed pasture (Field N20 and Field N16 respectively) which may be used as foraging habitat.

- 4.2.10 Three records of lapwing were made at West Burton 3, with a total of 28 individuals, including a group of 25 flying across the centre of the Site. The remaining two records relate to two birds within Field Q4 (north-west Site corner, Bellwood) in early May, prior to another displaying alarm just north of the redline boundary at Field Q1 (Bellwood). Although the arable fields were relatively small (approx. 7ha), Field Q4 (Bellwood) was situated immediately adjacent to an area of semi-improved grassland and considered to be a suitable source of soil invertebrates for chicks, should lapwing have bred on Site.



Figure 3: Estimated (Minimum) Number of Breeding Lapwing Territories, West Burton 2

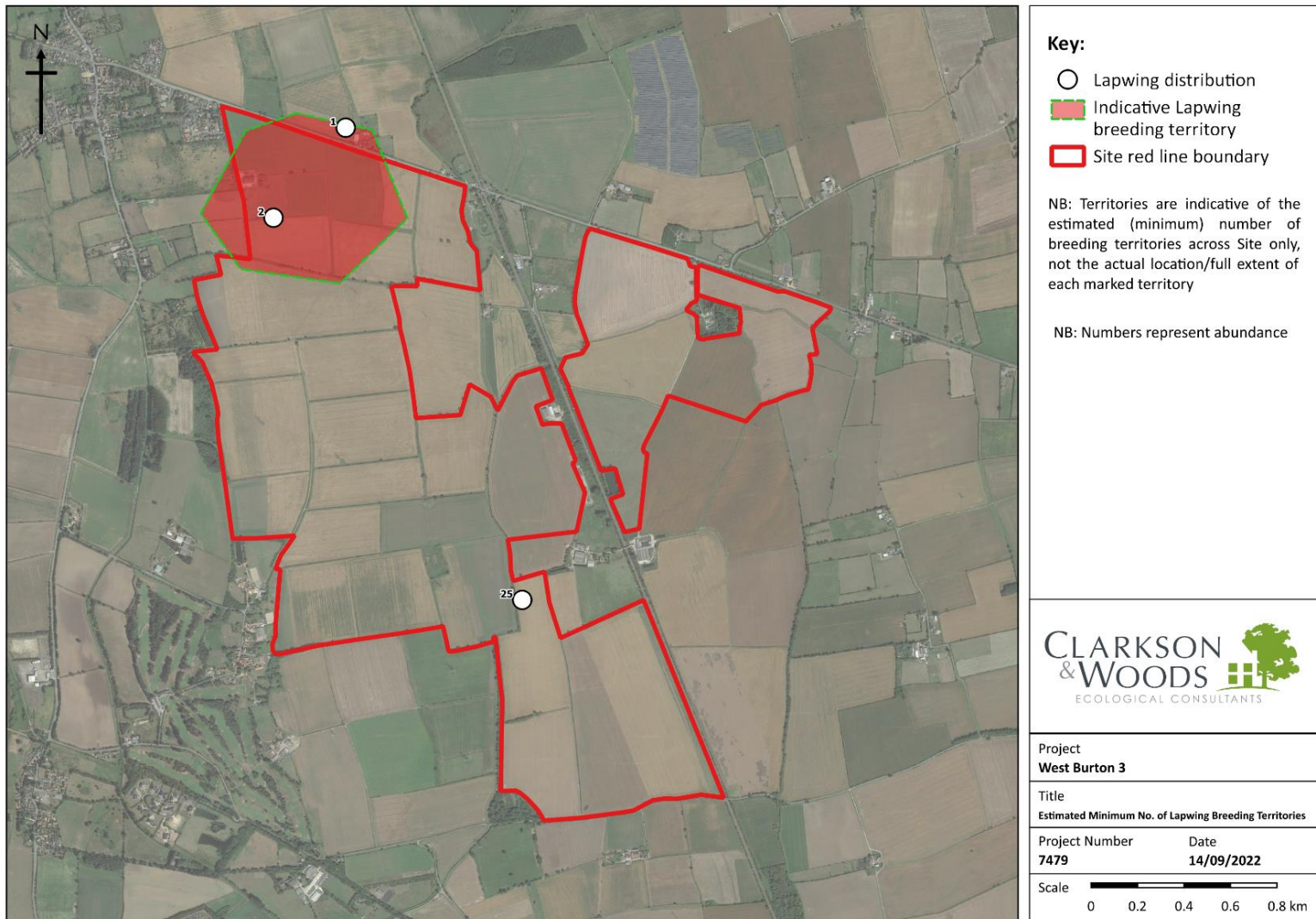


Figure 4: Estimated (Minimum) Number of Breeding Lapwing Territories, West Burton 3



Skylark

- 4.2.11 Skylark were confirmed to be breeding at West Burton 1 and Weston 3 (i.e. juveniles and repeated individuals recorded carrying food respectively) and also considered likely confirmed at West Burton 2, but included as probable as per BTO good practice guidance. A peak of 82 breeding territories were recorded at West Burton 3, with the majority recorded within arable fields.
- 4.2.12 Although the peak number of breeding territories were recorded at West Burton 3, the number of indicative breeding territories present across each Site (i.e. distribution of territories relative to area) was largely consistent across the Scheme. The average indicative skylark breeding territory size across the Scheme was approx. 5.36 hectares, however, more detailed analysis of mapping would be needed to determine absolute territory size.
- 4.2.13 Two thirds of skylarks within the UK breed within lowland farmland, with almost half of these associated with cereal fields¹³. Therefore skylarks are vulnerable to land change which affects the open field systems and habitat structure they require for nesting (vegetation ideally approx. 20 – 50cm in height).
- 4.2.14 Variations in skylark distribution across the Scheme will undoubtedly be influenced by the timing of cropping and annual crop rotations.

Yellow Wagtail

- 4.2.15 Yellow wagtail were recorded across the Site at varying territory densities, with an estimated minimum of 15 breeding territories across the Scheme. Their distribution was predominantly within open field but also included boundary habitats where records would have related to singing males (rather than nesting individuals).
- 4.2.16 Despite yellow wagtail being typically known to feed around grazing animals within damp pasture and meadows, their habitat preferences have changed (or at least had to adapt to changing agricultural practices) to include arable landscapes. Overall, yellow wagtail were recorded most often within arable fields.
- 4.2.17 At West Burton 3, yellow wagtail were recorded within both arable and occasionally grassland habitats. Notably, activity was concentrated within fields bounded by ditches, regardless of type, with a lack of records where fields were bounded only by hedgerow. Individuals were also recorded carrying food and considered to be breeding. This distribution pattern was similar at West Burton 2 where yellow wagtail were recorded within fields bounded by ditches, as well as some with areas of wild bird cover.

Amber-listed Birds of Conservation Concern

Meadow Pipit

- 4.2.18 Meadow pipits were recorded on all survey visits at West Burton 2 and West Burton 3, including individuals carrying food on some visits, and considered to be confirmed breeding attempts. They were most abundant West Burton 2, which was considered due to high densities within fields managed as fallow or grassland with numerous ponds (Field N25).
- 4.2.19 At West Burton 3, meadow pipits were recorded within both arable and grassland areas; however breeding behaviour and territories were concentrated within or in close proximity to grassland habitats, including small fields.
- 4.2.20 Meadow pipit were only recorded on three visits at West Burton 1, mostly flying overhead.

¹³ RSPB (2022) *Skylark on Arable* [online] Available at: [REDACTED] [Accessed 20/04/2022]



Breeding Birds Typically Associated with Arable Field Margins or Hedgerows/scrub

Red-listed Birds of Conservation Concern

Cuckoo

- 4.2.21 Four records of singing male cuckoo were made at the north-western portion of West Burton 3 at separate locations amongst a line of trees/hedgerow and a grassland field with scrub immediately adjacent. With three recorded on the same day (27/05/21) and in close proximity, these are considered likely the same individual, however another record was made at the same location the following season (10/05/2022) with possible breeding attempts made. Their main brood hosts, dunnoek and meadow pipit were also recorded on Site therefore breeding is possible if female cuckoos were also nearby.

Greenfinch

- 4.2.22 Greenfinch were recorded within hedgerow boundaries at West Burton 2 and West Burton 3 only, with a maximum of three individuals recorded on any single visit.
- 4.2.23 At West Burton 2, three records were made from within boundary hedgerows at two distinct locations. Greenfinch were recorded either singing or calling from three separate locations at West Burton 3, within hedgerow habitat and at one of these locations across two survey seasons.

Grey partridge

- 4.2.24 Grey partridge were recorded across the Scheme in varying distribution patterns, likely influenced by crop type and management at the time of survey. This is also likely to have been affected by the availability of suitable foraging and nesting habitat, including margins, areas of fallow land or conservation measures (e.g. field corners or flower mix).
- 4.2.25 Records were mainly associated with field edges or birds moving to these areas, in which grey partridge are most likely to nest amongst tussocky vegetation. Unmanaged margins and other areas with sufficient cover and diversity of invertebrates, seeds and vegetative shoots will be used for nesting but also within fields where suitable resources are present, e.g. fallow ground. In-field habitats provide valuable foraging grounds over winter.
- 4.2.26 Grey partridge were recorded at West Burton 1 across four visits, regularly moving across Site. At West Burton 2, although site-wide they were most abundant within the eastern section of Site amongst arable fields which appeared to be managed with some conservation measures, such as rotational fallow ground, species-rich margins, uncultivated field corners etc.
- 4.2.27 At West Burton 3 grey partridge were most abundant across arable fields to the west of the railway and an estimated minimum of five breeding territories were recorded.
- 4.2.28 Across the Scheme, an estimated 18 breeding territories were recorded. Despite the species being monogamous, this estimate should be taken as a precautionary number given the elusive nature and extended incubation period of this species.

Linnet

- 4.2.29 Linnets were recorded on all visits across the Scheme, with a peak count of 31 individuals at West Burton 1 and 75 at West Burton 2, both in late April; and 99 birds at West Burton 3 in late May. Field size is consistently smaller across West Burton 3, therefore with a higher field:boundary ratio. Overall, the distribution of linnets was generally skewed towards the arable fields rather than grassland habitats, considered most likely due to the availability of weed seeds within field margins and grain seeds.
- 4.2.30 This generalised distribution pattern was also evident at West Burton 2 where linnets were mostly recorded in the boundaries of arable fields or near to areas of wild bird cover.



Tree sparrow

- 4.2.31 Tree sparrows were recorded at West Burton 3 only. This species nests in natural tree holes/features in addition to hedgerow as a lesser extent, therefore can be vulnerable to impacts to small areas of habitat used for breeding.
- 4.2.32 Tree sparrows were recorded at three distinct locations including within scrub habitat surrounding the farmstead immediately adjacent to the railway (east Field Q24) and field boundaries. This included dense, frequently managed hedgerow (H45, Bellwood) and within a standard tree at H50, Brampton). Each record was made across three separate visits with breeding considered to be probable.

Yellowhammer

- 4.2.33 Yellowhammers were recorded across the Scheme, confirmed to be breeding (family recorded at West Burton 2) and clearly associated with boundary habitats, including where boundary connectivity was poor. Population declines have resulted in yellowhammer becoming a red-listed farmland bird species with the species needing a mosaic of habitats during breeding when they feed on grain and invertebrates, in addition to areas of seed-bearing crops over winter to maintain winter populations. A peak count of 67 individuals were recorded on any single visit at West Burton 3.
- 4.2.34 The red-listed species requires a mosaic of habitats during the breeding season, feeding on grain and invertebrates, in addition to reliance on good availability of seed-bearing crops over winter to maintain their presence/population numbers. Despite at least 75% of the area of West Burton 2 farmed as arable, yellowhammer abundance and density was lower than other land-parcels, with few records in areas of grazed pasture. Generally speaking, the number of field records within areas of non-grain bearing crops (e.g. pasture, miscanthus grass, fallow ground) was lower compared with arable.

Amber-listed Species

Bullfinch

- 4.2.35 Bullfinch were probable breeders at West Burton 3 and a single female was recorded at West Burton 2. Suitable breeding and foraging habitat was recorded at West Burton 2, concentrated around grassland fields, residential settings and tall hedgerows present amongst arable fields.
- 4.2.36 All records were associated with boundary habitats that provide suitable foraging and nesting habitats (i.e. hedgerows with trees, woodland, scrub etc). An estimated minimum of five breeding territories were recorded across the Scheme, which allows for bullfinches being known to travel from nests to search for food (estimated approx. up to 1km).
- 4.2.37 The general loss of suitable habitats and the availability of buds, seeds and fruits are a contributing factor to the bullfinch population declines.

Common whitethroat

- 4.2.38 Common whitethroat were recorded across the Scheme on all visits with the earliest records from early May. Confirmed breeders (individuals were recorded carrying food for young), this species was recorded across all visits, with a peak count of 70 individuals on a single visit in late May (West Burton 2). Their distribution was generally associated with hedgerow boundaries, as expected, but absent where fields were large, lacked hedgerow or suitable scrubby vegetation, boundaries comprised of open and frequently managed ditches or hedgerows were in poor condition.
- 4.2.39 As expected, there were fewer records in close proximity to open ditches at West Burton 2, but also adjacent to the wooded belt running bounding two large arable fields: Field N8 and Field N5.

Dunnock

- 4.2.40 Dunnock were recorded across the Scheme on the majority of visits. Distribution records were relatively consistent amongst hedgerow boundaries, but less frequent or absent adjacent to open ditches. They were recorded throughout much of West Burton 1 despite poor hedgerow connectivity and also confirmed breeding, with young seen, at West Burton 2.



4.2.41 At West Burton 3, dunnock records were lacking in a small number of fields (Fields P2, P6 and Q4), but otherwise frequent across the Site.

Other Species

Goldfinch

4.2.42 Goldfinch were likely breeding across the Site, with peak counts of 28 and 31 individuals at West Burton 2 and 3 respectively. Their distribution was concentrated within boundaries but evidently also foraging within field across all visits. Although goldfinch are a green-listed BoCC and have experienced increases in population numbers, they are one a number of more common species included on the UKFBI list due to their use of open farmland for feeding during the breeding season, despite nesting in boundary/hedgerows/vegetated habitats.

Wren

4.2.43 Wren have been included within this category rather than amber-listed category because they were listed as a green-listed BoCC up until Dec 2021. Consequently, the modified methodology included for the presence of this species to be summarised rather than all recorded. The abundance included within Table 4 (above) is not a complete record.

4.2.44 Wren were recorded across the Scheme, most frequently at West Burton 3 and confirmed as breeding at this Site (with a family seen). They were more frequently seen across the southern section of West Burton 1 and favouring taller hedgerows across the Scheme.



Breeding Predominantly Associated with Ditches, Waterbodies and Associated Habitats

Schedule 1

Cetti's Warbler

- 4.2.45 A single record of Cetti's warbler was recorded at West Burton 3 only and considered to be a migrant passing through. It was recorded from within the margin of a large arable field (Field Q25) bounded by a large, wet ditch and adjacent hedgerow at **B32b**.

Amber-listed Birds of Conservation Concern

Gadwall

- 4.2.46 A peak of two gadwall were recorded at West Burton 1 and West Burton 2 only. At West Burton 2, two gadwall were recorded flying overhead adjacent to the River Till; then, during the following season (2022) a pair of gadwall were recorded in a similar location (i.e. ditch D19 Field N31) in early June. They are therefore considered to be probable breeders at nearby locations. If present, inlets on the River Till or ponds may be used for breeding including those at nearby LWS (Torksey Marsh LWS, Trent Port Wetland LWS) situated within 1km of this Site.

Greylag Goose

- 4.2.47 Greylag goose were recorded across the Scheme with a peak count (across all surveys) of 52 individuals at West Burton 3. The geese were recorded most frequently at this Site and also successfully reared a family of five birds recorded on the reservoir (Pond 12 (Brampton), situated immediately east of the railway line in Field P3). This field was also managed as grassland at the time of the initial survey and provided a likely foraging ground.
- 4.2.48 The next most abundant location was at West Burton 2, with the River Till forming the eastern boundary of Site. Some larger waterbodies were also present on Site. Commuting birds were only recorded at West Burton 1 and West Burton 2 on no more than two occasions.

Mallard

- 4.2.49 Mallard were recorded across the Scheme, most consistently at West Burton 2 and West Burton 3 where large ponds are present.
- 4.2.50 At West Burton 1, mallard were recorded across seasons on three separate visits. This included pairs on two occasions, both within field and close to a wet ditch bounding the north of Site.
- 4.2.51 At West Burton 2, pairs were recorded on at least three visits with the majority of records occurring within the central section of Site. This included wet ditches and Pond 4 which was well used by wildfowl, as well as along the River Till. A peak count of 22 mallard were recorded in early May.
- 4.2.52 At West Burton 3, numerous records were made across Site including pairs recorded on at least three visits. A peak count of 27 mallard were recorded, with a group of 19 individuals at Pond 12. It was considered probable that mallard breed on Site, although not confirmed.

Moorhen

- 4.2.53 Moorhen were recorded across the Scheme, with confirmed breeding and a family of four recorded at West Burton 3 at Pond 12 (Brampton).
- 4.2.54 At West Burton 2, moorhen was recorded alarm calling on a single occasion along the banks of the River Till, which offers suitable breeding habitat where sufficient marginal vegetation retained. A single moorhen was also recorded within a deep, wet ditch at West Burton 1 on a single occasion.



Reed bunting

- 4.2.55 Reed bunting are included on the UK Farmland Bird Indicator list with population numbers suffering approx. 30% reduction over recent decades (1970 – 2007)¹⁴ despite some indication of improvement over recent decades. This species was confirmed as breeding across the Scheme and, as expected, individuals were most often associated with field boundaries but also foraging within field and boundary habitats adjacent to hedgerows, including those without ditches. This distribution pattern was more evident at West Burton 1, a Site dominated by arable, where similar numbers of reed buntings were recorded within hedgerows adjacent to grassland margins compared with margins adjacent to ditches bounding the north of the Site. Invertebrate-rich habitats would likely influence this distribution.
- 4.2.56 The peak count for the Scheme (on single visit) was 34 individuals at West Burton 2. With the exception of a wet ditch alongside a road, all wet ditches were found to be supporting singing reed bunting. Records were most abundant within grassland and fallow ground; habitats likely to provide a valuable source of invertebrates.
- 4.2.57 The majority of reed bunting records at West Burton 3 were associated with ditches, but also included hedgerow habitats. Fewer records occurred where arable fields lacked grassland margins.

Sedge Warbler

- 4.2.58 Sedge warbler were recorded across the Scheme, but only with confirmed breeding attempts at West Burton 2. Here, the majority of records were associated with the River Till where an estimated four territories were recorded along a 1.25km of river at five distinct locations.
- 4.2.59 At West Burton 1, two individuals were recorded within the eastern boundaries of the Site, including an individual carrying food within D1 north-west of Field M1 across two seasons; considered to be a breeding territory.
- 4.2.60 Five records of sedge warbler were made at West Burton 3 across two visits. This included a cluster of records around Pond 9 situated within centrally within site and two nearby records within an arable field (Field Q24). Another singing male was also recorded immediately south of the redline boundary at Field Q26) where Ponds 4 and Ponds 5 were situated. Overall, the Site was considered to support at least two sedge warbler territories.

Shelduck

- 4.2.61 Two shelduck were recorded within arable field bounded by wet ditch and situated within the south-west corner of West Burton 2.
- 4.2.62 Shelduck were repeatedly recorded across four visits at West Burton 3, both flying overhead across fields and a maximum of five birds in close proximity to Pond 12 (Brampton). This large waterbody may have been used for breeding if suitable nesting features were also present. Although historically coastal breeders, some shelduck have changed their behaviour more recently with records of breeding inland where suitable crevices exist, such as rabbit burrows, artificial boxes and natural holes in trees. West Burton 3 is situated approx. 40-50km from estuarine habitats and a total of 14 individuals were recorded at this Site, which also lies only <1km from Trent Port Wetland area forming a floodplain, with large expanses of shallow water and wetland vegetation, to the east of the River Trent.

¹⁴ RPSB (2022) *Reed bunting in brief*. [online] [redacted] [Accessed: 13/09/2022]



Breeding Predominantly Associated with Mature Trees/Woodlands

Schedule 1

Hobby

- 4.2.63 Hobby is a Schedule 1 species and recorded at West Burton 1 and West Burton 3.
- 4.2.64 They were recorded on the very final visit to West Burton 1, nesting within a tree along a hedgerow. At West Burton 3, three records were made across Site during the bird surveys, two in close proximity to one within Site hedgerow with mature and possibly nesting nearby. In response to these observations, a number of ad-hoc visits to the north eastern corner of the Site were carried out, during which a nest was confirmed within a tree along a hedgerow during 2021. Another record was also made at this Site of a commuting individual.
- 4.2.65 Due to the enhanced legal protection this species receives, the locations of hobby nests are not depicted on any maps. However, these locations are to be taken into account within the design of the scheme.

Red-listed Birds of Conservation Concern

Mistle thrush

- 4.2.66 Mistle thrush were recorded at West Burton 2 and West Burton 3 only, on two visits at West Burton 3. Suitable foraging ground is present amongst open field and nearby residential areas with suitable nesting habitat present within woodlands.

Amber-listed Species of Conservation Concern

Kestrel

- 4.2.67 Kestrel were recorded across the Scheme, which included both sexes and juveniles recorded at both West Burton 2 and West Burton 3. Kestrel have experienced steep declines in 1970s and included on the UKFBI list as the availability of their dietary requirements (small mammals, insects and earthworms) can be comprised where land is intensively farmed.
- 4.2.68 At West Burton 2, kestrels were recorded commuting and foraging across all Site habitats with both female and juveniles recorded in late June. These records were made within a line of trees situated amongst grazed pasture. At West Burton 3, kestrel were recorded in successive survey seasons at the same location within tall hedgerow. They were recorded nesting at this location with repeated records in close proximity from mid-May onwards and three juveniles seen in early June.

Song thrush

- 4.2.69 Song thrush was recorded across all Sites including records on each survey visit. Records were associated with their core foraging and nesting habitats (woodland, and copses etc.), species-hedgerows with trees and gardens/farmsteads with mature trees. The distribution pattern was evident at West Burton 2. At West Burton 3 numerous records were made amongst scrub and tall vegetation bounding the railway line. Records of song thrush at West Burton 1 were off-site within adjacent woodland and residential gardens Site habitats likely used for foraging.

Sparrowhawk

- 4.2.70 Sparrowhawk were recorded on Site within West Burton 1 and West Burton 3 only. At West Burton 3 the records were situated in woodland both bounding the redline boundary. At West Burton 1, the two records were from birds on the move and likely opportunistically foraging across Site. This species may have been under-recorded on account of its ambush hunting strategy.

Stock dove

- 4.2.71 Stock dove were recorded across the Scheme and most frequent at West Burton 2 and West Burton 3. Although only recorded at West Burton 1 on three occasions, the records were from the same residential and tall hedgerow with trees and considered probably breeding at this location.



4.2.72 At West Burton 2, there was a small number of calling individuals and repeated in-field records, especially within fallow areas and biofuel/game cover, and considered to also be foraging amongst arable crops. Although traditional nesting places would be within large tree cavities, they will nest within agricultural buildings with the majority of records at West Burton 3 each within approx. 500m of farm buildings and several mature trees within some boundaries.

Tawny owl

4.2.73 Two records of tawny owl were recorded across the whole scheme; one at West Burton 2 and another at West Burton 3. At this location it was found to be nesting close to the tall hedgerow also visited by cuckoo and with evidence of nesting kestrel nearby.

Willow Warbler

4.2.74 Willow warbler were recorded across the Scheme, despite its occurrence amongst all warblers recorded in Lincolnshire declining overall¹⁵. Their distribution was generally associated with woodland and established hedgerows, but also areas of patchy scrub such as those found along the River Till at West Burton 2 and railway and deep ditches at West Burton 3.

4.2.75 They were recorded from mid-April onwards and with a peak count of 13 individuals at West Burton 3 at this time (21/04/22).

Other Species

Jackdaw

4.2.76 Jackdaw were recorded across Site and generally associated with buildings at farmsteads and boundary habitats, including some in-field hedgerow boundaries and woodland belts. They were frequently recorded calling and likely breeding within buildings and nearby woodland.

4.2.77 Although no nests were confirmed, at West Burton 2 jackdaw were recorded within the standard tree situated within Field N15 and possibly nesting, plus flocks of jackdaw (peak count 15 individuals).

Rook

4.2.78 Rooks were recorded across Site and all land parcels, with a peak count of 187 individuals at West Burton 2; a rookery was noted at one of the farmsteads. Although fairly common and widespread, they are newly amber-listed and included as a UKFBI and mainly feed on soil invertebrates although are also known to scavenge.

4.2.79 Rooks were repeatedly recorded foraging within pasture fields and amongst mature trees or wooded areas within or adjacent to Field N15 at West Burton 2.

Woodpigeon

4.2.80 Woodpigeon were recorded frequently across the Scheme and sometimes in high abundance. The numbers included within Table 4 above are not complete (due to the recording methodology), however flocks of approx. 50 birds minimum were recorded at each Site, with over 200 at West Burton 2 on a single visit. Woodpigeon were recorded on at least four of the visits at most Sites, with flocks comprised of individuals foraging within fields, predominantly arable and fallow areas.

¹⁵ Casey, C., Clarkson, J.R., Espin, P. and Hyde, P.A. (2021) *The Birds of Lincolnshire*. Lincolnshire Bird Club: Louth



Breeding Predominantly Associated with Buildings

Schedule 1

Barn owl

- 4.2.81 Barn owl were recorded at West Burton 2 and 3 on three occasions each, with a peak of two individuals at each Site.
- 4.2.82 At West Burton 2, barn owls were frequently recorded flying over arable fields (e.g. Field N14, Field N25) in close proximity to the river boundaries or fields with margins or game cover, each providing suitable habitat for small mammals. A barn owl was also observed nesting within a woodland parcel adjacent to Site.
- 4.2.83 Barn owls were recorded at West Burton 3 commuting over Site and also seen perched and considered likely foraging from a mature standard tree. They were also confirmed nesting at two separate locations; one within the agricultural buildings and another within the mature standard tree. Two individuals were recorded at this location alongside the evidence of nesting.

Peregrine

- 4.2.84 Four records of peregrine were made across West Burton 3 only. All records were from May and early June where single individuals were recorded on two consecutive days; once flying overhead to the north and a separate individual from a metal-framed electricity pylon. It was then recorded again calling from the same location later in June and considered likely nesting although not confirmed.

Red-listed Birds of Conservation Concern

House martin

- 4.2.85 House martins have been included within this section due to their use of buildings for nesting; however, farmland provides a valuable foraging resource and location for sources for nesting building materials.
- 4.2.86 House martin were recorded across the Scheme, with a peak count of four individuals at West Burton 2 and 3. They were noted foraging over arable fields (Field Q18) at West Burton 3.
- 4.2.87 All records of house martins were from commuting birds, but with many of the farmsteads and nearby residential buildings all providing suitable habitat for this species, although they are known to show preference to previous nesting.

House sparrow

- 4.2.88 House sparrow were recorded across the Scheme, with the exception of West Burton 1, potentially affected by the lack of buildings at this Site.
- 4.2.89 At West Burton 2, breeding house sparrows were recorded at all locations at either farmsteads or collections of residential buildings. Their abundance was much higher adjacent to residences, such as the cluster of residences adjacent to the road running through the centre of West Burton 2 (south Field N13).
- 4.2.90 This distribution pattern was repeated at West Burton 3 with only one record >500m from any building. An individual was recorded displaying alarm calls, potentially breeding, at intersecting hedgerows north of Field Q13.

Starling

- 4.2.91 As a UKFBI, farmland provides important sources of soil invertebrates which starling feed on year-round, in addition to suitable breeding locations where present in trees although more commonly in buildings. Starling were recorded at West Burton 2 and West Burton 3 only, with peak counts of 40 and 21 individuals respectively. They were predominantly recorded flying overhead, likely foraging nearby.
- 4.2.92 Starlings were recorded within or near to areas of grassland, where present, but also amongst arable fields with recently tilled or areas of open soil a potential foraging resource for the species.



Swift

- 4.2.93 Swift were recorded in low numbers across the Scheme on two separate visits with a peak count of three individuals on any given visit. They were recorded from mid-May often flying overhead and likely foraging but may nest nearby where buildings offer suitable nesting habitat.

Other Conservation Species Recorded on Site, but typically breeding in other habitats.

Schedule 1

Marsh harrier

- 4.2.94 Marsh harrier were recorded at West Burton 1 with two females seen above arable fields on the same date (23/05/21).

Amber Birds of Conservation Concern

Black headed-gull

- 4.2.95 Black-headed gulls were recorded at West Burton 2 and 3 in low numbers, including adjacent to the River Till. The birds were recorded commuting or considered to be foraging opportunistically.

Common gull

- 4.2.96 A single common gull was recorded on a single occasion calling overhead at West Burton 3 and considered to be either commuting or foraging opportunistically.

Lesser black-backed gull

- 4.2.97 As with common gull, a single record of lesser black-backed gulls was made but with three individuals recorded at West Burton 2 and considered to be commuting across Site.

Wheatear

- 4.2.98 Wheatear were recorded at West Burton 2 and West Burton 3 only, with peak counts of 1 and 3 individuals respectively, including both male and females. Four of the six records made relate to the same visit or consecutive days and are considered most likely to be the same birds.

- 4.2.99 All records were made during a 21 day period with wheatear known to hold territories within suitable habitat across several weeks within Lincolnshire, but no confirmed breeding during the previous century¹⁶. These records are therefore considered most likely to relate to migrating individuals.

Species excluded from the Standard Methodology Approach

- 4.2.100 As detailed within Item 2.2.4, the eight most common and widespread species recorded during scoping surveys were excluded from the main field results maps (i.e. individual registrations) and tallied within a separate table. Where possible, this included an overview of their presence, abundance and breeding status. The eight species originally included were blackbird, blue tit, chaffinch, great tit, herring gull, robin, woodpigeon and wren; however the conservation status of woodpigeon and wren increased during the survey period therefore these species are included above. All remaining species have a brief overview included below.

- 4.2.101 Blackbird was recorded occasionally, increasing to frequent on some visits during early summer. They were confirmed breeders at West Burton 3 and considered to be probable breeders elsewhere.

- 4.2.102 Blue tit were recorded across Site but generally in low numbers. Their presence was notably more frequent within mature hedgerow and standard trees (e.g. oak and ash) and considered likely to be foraging. They were confirmed breeders at both West Burton 2 and West Burton 3.

¹⁶ Casey, C., Clarkson, J.R., Espin, P. and Hyde, P.A. (20210) The Birds of Lincolnshire. Lincolnshire Bird Club: Louth



- 4.2.103 Chaffinch were the most abundant passerine within this category and recorded frequently within hedgerows at West Burton 2. They were considered to be probable breeders with singing individuals frequently recorded.
- 4.2.104 Great tit were recorded less often than blue tit with their activity generally noted within mature trees, occasionally also good condition hedgerows and confirmed breeders at West Burton 3.
- 4.2.105 Herring gull were recorded on rare occasions across the Scheme, most frequently commuting/flying overhead, but possibly taking opportunity to forage within fields. No notable foraging was recorded across the Scheme however.
- 4.2.106 Robin were recorded breeding at West Burton 3, most often within more substantial hedgerows, but overall only rarely across the Scheme.

Green-listed and Least Concern Species of Conservation Concern

- 4.2.107 As described within the Introduction, the primary aim of this report was to ascertain a baseline of breeding bird populations and assemblages for the Scheme. However, conservation priority species, including Schedule 1 species (in accordance with the Wildlife and Countryside Act, 1981) and amber- and red-listed species (taken from the latest Birds of Conservation Concern BoCC List prepared by the BTO and conservation partners) have been prioritised to ensure focus around the species more vulnerable to the potential impacts of the proposed development.
- 4.2.108 Table 6 collates all other species with the results combined for the entire Scheme. This includes the total abundance of each species across all visits, their peak count on any single visit (across all sites) and the number of visits during which each species was recorded. The latter has informed the assumed breeding categories where information on the species breeding status was recorded during survey visits.

Table 6: Common and Widespread Bird Species Recorded at West Burton, Lincs

Species	Conservation Status	No. of surveys species found (/6)	Peak count on any single visit	Total no. of species across all surveys	Assumed breeding status (across all surveys)
Barn swallow	Green BoCC	6/6	37	169	Confirmed
Blackbird	Green BoCC	6/6	45	138	Confirmed
Blackcap	Green BoCC	6/6	28	136	Probable
Blue tit	Green BoCC	5/6	32	87	Confirmed
Buzzard	Green BoCC	6/6	14	57	Confirmed
Canada goose	Least Concern	1/6	6	6	Unlikely
Carrion crow	Green BoCC	6/6	39	109	Probable
Chaffinch	Green BoCC	5/6	101	277	Probable
Chiffchaff	Green BoCC	6/6	28	125	Probable
Collared dove	Green BoCC	4/6	3	6	Possible
Coot	Green BoCC	3/6	3	5	Possible
Cormorant	Green BoCC	4/6	3	7	Unlikely
Feral pigeon	Green BoCC	2/6	4	5	Possible
Garden warbler	Green BoCC	3/6	5	7	Possible
Great spotted woodpecker	Green BoCC	5/6	3	9	Probable
Great tit	Green BoCC	5/6	10	33	Confirmed



Species	Conservation Status	No. of surveys species found (/6)	Peak count on any single visit	Total no. of species across all surveys	Assumed breeding status (across all surveys)
Green woodpecker	Green BoCC	5/6	2	7	Probable
Grey heron	Green BoCC	6/6	9	23	Possible
Jay	Green BoCC	4/6	4	8	Probable
Lesser Whitethroat	Green BoCC	6/6	17	41	Probable
Little egret	Green BoCC	2/6	6	7	Unlikely
Little grebe	Green BoCC	1/6	1	1	Unlikely
Little owl	Least Concern	1/6	1	1	Possible
Long-tailed tit	Green BoCC	6/6	8	29	Probable
Magpie	Green BoCC	6/6	10	33	Probable
Mute swan	Green BoCC	3/6	3	5	Possible
Pheasant	Introduced	6/6	17	72	Possible
Pied wagtail	Green BoCC	6/6	5	21	Probable
Raven	Green BoCC	2/6	5	8	Possible
Red-legged partridge	Introduced	6/6	36	156	Probable
Reed warbler	Green BoCC	2/6	4	5	Possible
Robin	Green BoCC	6/6	24	79	Probable
Stonechat	Green BoCC	1/6	1	1	Possible
Tufted duck	Green BoCC	2/6	4	5	Possible

Overview of Potential Impacts

- 4.2.109 The species considered to be at most risk of impacts are those associated with open habitats and which require open sightlines, or which have a strong dependency on the provision and management of arable crops (including arable field margins). Construction of the solar arrays will result in the loss of open sightlines and the cessation of arable management, which may result in the exclusion of species with such dependencies. This includes skylark, yellow wagtail and waders (curlew, golden plover, lapwing, snipe and woodcock).
- 4.2.110 Species like grey partridge are associated with arable systems but may take advantage of grassland habitats and the cover afforded by the panels within the new solar farms. The cessation of predator control may be a greater factor in their continued success.
- 4.2.111 Other species like linnet, meadow pipit, reed bunting and yellowhammer may also have reduced foraging opportunities, although are expected to utilise the newly created grassland habitats amongst the arrays, which will provide a source of seeds and invertebrates.
- 4.2.112 **Table 7**, overleaf, summarises the potential impacts and opportunities for mitigation and compensation for each broad species group which may occur or be available as a result of the proposed Scheme.



Table 7: Summary of Species of Conservation Priority Recorded on Site and Overview of Impacts Resulting from Habitat Change/Loss

Overview of Species Requirements (by Category)	Characterisation of Unmitigated Impacts	Key Avoidance and Mitigation Measures	Key Compensation and Enhancement Measures	Headline Habitat Management Considerations
Predominantly associated with open/arable landscapes				
<p>All species largely insectivorous, including soil invertebrates for waders, and essential food source for young. Some species also supplementary feed on leaves and seeds of crops as important part of the adults diet (e.g. skylark)</p>	<p>Impacts of habitat loss/change</p> <p><u>All species:</u></p> <ul style="list-style-type: none"> ▪ Loss of farmland habitats and provision of suitable nesting and foraging habitats; ▪ Fragmentation of open field habitat (with wide visibility/ sightlines) resulting in them either becoming unusable or reducing suitability of breeding habitats; <p><u>Specific species considerations:</u></p> <ul style="list-style-type: none"> ▪ Curlew and lapwing remain site faithful, returning to sites where they have been bred before (and were raised); ▪ Within lowland farmland, lapwing have an affinity with arable and early pasture (nest from early April). 	<p>Avoidance and mitigation:</p> <ul style="list-style-type: none"> ▪ Avoid construction within Site where affected species exhibit site fidelity (esp. lapwing and curlew) or ensure nearby sites remain suitable year-on-year; ▪ Avoid development at likely quail communal pairing places; ▪ Avoid introduction of predator perches in close proximity to mitigation habitats. 	<p>Compensation and enhancement:</p> <ul style="list-style-type: none"> ▪ Creation replacement suitable habitat off-site where not possible to mitigate within the redline boundary or introduction of panels negates value of open field; ▪ Inclusion of water bodies and wet areas for soil feeders (e.g. curlew, lapwing), but also to increase provision of invertebrates (yellow wagtail); ▪ Include diverse range of habitats and sward structure to provide suitable nesting habitat and nearby foraging areas to accommodate varying species needs (e.g. lapwing feed their young within 200 – 300m of nest; lapwing will nest on open ground or short swards with occasional tussock, whereas skylark and curlew approx. 20 – 40cm); ▪ Cultivated fields farmed (sensitively) with spring-sown crop or set-aside would provide open habitat and preferred conditions for number of affected species. 	<p>Habitat management considerations:</p> <ul style="list-style-type: none"> ▪ Rotational management of compensation habitats would be necessary to meet the requirements of all species (e.g. bare ground – diverse sward structure but vegetation no more than 40/50cm); ▪ Within lowland farmland, lapwing favour tilled land or spring-sown crops with good sightlines; ▪ Extensively grazed grassland could increase sward diversity and invertebrate resources; ▪ Retain appropriate access within undeveloped margins to ensure sward managed appropriately and ease of access by foraging species.



Overview of Species Requirements (by Category)	Characterisation of Unmitigated Impacts	Key Avoidance and Mitigation Measures	Key Compensation and Enhancement Measures	Headline Habitat Management Considerations
Species typically associated with arable field margins and hedgerow/scrub habitats				
<p>A mix of granivores and insectivores (or both during their breeding seasons) within this category, with the granivores more reliant on farmed habitats year-round and typically nesting within field margins (e.g. yellowhammer, grey partridge).</p>	<p>Impacts of habitat loss/change</p> <p><u>All species:</u></p> <ul style="list-style-type: none"> ▪ Loss of suitable nesting habitat where hedgerow/trees/margins impacted or removed; ▪ Loss of foraging habitats from within fields most profound for species utilising farmed landscapes and adjacent habitats, e.g. e.g. yellowhammer, grey partridge; ▪ Possible loss of seed resource over winter, e.g. where stubble retained or emerging crops foraging resources (e.g. yellowhammer and grey partridge respectively) <p><u>Specific species considerations:</u></p> <ul style="list-style-type: none"> ▪ Potential impact and subsequent loss of breeding site affecting entire colonies where species exhibits site fidelity, e.g. tree sparrow. 	<p>Avoidance and mitigation:</p> <ul style="list-style-type: none"> ▪ Avoid loss of boundary habitat and protect with appropriately undeveloped margins; ▪ Revise proposed boundary route where construction would impact habitat feature (e.g. hedge, trees) known to be used by species exhibiting site fidelity (e.g. tree sparrow); ▪ Retention of undeveloped grassland margins to provide suitable nesting habitat (e.g. grey partridge, yellowhammer) 	<p>Compensation and enhancement:</p> <ul style="list-style-type: none"> ▪ Creation of species-rich hedgerow or woodland belt, or in-fill planting, to increase provision of nesting sites and foraging resources; ▪ Creation of tall hedgerows to increase nesting suitability; ▪ Inclusion of occasional pockets of scrub to increase habitat diversity and suitable nesting sites (e.g. turtle dove, common whitethroat); ▪ Enhance margins with species-rich grassland planting to increase habitat diversity, suitable nesting habitats etc; ▪ Continued cultivation of some areas as arable (spring sown crops, managed extensively) to enable retention of stubble following harvest to supporting wintering populations (e.g. tree sparrow, yellowhammer); ▪ Create areas of annual wild bird seed cover for granivores, such as greenfinch, linnets, yellowhammers 	<p>Habitat management considerations:</p> <ul style="list-style-type: none"> ▪ Retain sufficiently wide margins to enable vehicle access and long-term management; ▪ Allow management to include occasional presence of seed-bearing plants (e.g. thistles etc) within margins as these provide valuable foraging resource for birds such as linnets; ▪ Include diverse range of arable habitats on rotation (e.g. cultivated, fallow, cover crops) to provide suitable nesting habitat in close proximity to seeds, shoots, leaves (e.g. grey partridge).



Overview of Species Requirements (by Category)	Characterisation of Unmitigated Impacts	Key Avoidance and Mitigation Measures	Key Compensation and Enhancement Measures	Headline Habitat Management Considerations
Species typically breeding in/near to waterbodies and associated habitats (e.g. reeds, burrows)				
<p>A group that can be broadly categorised into two sub-groups: those which nest and feed within waterbodies (wildfowl) and others nesting within adjacent habitats and mostly feeding on terrestrial habitats (passerines)</p>	<p>Impacts of habitat loss/change</p> <p><u>All species:</u></p> <ul style="list-style-type: none"> ▪ Retention of waterbodies would negate loss of wildfowl breeding habitats; ▪ Habitat loss and fragmentation may occur should watercourses be impacted, such as creation of access routes/culverting; ▪ Installation of PV array may result in loss of foraging grounds, e.g. greylag geese; ▪ Pollution of watercourses/bodies during construction and loss of foraging resources; ▪ Loss of foraging habitats from within fields most pronounced for species utilising lowland farmland (e.g. reed bunting) 	<p>Avoidance and mitigation:</p> <ul style="list-style-type: none"> ▪ Retention and appropriate management of waterbodies/courses to retain breeding habitats; ▪ Permanent addition of sufficiently wide undeveloped margins adjacent to watercourse to avoid long-term impacts; ▪ Implementation of pollution prevention measures survey construction 	<p>Compensation and enhancement:</p> <ul style="list-style-type: none"> ▪ Pond creation has the potential to increase foraging grounds, potentially breeding if waterbodies; ▪ Retention of grassland adjacent to suitable waterbodies will retain foraging grounds for greylag geese; ▪ Enhancement measures to improve current ponds and condition of waterbodies; ▪ Provision of artificial roosts at locations known to be used by shelduck; ▪ Retention of undeveloped margins managed as arable margins or species-rich grassland to provide suitable nesting and foraging resources (e.g. reed bunting, sedge warbler); ▪ Provision of areas of adjacent fallow or oilseed rape would continue to provide foraging habitat for reed bunting (and other priority species) 	<p>Habitat management considerations:</p> <ul style="list-style-type: none"> ▪ Retain sufficiently wide margins to enable vehicle access and long-term management; ▪ Allow management to include occasional presence of seed-bearing plants (e.g. thistles etc) within margins as these provide valuable foraging resource for birds such as linnets; ▪ Include diverse range of arable habitats on rotation (e.g. cultivated, fallow, cover crops) to provide suitable nesting habitat in close proximity to seeds, shoots, leaves (e.g. grey partridge).



Overview of Species Requirements (by Category)	Characterisation of Unmitigated Impacts	Key Avoidance and Mitigation Measures	Key Compensation and Enhancement Measures	Headline Habitat Management Considerations
Birds typically breeding in mature trees/woodland				
<p>A group with a broad ecological requirements during their breeding despite similarities across nesting habitat, including insectivores, granivores, scavengers and birds of prey.</p>	<p>Impacts of habitat loss/change <u>All species:</u></p> <ul style="list-style-type: none"> ▪ Loss of nesting habitat where woodland, wooded belts or mature trees impacted; ▪ Loss of foraging habitat where farmland habitats lost, esp. species taking soil invertebrates (e.g. jackdaw, rook, song thrush). Also arable margins where managed as long vegetation that create sources of small mammals (e.g. kestrel); ▪ Unlawful activity would occur where breeding Schedule 1 species are impacted during construction or operation of the proposal, including disturbance whilst building a nest or rearing young. 	<p>Avoidance and mitigation:</p> <ul style="list-style-type: none"> ▪ Retention of woodland habitat, lines of trees and mature trees will negate loss of nesting habitats; ▪ Appropriate buffers to standard trees and woodland to ensure their longevity ; ▪ Appropriate management and habitat creation to mitigate for the loss of an overall reduction in the loss of suitable foraging habitats; ▪ Timing of works or preconstruction surveys to avoid impacts or determine presence of breeding birds respectively; ▪ Implementation of working method statements to ensure works carried out in compliance with current environmental law; 	<p>Compensation and enhancement:</p> <ul style="list-style-type: none"> ▪ Creation woodland belts and standard trees planting to pre-empt future loss current mature trees; ▪ Retention of undeveloped margins managed as arable margins or species-rich grassland to provide diverse foraging habitat; ▪ Creation new woodland or shelter belt to increase area of suitable habitat across Site; ▪ Provision of artificial nesting boxes may increase availability of nesting sites for some species (e.g. kestrel, tawny owl); ▪ Creation of wetland habitats, including grassland subject to occasional flooding, will compensate for loss of foraging habitat. 	<p>Habitat management considerations:</p> <ul style="list-style-type: none"> ▪ Creation of development, grassland margins including variation in sward height and some managed as tussocky grassland to increase abundance of small mammals; ▪ Revision of woodland management to improve diversity and overall condition across Site, increasing foraging and nesting opportunities;



Overview of Species Requirements (by Category)	Characterisation of Unmitigated Impacts	Key Avoidance and Mitigation Measures	Key Compensation and Enhancement Measures	Headline Habitat Management Considerations
Birds typically breeding in buildings/infrastructure				
<p>Species with a range of foraging requirements (including insectivores, small mammals and seed-eaters) but all making use of buildings within rural or residential settings.</p>	<p>Impacts of habitat loss/change <u>All species:</u></p> <ul style="list-style-type: none"> ▪ Reduced nesting opportunities where suitable nesting habitat lost or impacted; ▪ Loss of foraging habitat where arable margins/uncultivated habitat lost; ▪ Loss of potential foraging habitat from within arable field and short, grazed grassland providing ease of access to soil invertebrates. ▪ Unlawful activity would occur where breeding Schedule 1 species are impacted during construction or operation of the proposal, including disturbance whilst building a nest or rearing young. 	<p>Avoidance and mitigation:</p> <ul style="list-style-type: none"> ▪ Retention of buildings or infrastructure confirmed as nesting locations (e.g. peregrine show attachment to nesting sites); ▪ woodland habitat, lines of trees and mature trees will negate loss of nesting habitats; ▪ Appropriate buffers to standard trees and woodland to ensure their longevity ; ▪ Appropriate management and habitat creation to mitigate for the loss of an overall reduction in the loss of suitable foraging habitats; ▪ Timing of works or preconstruction surveys to avoid impacts or determine presence of breeding birds respectively; ▪ Implementation of working method statements to ensure works carried out in compliance with current environmental law; 	<p>Compensation and enhancement:</p> <ul style="list-style-type: none"> ▪ Retention of undeveloped margins managed as arable margins or species-rich grassland to provide diverse foraging habitat, including invertebrates and small mammals; ▪ Reversion of arable to grassland within the arrays will also create foraging opportunities ▪ Provision of artificial nesting boxes may increase availability of nesting sites for some species (e.g. house sparrow, starling, swift); ▪ Creation of wetland habitats and waterbodies with some exposed earth banks or open scrapes would provide nest building materials sources for house martins (and swallows) and increase provision invertebrates; ▪ Continued cultivation of some areas as arable (spring sown crops, managed extensively) to enable retention of stubble or create areas of annual wild bird seed cover for seed eaters (e.g. house sparrows) 	<p>Habitat management considerations:</p> <ul style="list-style-type: none"> ▪ Creation of diverse grassland margins including variation in sward height and some managed as tussocky grassland to increase abundance of small mammals.



5 ECOLOGICAL EVALUATION

5.1.1 **Table 8** below provides the status of each notable bird species recorded and also the importance of the Survey Area. The valuation of the feature reflects the rarity and conservation status of each species as well as its relative abundance and activity levels on Site described within this document.

Table 8. Ecological Evaluation for Notable Breeding Bird Species

Species	Conservation Status	County and UK Population Status	Abundance and Distribution within the Survey Area	Ecological Evaluation
Birds predominantly associated with open arable/grassland fields				
Curlew	Red BoCC, S41 , UK Farmland Bird Indicator (UKFBI)	Lincolnshire breeding population likely to be 10 – 50 pairs. UK breeding population estimate is 58,500.	Total of three records of birds calling or flying overhead at West Burton 1 and 2. Considered possibly breeding at West Burton 2 or nearby.	District
Lapwing	Red BoCC, S41 , UKFBI	Lincolnshire breeding population estimate of 2,400 pairs. UK breeding population estimate 98,000 pairs.	Recorded at West Burton 2 and 3, with juveniles also recorded at West Burton 2. An estimated minimum of three breeding territories across the Scheme.	District
Meadow pipit	Amber BoCC	Lincolnshire breeding population estimate of 20,000 pairs. UK breeding population estimate 2.5 million pairs.	Recorded at all sites with a peak count of 28 individuals on a single visit at West Burton 2. Possible breeding at West Burton 1; confirmed breeding West Burton 2 and 3.	Local
Skylark	Red BoCC, S41 , UKFBI	Lincolnshire breeding population estimate of 70,000 pairs. UK breeding population estimate 1.6 million pairs.	Confirmed breeding at West Burton 1 and 3; probable breeding at West Burton 2. Most abundant at West Burton 3, with a peak of 135 individuals recorded.	District
Yellow wagtail	Red BoCC, S41 , UKFBI	Lincolnshire breeding population estimate of 2,700 pairs. UK breeding population estimate 20,000 pairs.	Confirmed breeding at all Sites with an estimated minimum 15 breeding territories across all Sites.	District
Birds predominantly associated with arable field margins and hedgerows/scrub boundaries				
Bullfinch	Amber BoCC, S41	Lincolnshire breeding population estimate of 4,800 pairs. UK breeding population estimate 265,000 pairs.	Bullfinch were chiefly at West Burton 3, with an estimated minimum 5 breeding territories.	Local
Common whitethroat	Amber BoCC , UKFBI	Lincolnshire breeding population estimate of 53,000 pairs. UK breeding population estimate 1.1 million pairs.	Common whitethroat were recorded frequently at each Site, with confirmed breeding.	Local
Cuckoo	Red BoCC S41	Lincolnshire breeding population estimate of 200 pairs. UK breeding population estimate 18,000 pairs.	A single bird recorded at West Burton 3 only in consecutive seasons; considered possibly breeding.	Local



Species	Conservation Status	County and UK Population Status	Abundance and Distribution within the Survey Area	Ecological Evaluation
Dunnock	Amber BoCC S41	Lincolnshire breeding population estimate of 100,000 pairs. UK breeding population estimate 2.5 million pairs.	Recorded at each Site during each visit, with confirmed or probable breeding. Peak count per visit of 15 at West Burton 3.	Local
Goldfinch	UKFBI	Lincolnshire breeding population estimate of 43,000 pairs. UK breeding population estimate 1.7 million pairs.	Recorded at each Site, with a peak count per visit of 47 at West Burton 3. Probable breeding at each Site.	Site
Greenfinch	Red BoCC, UKFBI	Lincolnshire breeding population estimate of 16,000 pairs. UK breeding population estimate 785,000 pairs.	Recorded in low numbers at West Burton 2 and 3 (peak of 2 and 3 individuals respectively). Possible breeding at West Burton 2 and probable breeding at West Burton 3.	Local
Grey partridge	Red BoCC S41	Lincolnshire breeding population estimate of 4,000 pairs. UK breeding population estimate 37,000 pairs.	Recorded at each Site during most survey visits, with a peak count per visit of 30 at West Burton 2. Probable breeding at each Site, with an estimated minimum 18 breeding territories.	District
Linnet	Red BoCC, S41, UKFBI	Lincolnshire breeding population estimate of 30,000 pairs. UK breeding population estimate 560,000 pairs.	Recorded at each Site and during each survey visit with a peak count per visit of 99 at West Burton 3. Probable breeding at each Site.	Local
Tree sparrow	Red BoCC, S41, UKFBI	Lincolnshire breeding population estimate of 18,000 pairs. UK breeding population estimate 245,000 pairs.	Peak 2 individuals recorded at West Burton 3 only, with possible breeding.	Local
*Wren	Amber BoCC	Lincolnshire breeding population estimate of 278,000 pairs. UK breeding population estimate 11 million pairs.	Recorded at each Site with a peak count of 28 at West Burton 2 and 3.	Local
Yellowhammer	Red BoCC, S41, UKFBI	Lincolnshire breeding population estimate of 39,000 pairs. UK breeding population estimate 700,000 pairs.	Recorded at each Site and during each visit, with a peak count per visit of 67 at West Burton 3. Confirmed breeding at each Site.	District
Birds predominantly associated with ditches, plus near/within waterbodies and associated habitats (e.g. reeds, burrows)				
Cetti's warbler	Sch1	Estimate of around 40 pairs in Lincolnshire.	Single bird recorded at West Burton 3 on one occasion. Unlikely breeding within the Site.	Site
Gadwall	Amber BoCC	Lincolnshire breeding population estimate of 200 pairs. UK breeding population estimate 2,225 pairs.	Recorded in low numbers at West Burton 1 and West Burton 2 only, possibly breeding.	Site
Greylag goose	Amber BoCC	Lincolnshire breeding population estimate of 2,000 pairs. UK breeding population estimate 47,000 pairs.	Recorded at each Site, in appreciable numbers at West Burton 2 and 3 but mainly flying overhead. Confirmed breeding at West Burton 3 and possible at West Burton 2.	Local



Species	Conservation Status	County and UK Population Status	Abundance and Distribution within the Survey Area	Ecological Evaluation
Mallard	Amber BoCC,	Lincolnshire breeding population estimate of 6,000 pairs. UK breeding population estimate 103,000 pairs.	Recorded at all sites with probable breeding. Appreciable numbers at West Burton 2 and 3.	Local
Moorhen	Amber BoCC	Lincolnshire breeding population estimate of 7,000 pairs. UK breeding population estimate 210,000 pairs.	Recorded at all sites in low numbers. Possible breeding at West Burton 1 and 2; confirmed at West Burton 3.	Site
Reed bunting	Amber BoCC UKFBI	Lincolnshire breeding population estimate of 32,000 pairs. UK breeding population estimate 275,000 pairs.	Recorded at each Site on each visit, with a peak count per visit of 34 at West Burton 2. Confirmed breeding at all sites.	Local
Sedge warbler	Amber BoCC	Lincolnshire breeding population estimate of 18,000 pairs. UK breeding population estimate 240,000 pairs.	Recorded at all sites, with confirmed breeding at West Burton 2. Estimate of 4 territories at West Burton 2 and 2 territories at West Burton 3.	Local
Shelduck	Amber BoCC	Lincolnshire breeding population estimate of 700 pairs. UK breeding population estimate 7,900 pairs.	Only consistently recorded at West Burton 3, with possible breeding (max 5 individuals recorded).	Site
Birds predominantly associated with mature trees/woodland				
Hobby	Sch1	Lincolnshire breeding population estimate of 69 pairs. UK breeding population estimate 2,050 pairs.	Peak 2 individuals recorded at West Burton 1 and 3. Confirmed nesting at West Burton 1 and at West Burton 3.	District
Jackdaw	UKFBI	Lincolnshire breeding population estimate of 28,000 pairs. UK breeding population estimate 1.6 million pairs.	Recorded at each of the Sites in low numbers, with possible nesting (probable at West Burton 2).	Site
Kestrel	Amber BoCC, UKFBI	Lincolnshire breeding population estimate of 1,000 pairs. UK breeding population estimate 31,000 pairs.	Recorded at each of the Sites with a peak of 4 at West Burton 2. Confirmed breeding at West Burton 2 and 3.	Local
Mistle thrush	Red BoCC	Lincolnshire breeding population estimate of 3,000 pairs. UK breeding population estimate 165,000 pairs.	Recorded at West Burton 2 and 3 in low numbers, with possible nesting.	Local
* Rook	Amber BoCC, UKFBI	Lincolnshire breeding population estimate of 38,000 pairs. UK breeding population estimate 980,000 pairs.	Recorded at each Site, with a peak count of 187 at West Burton 2, where breeding was confirmed. Possible breeding at West Burton 1 and probable at West Burton 3.	Local
Song thrush	Amber BoCC, S41	Lincolnshire breeding population estimate of 38,000 pairs. UK breeding population estimate 1.3 million pairs.	Recorded at each of the Sites during each visit, with a peak count of 17 at West Burton 3. Probable breeders.	Local



Species	Conservation Status	County and UK Population Status	Abundance and Distribution within the Survey Area	Ecological Evaluation
Sparrowhawk	Amber BoCC	Lincolnshire breeding population estimate of 1,500 pairs. UK breeding population estimate 31,000 pairs.	Recorded at West Burton 1 and 3 in low numbers, but likely to be under-recorded. Possible breeders.	Local
Stock dove	Amber BoCC, UKFBI	Lincolnshire breeding population estimate of 11,000 pairs. UK breeding population estimate 320,000 pairs.	Recorded at each Site, with a peak count of 16 at West Burton 2. Probable breeders at all sites.	Local
Tawny owl	Amber BoCC	Lincolnshire breeding population unknown, but common and widespread resident. UK breeding population estimate 50,000 pairs.	Individuals recorded at West Burton 2 and 3 Possible breeding at West Burton 2 and confirmed at West Burton 3.	Local
Willow warbler	Amber BoCC, S41	Lincolnshire breeding population estimate of 14,000 pairs. UK breeding population estimate 2.3 million pairs.	Recorded at all sites with probable breeding. Peak 13 individuals at West Burton 3.	Local
* Woodpigeon	Amber BoCC, UKFBI	Lincolnshire breeding population estimate of 78,000 pairs. UK breeding population estimate 5.2 million pairs.	Recorded at each Site, with greatest numbers at West Burton 2. Possible breeding at West Burton 1 and probable at West Burton 2 and 3.	Local
Birds predominantly associated with buildings/infrastructure				
Barn owl	Sch1	Lincolnshire breeding population estimate of 1,200 pairs. UK breeding population estimate 9,000 pairs.	Confirmed breeding at West Burton 2 and 3 (peak 2 individuals).	Local
House martin	Red BoCC	Lincolnshire breeding population estimate of 11,000 pairs. UK breeding population estimate 480,000 pairs.	Recorded at all sites in low numbers. Possible breeding in nearby buildings.	Local
House sparrow	Red BoCC, S41	Lincolnshire breeding population estimate of 130,000 pairs. UK breeding population estimate 5.3 million pairs.	Recorded at West Burton 2 and 3 only, with a peak of 22 individuals at West Burton 2. Probable breeding at both sites.	Local
Peregrine	Sch1	Lincolnshire breeding population estimate of 22 pairs. UK breeding population estimate 1,750 pairs.	Recorded at West Burton 3 only, with probable breeding. Peak 2 individuals.	Local
Starling	Red BoCC, S41, UKFBI	Lincolnshire breeding population estimate of 30,000 pairs. UK breeding population estimate 1.8 million pairs.	Recorded at West Burton 2 and 3 only, with a peak of 40 individuals at West Burton 2. Probable breeding at both sites.	Local



Species	Conservation Status	County and UK Population Status	Abundance and Distribution within the Survey Area	Ecological Evaluation
Swift	Red BoCC	Lincolnshire breeding population unknown, possibly in region of 3,000 pairs. UK breeding population estimate 59,000 pairs.	Recorded at all sites in low numbers. Breeding on Site unlikely.	Site
Other Conservation Species Recorded on Site, but typically breed in other habitats e.g. marshland, extensive reedbeds, uplands etc				
Black-headed gull	Amber BoCC	Lincolnshire breeding population unknown, estimated 3,000 pairs in 1980s. UK breeding population estimate 140,000 pairs.	Recorded at West Burton 2 and 3 in low numbers. Breeding on Site unlikely.	Site
Common gull	Amber BoCC	Not thought to breed in Lincolnshire, those few that summer are thought to be juvenile birds. UK breeding population estimate 49,000 pairs.	Single individual recorded flying over West Burton 3 only on one occasion. Breeding on Site unlikely.	Site
Lesser black-backed gull	Amber BoCC	Lincolnshire breeding population estimate of 100 pairs. UK breeding population estimate 110,000 pairs.	Three individuals recorded flying over West Burton 2 only on one occasion. Breeding on Site unlikely.	Site
Marsh harrier	Amber BoCC, Sch1	Lincolnshire breeding population estimate of 45 pairs. UK breeding population estimate 642.5 pairs.	Two individuals recorded over West Burton 1 on one occasion. Breeding unlikely.	Local
Wheatear	Amber BoCC	No evidence of breeding in Lincolnshire in last 120 years. Widespread migrant in spring.	Recorded at West Burton 2 and 3 in low numbers. Likely passing through and not breeding.	Site



APPENDIX A: SURVEYS AND ASSESSMENT METHODOLOGY ADDENDUM

Table A1: Dates, Weather Conditions and Surveyors undertaking Breeding Bird Surveys

Site Name	Local Site Name	Survey Visit No.	Date	Weather Conditions (Cloud 0-8; Wind 1-12; Precipitation mm, Temperature °C)	Surveyors
WB1	Broxholme	1	23/05/2021	Cloud 4, Wind 2, Prec. 0, Temp. 6-8	BH
		2	27/05/2021	Cloud 5, Wind 1, Prec. 0, Temp. 13	MH
		3	07/06/2021	Cloud 2, Wind 2, Prec. 3 (heavy shower at 7:30am), Temp. 12-16	JG
		4	29/06/2021	Cloud 6, Wind 2, Prec. 0, Temp. 12-15	BH
		Dusk	01/07/2021	Cloud 2, Wind 1, Prec. 1, Temp. 15	JG
		5	20/04/2022	Cloud 0, Wind 1, Prec. 0, Temp. 8	PE
		6	12/05/2022	Cloud 1, Wind 2, Prec. 0, Temp. 9	PE
WB2	Ingleby	1	17/05/2021	Cloud 3, Wind 2, Prec. 0, Temp. 8-10	JG
			18/05/2021	Cloud 3, Wind 1, Prec. 3 (light showers), Temp. 6-10	JG, SM
			19/05/2021	Cloud 1, Wind 0, Prec. 0, Temp. 9	SM
		2	28/05/2021	Cloud 4, Wind 1, Prec. 0, Temp. 10-15	HM
			03/06/2021	Cloud 4, Wind 1, Prec. 0, Temp. 13-14	BH
		3	04/06/2021	Cloud 3, Wind 1, Prec. 0, Temp. 14	HF, HP
			14/06/2021	Cloud 4, Wind 1, Prec. 0, Temp. 18-20	JG, AT, RA
		4	23/06/2021	Cloud 1, Wind 1, Prec. 1 (light mist), Temp 8-15	JG, JL
			24/06/2021	Cloud 8, Wind 1, Prec. 0, Temp. 13	JL
			26/06/2021	Cloud 8, Wind 1, Prec. 0, Temp. 10	AT
		Dusk 1	28/06/2021	Cloud 8, Wind 0, Prec. 0, Temp 17	LD, HF, JG, JL
		Dusk 2	05/07/2021	Cloud 2, Wind 1, Prec. 0, Temp. 18	RA
			06/07/2021	Cloud 8, Wind 1, Prec. 0, Temp. 15	JL
			08/07/2021	Cloud 5, Wind 1, rec. 0, Temp. 18	RA
		5	26/04/2022	Cloud 6, Wind 0, Prec. 0, Temp. 5-11	JL, JG, LD, RA
		6	11/05/2022	Cloud 8, Wind 2, Prec. 3 (started light, heavier from 8:45am), Temp. 12	PE, AR, MH, RA
		WB3	Bellwood/ Brampton	1	02/05/2021
10/05/2021	Cloud 3, Wind 2, Prec. 1 (light showers), Temp. 12				SM
11/05/2021	Cloud 2, Wind 1, Prec. 0, Temp. 12				SM
2	26/05/2021			Cloud 5, Wind 2, Prec. 4 (light showers), Temp. 10	SM
	27/05/2021			Cloud 5, Wind 1, Prec. 0, Temp. 12	MB, AR, HM, SM,
3	08/06/2021			Cloud 1, Wind 0, Prec. 1 (light mist), Temp. 11-21	JL, MH, JG,
	10/06/2021			Cloud 8, Wind 1, Prec. 0, Temp. 18	LD
	11/06/2021			Cloud 4, Wind 2, Prec. 0, Temp. 19	LD



Site Name	Local Site Name	Survey Visit No.	Date	Weather Conditions (Cloud 0-8; Wind 1-12; Precipitation mm, Temperature °C)	Surveyors
			12/06/2021	Cloud 5, Wind 2, Prec. 0, Temp. 12	LD
		4	15/06/2021	Cloud 4, Wind 1, Prec. 0, Temp. 12-15	JL, LD, JM
			23/06/2021	Cloud 1, Wind 2, Prec. 0, Temp. 7-14	BH
			24/06/2021	Cloud 4, Wind 1, Prec. 1 (light rain at start), Temp. 13-16	BH
	Dusk (Bellwood)		02/07/2021	Cloud 4, Wind 1, Prec. 0, Temp. 20	RA, LD, JG
	Dusk (Brampton)		08/07/2021	Cloud 8, Wind 0, Prec. 1 (intermittent rain 22:00 – 22:30), Temp. 19	LD, JG
		5	22/03/2022	Cloud 1, Wind 1, Prec. 0, Temp. 8-14	MB
			24/03/2022	Cloud 4, Wind 1, Prec. 0, Temp. 4-13	MB
		6	21/04/2022	Cloud 0, Wind 1, Prec. 0, Temp. 7	RA/LD



APPENDIX B: WILDLIFE LEGISLATION & SPECIES INFORMATION

BIRDS

All British birds, their nests and eggs (with certain exceptions) are protected under the Wildlife & Countryside Act 1981 (as amended) which makes it an offence to: intentionally kill, injure or take a wild bird; intentionally take, damage or destroy nests which are in use or being built; intentionally take or destroy birds' eggs; or possess live or dead wild birds or eggs. A number of species receive additional protection through inclusion on Schedule 1 of the Wildlife and Countryside Act; for these it is also an offence to intentionally or recklessly disturb birds while nest building, or at a nest containing eggs or young, or to disturb the dependant young of such a bird. Penalties for offences against bird species include fines of up to £5,000 and/or up to six months in prison.

General licences for control of some bird species are issued by Natural England and Natural Resources Wales in order to prevent damage or disease, or to preserve public health or public safety, but it is not possible to obtain a licence for control of birds or removal of eggs/nests for development purposes. Consequently if nesting birds are present on a development site when works are programmed to start it is usually necessary to delay works, at least in the areas supporting nests, until any chicks have fledged and left the nest. It is usually possible, once chicks have hatched, for an experienced ecologist to predict approximately when they are likely to fledge, in order to inform programming of works on site.

PLANNING POLICY IN RELATION TO BIODIVERSITY - ENGLAND

The National Planning Policy Framework (NPPF), issued in March 2012, has superseded Planning Policy Statement 9: Biodiversity and Geological Conservation (August 2005). Additional guidance can be found online at <http://planningguidance.planningportal.gov.uk/blog/guidance/>. Further guidance is also available within the Government Circular ODPM 06/2005 on Biodiversity and Geological conservation although it should be noted that this document is currently being updated by DEFRA. The NPPF simplifies and collates a number of previous planning documents and outlines the government's objective towards biodiversity.

The NPPF identifies ways in which the planning system should contribute to and enhance the natural and local environment (Paragraph 109), including:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

It also emphasises the importance of conserving biodiversity and areas covered by landscape designations (Paragraph 115):

Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads.

When determining planning applications, the NPPF states that local planning authorities should aim to conserve and enhance biodiversity (Paragraph 118) by applying principles including:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- the following wildlife sites should be given the same protection as European sites: potential Special Protection Areas and possible Special Areas of Conservation; listed or proposed Ramsar sites; and sites identified, or required, as



compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The Natural Environment and Rural Communities Act (2006) states that a public authority must, "in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat". DEFRA issued further guidance on implementation of this act in the document; Guidance for Local Authorities on Implementing the Biodiversity Duty (May 2007), which notes that "Conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them".

ECOLOGICAL ENHANCEMENTS

The Natural Environment and Rural Communities Act (2006) states that a public authority must, "in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat". DEFRA issued further guidance on implementation of this act in the document; Guidance for Local Authorities on Implementing the Biodiversity Duty (May 2007), which notes that "Conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them".

In England, the National Planning Policy Framework (NPPF), issued in July 2018, states that the planning system should contribute to and enhance the natural and local environment by: "protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan; *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*". It also states that "*development whose primary objective is to conserve or enhance biodiversity should be supported*".



APPENDIX C: ECOLOGICAL EVALUATION CRITERIA

It is important to appreciate that the level of protection given to a particular species or habitat through national or international legislation does not necessarily relate to the evaluated level of importance of that feature to nature conservation. Whilst species may be widespread or common nationally, but of scarce occurrence in a particular county (for example, it might be at the limit of its geographical range), a species may also be considered to be rare nationally or internationally but be abundant within particular areas.

The Ratcliffe Criteria (Ratcliffe, 1977) provide a long established and widely accepted method of determining the nature conservation value of a particular site and have been used to aid the evaluation of the habitats associated with the Scheme. The attributes of the Ratcliffe Criteria are described below.

Ratcliffe Criteria for Nature Conservation Evaluation	
Criteria	Description
Size	Large, continuous areas of habitat are considered to be of greater importance than small or fragmented areas.
Diversity	Species and habitat diversity, including variations in topography and wetness, increase the wildlife value.
Naturalness	This reflects man's intervention or management of the habitat. Most habitats of this survey are semi-natural. Naturalness indicates the amount of modification of the land by man. Generally a less modified area results in an increase in the nature conservation value.
Rarity	The scarceness of a habitat, and the presence of rare/uncommon species, relates to its importance and priority for nature conservation. Rarity is related to the frequency of occurrence at national or county level.
Fragility	Fragile habitats are those where changes due to man's intervention, environmental factors or natural succession can directly threaten it. Scrub invasion, agricultural improvement, fire and changes in hydrological regime are the most common threats.
Typicalness	This relates to the quality of the habitat in terms of how good an example it is of a recognised type.
Position in an ecological/geographical unit	The relationship of a site to adjacent areas of nature conservation value. It is important to recognise the important and characteristic formations, communities and species of a district.
Recorded history	The extent to which a site has been used for scientific study and research is a factor of some importance.
Potential wildlife value	The likely quality of the habitat for birds, mammals, reptiles, amphibians and invertebrates if it is managed for wildlife. If appropriate habitat management is undertaken, it is possible for an increase in the diversity and nature conservation value of an area.
Intrinsic appeal	The knowledge of the distribution and numbers of popular groups of species such as birds, is greater than for obscure groups. Similarly, colourful wild flowers and rare orchids arouse more enthusiasm than liverworts. It is pragmatic to give more weight to some groups than to others.
Criteria are based on Ratcliffe, D.A. (1977). A Nature Conservation Review, Cambridge University Press	

Following the CIEEM Guidelines for Ecological Impact Assessment in the UK, when determining the biodiversity value of natural features found on or in proximity to the site the following characteristics will be considered:

- Animal or plant species which are rare or uncommon, either internationally, nationally or more locally;
- Endemic or locally distinct sub-populations of a species;
- Habitat diversity, connectivity and/ or other synergistic associations (e.g. networks of hedges);
- Priority Biodiversity Action Plan (BAP) habitat or species;
- Notably large populations or concentrations of animals considered uncommon or threatened in a wider context; plant communities that are considered to be typical of valued natural/ semi-natural vegetation types;
- Species at the edge of their range; and
- Species-rich assemblages of plants or animals.

The criteria described by Ratcliffe and CIEEM will then be used to ascribe a value to each feature according to its value in a geographic context. This is described in the table overleaf.



Level of Value	Ecological Features
International	<p>A habitat or species cited as a reason for the designation or proposed designation of a World Heritage Site, Biosphere Reserve, Biogenetic Reserve, Ramsar Site, Special Protection Area (SPA) or Special Area of Conservation (SAC).</p> <p>A large extent of habitat that is listed as a Priority Habitat Type in Annex 1 of the EC Habitats Directive in good condition with typical species diversity.</p> <p>A large and viable population of a regularly occurring species that is rare within an international context.</p>
National	<p>A habitat or species cited as a reason for the designation or proposed designation of a National Nature Reserve (NNR), Marine Nature Reserve (MNR), National Park, Site of Special Scientific Interest (SSSI) or Area of Special Scientific Interest (ASSI).</p> <p>Any area of habitat listed as a Priority Habitat Type in Annex 1 of the EC Habitats Directive that has potential to support typical species diversity.</p> <p>A large extent of habitat listed as a Priority Habitat in the UK BAP in good condition that supports an abundance of typical species.</p> <p>A large and viable population of a regularly occurring species that is scarce within an international context.</p> <p>A very large and viable population of a regularly occurring species that is listed as a Priority Species in the UK BAP.</p> <p>A large and viable population of a regularly occurring rare species that occurs in 15 or fewer 10km squares of the National Grid (e.g. a species that is listed in UK Red Data Books).</p> <p>A bird species with a British breeding population of <1,000 pairs.</p>
Regional	<p>A large extent of habitat listed as a Priority Habitat in the UK BAP that supports typical species diversity and is in good condition.</p> <p>A large and viable population of a regularly occurring species that is listed as a Priority Species in the UK BAP.</p> <p>A large and viable population of a regularly occurring plant species that is known to occur in 16 to 100 10km squares of National Grid (Stewart, Preston and Pearman 1994).</p> <p>A large and viable population of a regularly occurring insect species (Nationally Notable categories Na and Nb) that is known to occur in 16 to 100 10km squares of the National Grid [Ball, 1986].</p> <p>A bird species with a British breeding population of 1,000 to 10,000 pairs.</p>
County	<p>A habitat or species cited as a reason for the designation or proposed designation of a Local Site (known locally as a County Wildlife Site (CWS), Site of Importance for Nature Conservation (SINC), Ecology Database Site (EDS) etc.), a Local Nature Reserve (LNR), a Nature Reserve (owned or managed by: The Wildlife Trusts, The Woodland Trust or equivalent body etc) or an Ancient Woodland.</p> <p>A habitat listed as a Priority Habitat in the UK BAP which is large in extent and supports typical species diversity.</p> <p>A medium and viable population of a regularly occurring species that is listed as a Priority Species in the UK BAP.</p> <p>A viable population of a regularly occurring species listed in a County Red Data Book, County Flora or found in less than 10% of 1km squares of the National Grid within the count.</p> <p>A small population of a plant species that is known to occur in 16 to 100 10km squares of National Grid.</p> <p>A small population of an insect species (Nationally Notable categories Na and Nb) that is known to occur in 16 to 100 10km squares of the National Grid.</p> <p>A bird species with a British breeding population of 10,000 to 100,000 pair</p>
District	<p>A habitat or species cited as a reason for the designation or proposed designation of a Local Site (known locally as a Local Wildlife Site (LWS), Site of Importance for Nature Conservation (SINC), Ecology Database Site (EDS) etc.), a Local Nature Reserve (LNR), a Nature Reserve (owned or managed by: The Wildlife Trusts, The Woodland Trust or equivalent body etc) or an Ancient Woodland.</p> <p>A habitat listed as a Priority Habitat in the UK BAP which is small in extent, supports typical species diversity or is in an unfavourable condition.</p> <p>A small and viable population of a species that is listed in the UK BAP or LBAP.</p> <p>A bird species with a British breeding population of 100,000 to 500,000 pairs.</p>
Local	<p>A habitat or species cited as a reason for the designation or proposed designation of a site which is officially listed e.g. on a Parish Register.</p> <p>A semi-natural habitat that is listed in the UK BAP or LBAP, which is either small in extent and/or is in an unfavourable condition.</p> <p>A species which occurs occasionally that is listed in the UK BAP or LBAP.</p> <p>A bird species with a British breeding population of >500,000 pairs.</p>
Site	<p>An artificial habitat or habitat that has readily established e.g. amenity grassland.</p> <p>A species which is common and not listed on the UK BAP or LBAP e.g. Badger.</p>
Negligible	<p>A habitat or species common within the Application Site, offering little benefit to British wildlife and biodiversity.</p>



APPENDIX D: FIELD SURVEY RESULTS

Table D1: Total Abundance of Species Recorded on Survey Visit, Abundance and Breeding Status – West Burton 1

Species	Conservation Status	Visit 1	Visit 2	Visit 3	Visit 4	Dusk	Visit 5	Visit 6	Breeding Status (during surveys)
Birds predominantly associated with open arable/grassland fields									
Curlew	Red BoCC, S41, UKFBI	1							Unlikely
Meadow pipit	Amber BoCC			3			1		Possible
Skylark	Red BoCC, S41, UKFBI	28	22	25	38		23	22	Confirmed
Yellow wagtail	Red BoCC, S41, UKFBI	1			1		1	3	Probable
Birds typically breeding in field margins and fields boundaries (e.g. hedgerows/scrub)									
Common whitethroat	Amber BoCC, UKFBI	11	8	6	15		2	22	Confirmed
Duncock	Amber BoCC S41	4	1	6	4		6	2	Probable
Goldfinch	UKFBI	8	1	3			5	2	Probable
Grey partridge	Red BoCC S41	4		4			6	5	Probable
Linnet	Red BoCC, S41, UKFBI	8	6	7	4		31	9	Probable
Wren	Amber BoCC	Refer to species description							Possible
Yellowhammer	Red BoCC, S41, UKFBI	13	17	16	17		23	13	Confirmed
Birds typically breeding in/near to waterbodies and associated habitats (e.g. reeds, burrows)									
Gadwall	Amber BoCC						2		Possible
Greylag goose	Amber BoCC		2				2		Unlikely
Mallard	Amber BoCC	2					3	4	Probable
Moorhen	Amber BoCC						1		Possible
Reed bunting	Amber BoCC, UKFBI	9	7	8	6		8	8	Confirmed
Sedge warbler	Amber BoCC	1						1	Possible
Birds typically breeding in mature trees/woodland									
Hobby	Sch1							2	Confirmed
Jackdaw	UKFBI		3					4	Possible
Kestrel	Amber BoCC, UKFBI		1				1		Unlikely
Rook	Amber BoCC, UKFBI		2				2		Possible
Song thrush	Amber BoCC S41	2	2	1	1		1	3	Probable
Sparrowhawk	Amber BoCC	1	1					1	Possible
Stock dove	Amber BoCC, UKFBI				1		1	1	Probable
Woodpigeon	Amber BoCC, UKFBI	Refer to species description							Possible
Willow warbler	Amber BoCC, S41		1	1			1	1	Probable
Birds typically breeding in buildings									



Species	Conservation Status	Visit 1	Visit 2	Visit 3	Visit 4	Dusk	Visit 5	Visit 6	Breeding Status (during surveys)
House martin	Red BoCC						1		Possible
Swift	Red BoCC							2	Unlikely
Birds typically breeding in non-agricultural landscapes, e.g. marshland, extensive reedbeds, uplands...									
Marsh harrier	Amber BoCC, Sch1	2							Unlikely



Table D2: Species Recorded on each Survey Visit, Abundance and Breeding Status – West Burton 2

Species	Conservation Status	Visit 1	Visit 2	Visit 3	Visit 4	Dusk	Visit 5	Visit 6	Breeding Status (during surveys)
Birds predominantly associated with open arable/grassland fields									
Curlew	Red BoCC, S41, UKFBI	1	1						Possible
Lapwing	Red BoCC, S41, UKFBI		4		2		2		Confirmed
Meadow pipit	Amber BoCC	13	21	24	23		25	28	Confirmed
Skylark	Red BoCC, S41, UKFBI	68	117	86	84	1	95	65	Probable
Yellow wagtail	Red BoCC, S41, UKFBI	4	5	1	7		6	4	Probable
Birds typically breeding in field margins and fields boundaries (e.g. hedgerows/scrub)									
Bullfinch	Amber BoCC S41	1							Possible
Common whitethroat	Amber BoCC, UKFBI	52	35	35	41		22	33	Confirmed
Dunnock	Amber BoCC S41	8	6	5	12		7	14	Confirmed
Goldfinch	UKFBI	26	19	19	28		27	24	Probable
Greenfinch	Red BoCC, UKFBI		1				2		Possible
Grey partridge	Red BoCC S41		20	10	3	3	30	4	Probable
Linnet	Red BoCC, S41, UKFBI	31	65	19	57		75	65	Probable
Wren	Amber BoCC				28		19	20	Probable
Yellowhammer	Red BoCC, S41, UKFBI	28	28	22	34		29	35	Confirmed
Birds typically breeding in/near to waterbodies and associated habitats (e.g. reeds, burrows)									
Gadwall	Amber BoCC			2			2		Possible
Greylag goose	Amber BoCC	1	24				11	4	Possible
Mallard	Amber BoCC	1	16		9		20	22	Probable
Moorhen	Amber BoCC		1				1	1	Possible
Reed bunting	Amber BoCC, UKFBI	18	23	19	26		34	16	Confirmed
Shelduck	Amber BoCC						3		Unlikely
Sedge warbler	Amber BoCC		2	6	3		1	4	Confirmed
Birds typically breeding in mature trees/woodland									
Jackdaw	UKFBI	1	10	4	6		15	7	Probable
Kestrel	Amber BoCC, UKFBI	2	4	2	4			1	Confirmed
Mistle thrush	Red BoCC						4		Possible
Rook	Amber BoCC, UKFBI	4	22	6	4		187	47	Confirmed
Song thrush	Amber BoCC S41	6	2	6	3		5	2	Probable
Stock dove	Amber BoCC, UKFBI		2	4	2		16	6	Possible
Tawny owl	Amber BoCC		1						Possible



Species	Conservation Status	Visit 1	Visit 2	Visit 3	Visit 4	Dusk	Visit 5	Visit 6	Breeding Status (during surveys)
Woodpigeon	Amber BoCC, UKFBI						220	111	Probable
Willow warbler	Amber BoCC, S41			2			3	2	Probable
Birds typically breeding in buildings									
Barn owl	Sch1, S41		2	2	1				Confirmed
House martin	Red BoCC		1		4				Possible
House sparrow	Red BoCC, S41	4	10	4	22		2		Probable
Starling	Red BoCC, S41, UKFBI	4	40	14	27		2		Probable
Swift	Red BoCC				2	4			Unlikely
Birds typically breeding in non-agricultural landscapes, e.g. marshland, extensive reedbeds, uplands...									
Black-headed gull	Amber BoCC		2					1	Unlikely
Lesser black-backed gull	Amber BoCC						3		Unlikely
Wheatear	Amber BoCC						1	1	Unlikely



Table D3: Species Recorded on each Survey Visit, Abundance and Breeding Status – West Burton 3

Species	Conservation Status	Visit 1	Visit 2	Visit 3	Visit 4	Dusk	Visit 5	Visit 6	Breeding Status (during surveys)
Birds predominantly associated with open arable/grassland fields									
Lapwing	Red BoCC, S41, UKFBI	2		1			25		Possible
Meadow pipit	Amber BoCC	14	8	14	8	1	5	4	Confirmed
Skylark	Red BoCC, S41, UKFBI	135	106	128	105	4	115	84	Confirmed
Yellow wagtail	Red BoCC, S41, UKFBI	16	7	25	10		5	20	Confirmed
Birds typically breeding in field margins and fields boundaries (e.g. hedgerows/scrub)									
Bullfinch	Amber BoCC, S41	7	4	1	5		1		Probable
Common whitethroat	Amber BoCC, UKFBI	70	49	35	36		18	51	Confirmed
Cuckoo	Red BoCC S41		3					1	Possible
Dunnock	Amber BoCC S41	15	8	14	11		14	11	Probable
Goldfinch	UKFBI	24	20	47	12		17	31	Probable
Greenfinch	Red BoCC, UKFBI	2	2	2			1	3	Probable
Grey partridge	Red BoCC S41	6		14	9	4	6	6	Probable
Linnet	Red BoCC, S41, UKFBI	63	99	39	30		61	38	Probable
Tree sparrow	Red BoCC, UKFBI		2	1	1				Possible
Wren	Amber BoCC	28		6	12		23	25	Confirmed
Yellowhammer	Red BoCC, UKFBI	67	53	61	55	4	63	44	Confirmed
Birds typically breeding in/near to waterbodies and associated habitats (e.g. reeds, burrows)									
Cetti's warbler	Sch1	1							Unlikely
Greylag goose	Amber BoCC	11	13		5		18	52	Confirmed
Mallard	Amber BoCC	7	11	2	12		27	5	Probable
Moorhen	Amber BoCC				6		2		Confirmed
Reed bunting	Amber BoCC, UKFBI	21	18	22	13	1	13	31	Confirmed
Shelduck	Amber BoCC	3	3		1		2	5	Possible
Sedge warbler	Amber BoCC		1				4		Possible
Birds typically breeding in mature trees/woodland									
Hobby	Sch1	1		2					Confirmed
Jackdaw	UKFBI			10	8		1	3	Possible
Kestrel	Amber BoCC, UKFBI	2	1	3	1		2	1	Confirmed
Mistle thrush	Red BoCC						1	3	Possible
Rook	Amber BoCC, UKFBI		3	1			29	4	Possible
Song thrush	Amber BoCC S41	6	17	10	16		4	4	Probable
Sparrowhawk	Amber BoCC		2						Possible
Stock dove	Amber BoCC, UKFBI			12	9		3	5	Probable
Tawny owl	Amber BoCC		1						Confirmed



Species	Conservation Status	Visit 1	Visit 2	Visit 3	Visit 4	Dusk	Visit 5	Visit 6	Breeding Status (during surveys)
Woodpigeon	Amber BoCC, UKFBI						90	51	Probable
Willow warbler	Amber BoCC, S41	8	10	3	1		13	6	Probable
Birds typically breeding in buildings									
Barn owl	Sch1			2	2	4		1	Confirmed
House martin	Red BoCC				4				Possible
House sparrow	Red BoCC, S41		4	2	4				Probable
Peregrine	Sch1	2		1				1	Probable
Starling	Red BoCC, S41, UKFBI		1	21	1		2		Probable
Swift	Red BoCC				2			3	Unlikely
Birds typically breeding in non-agricultural landscapes, e.g. marshland, extensive reedbeds, uplands...									
Black-headed gull	Amber BoCC							3	Unlikely
Common gull	Amber BoCC	1							Unlikely
Wheatear	Amber BoCC						1	3	Unlikely

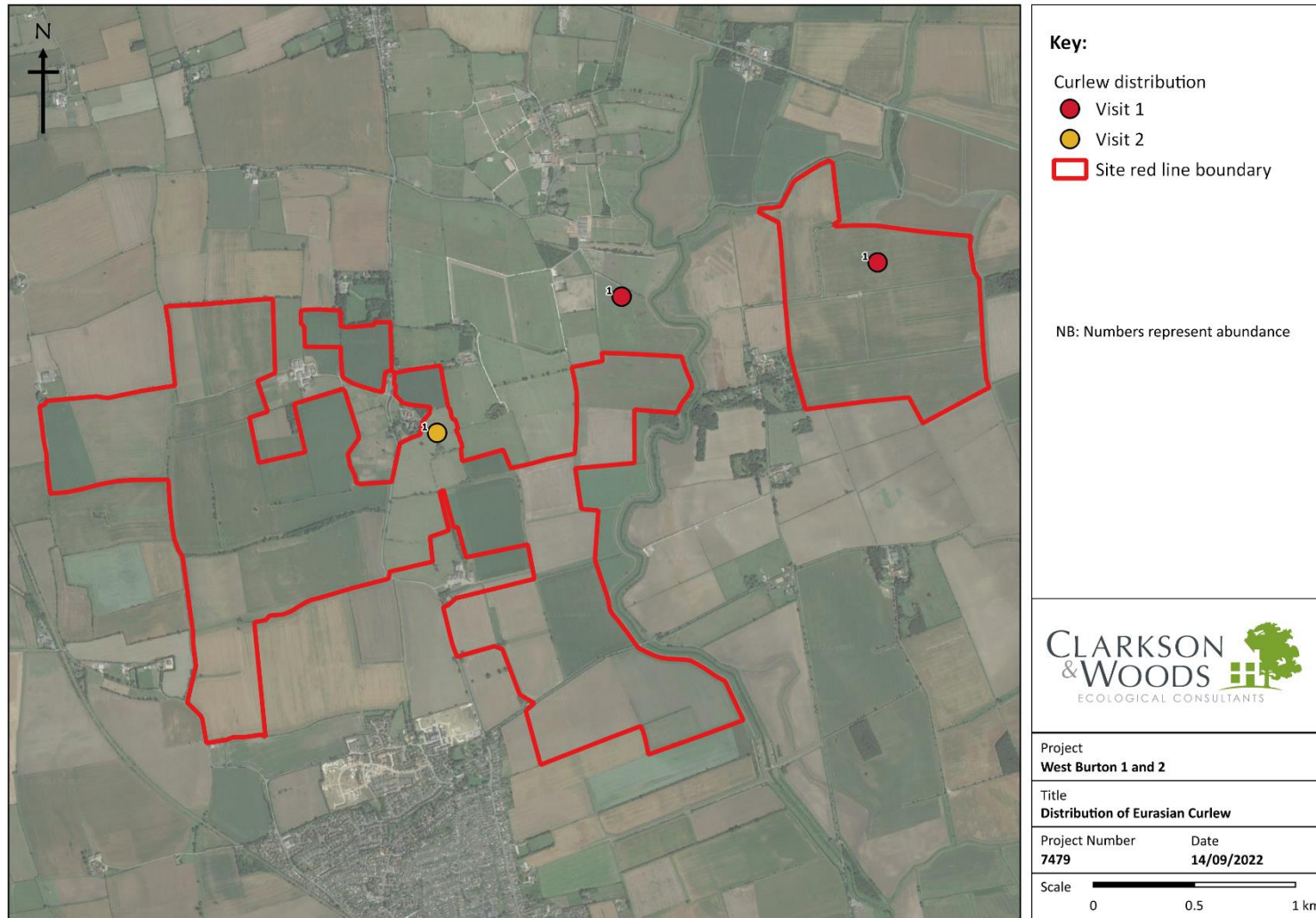


Figure D1: Distribution of Eurasian Curlew – West Burton 1 and 2

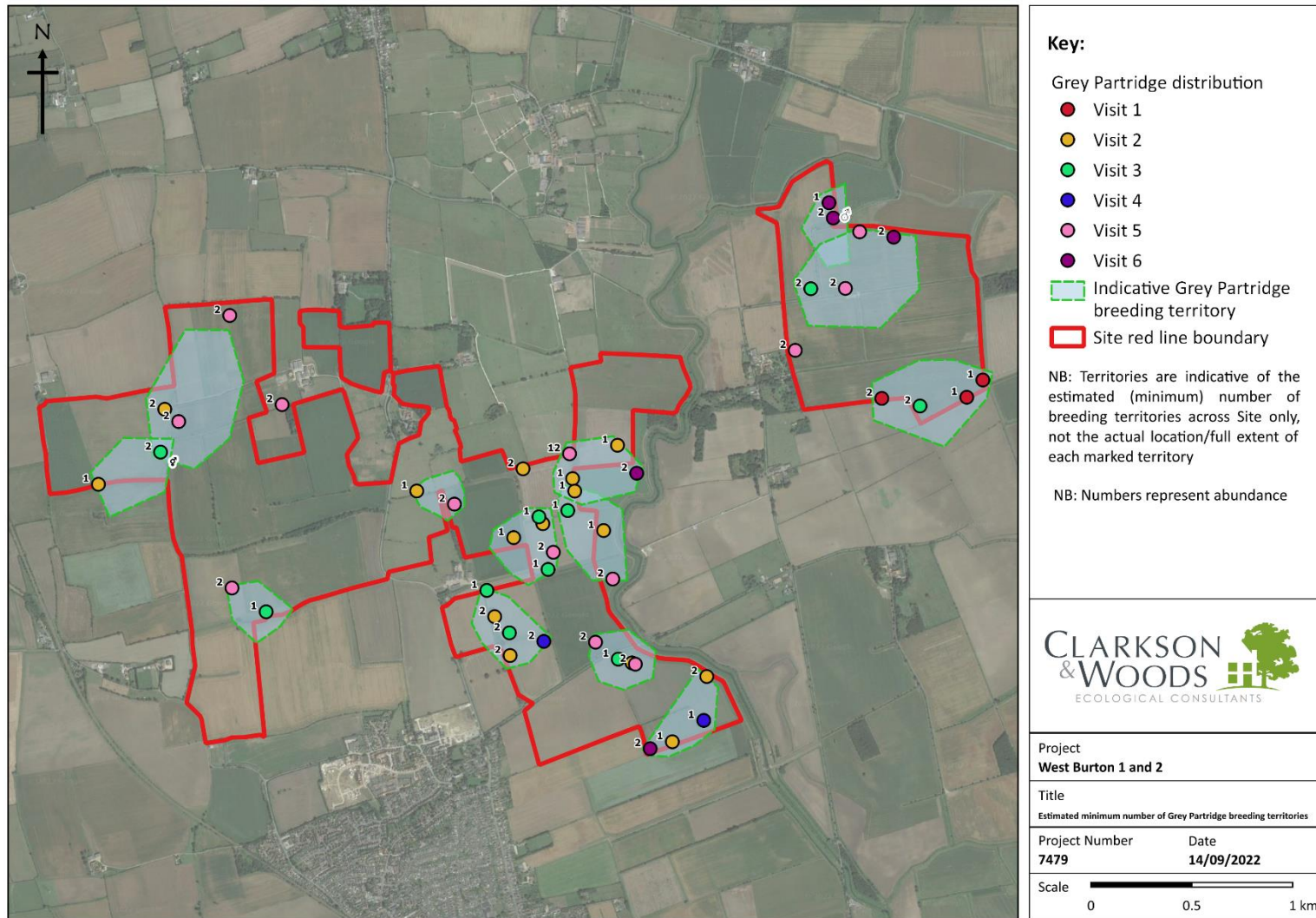


Figure D2: Estimated (Minimum) Number of Breeding Grey Partridge Territories – West Burton 1 and West Burton 2

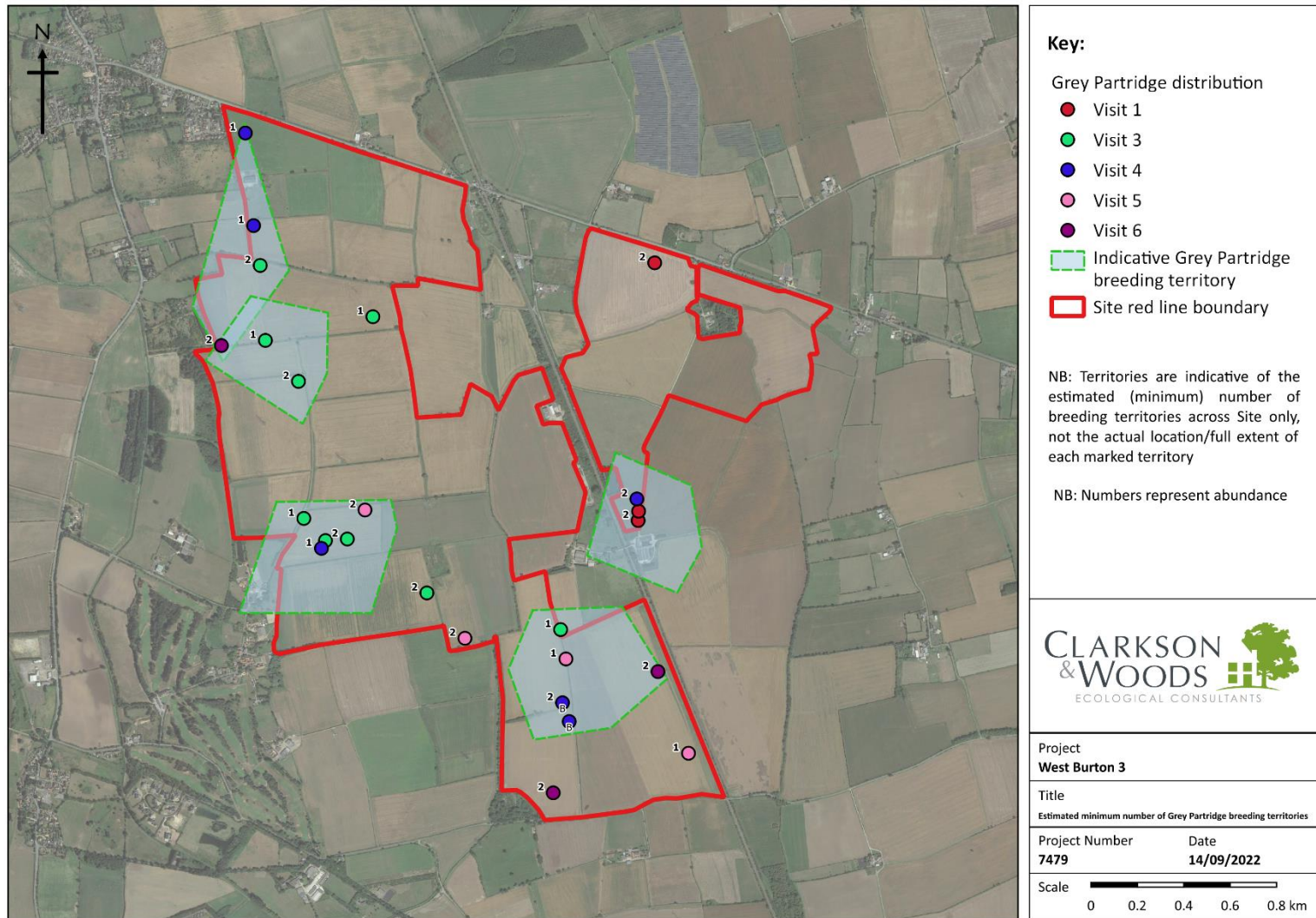


Figure D3: Estimated (Minimum) Number of Breeding Grey Partridge Territories – West Burton 3

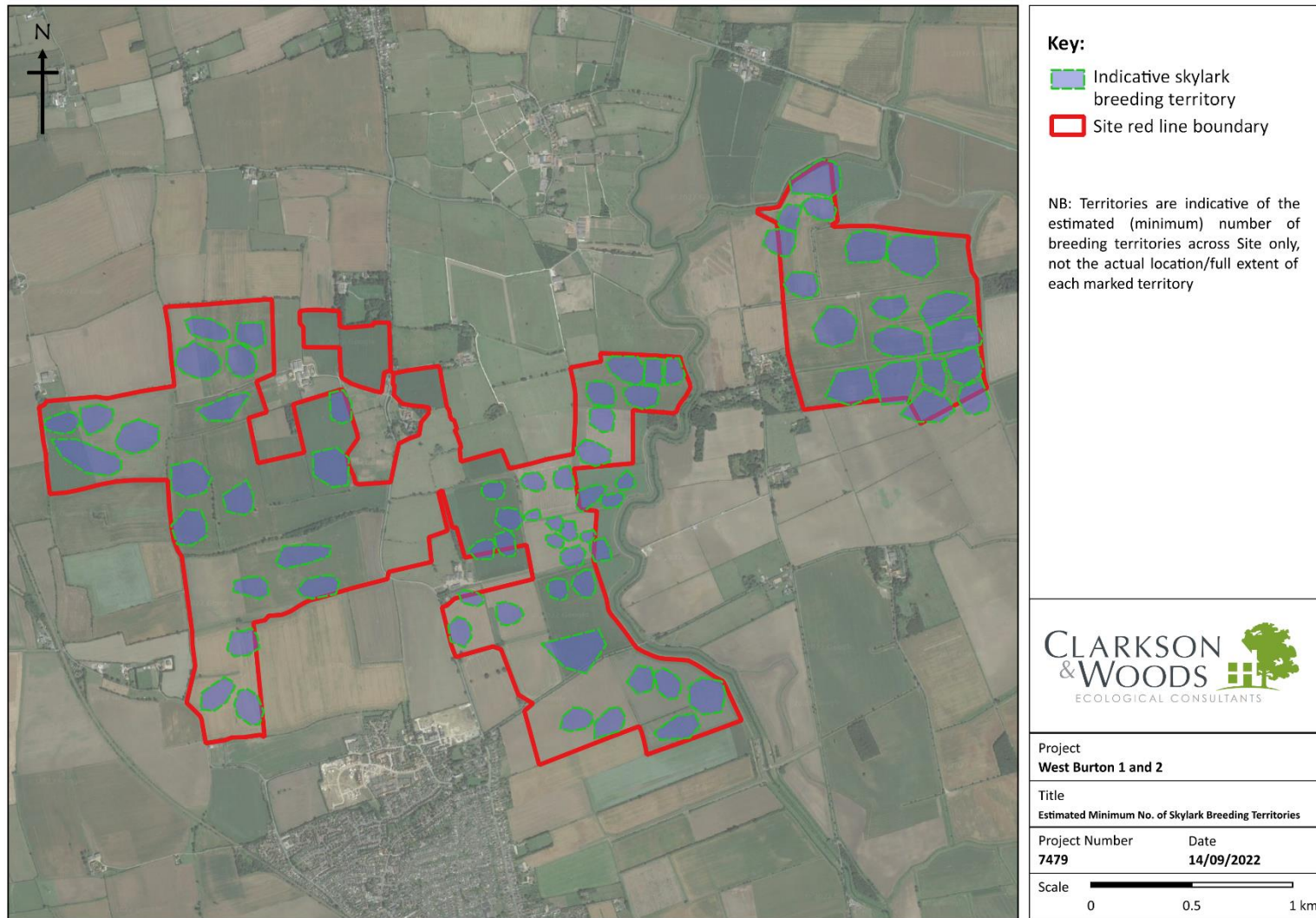


Figure D4: Estimated (Minimum) Number of Breeding Skylark Territories - West Burton 1 and 2

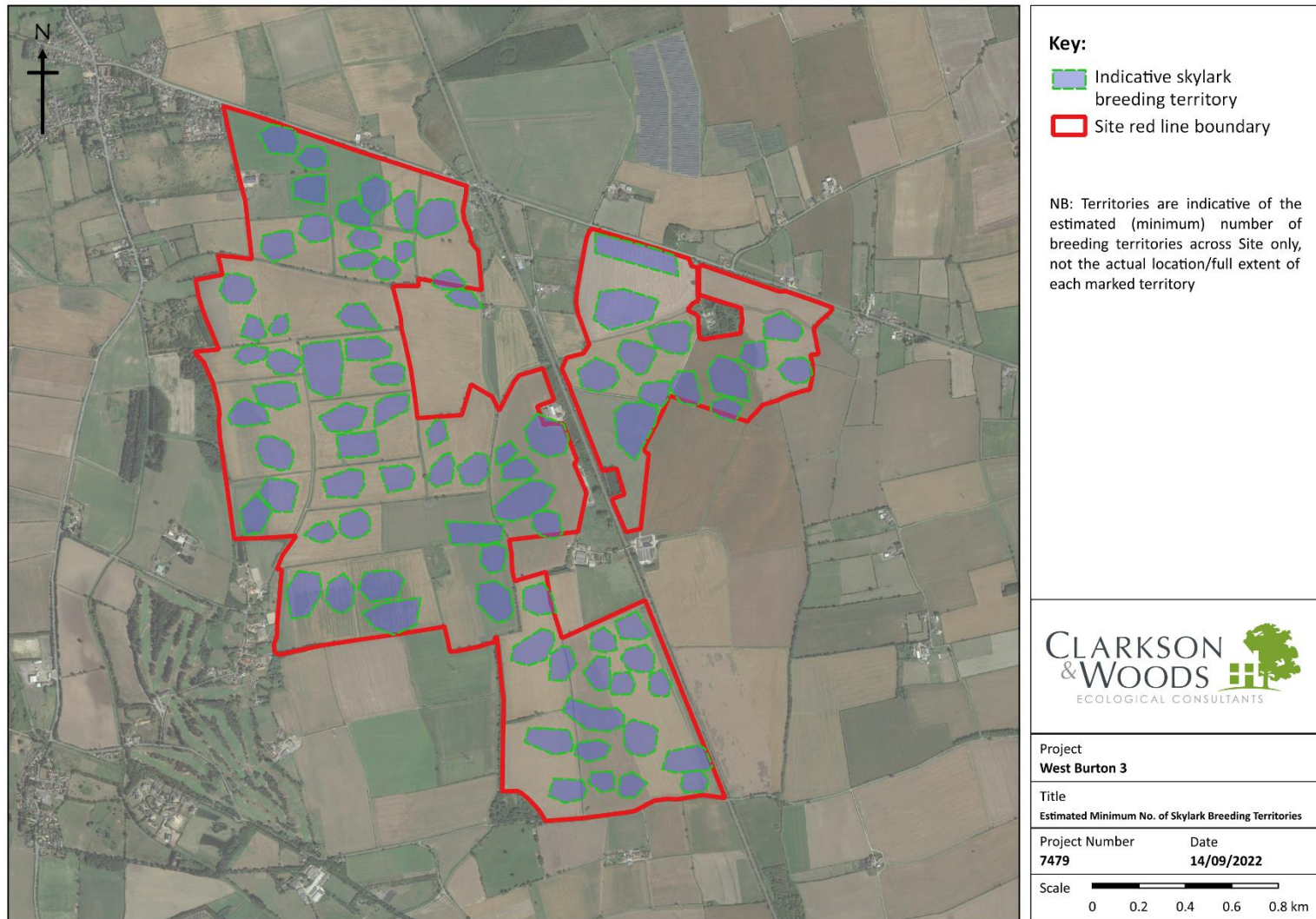


Figure D5: Estimated (Minimum) Number of Breeding Skylark Territories – West Burton 3

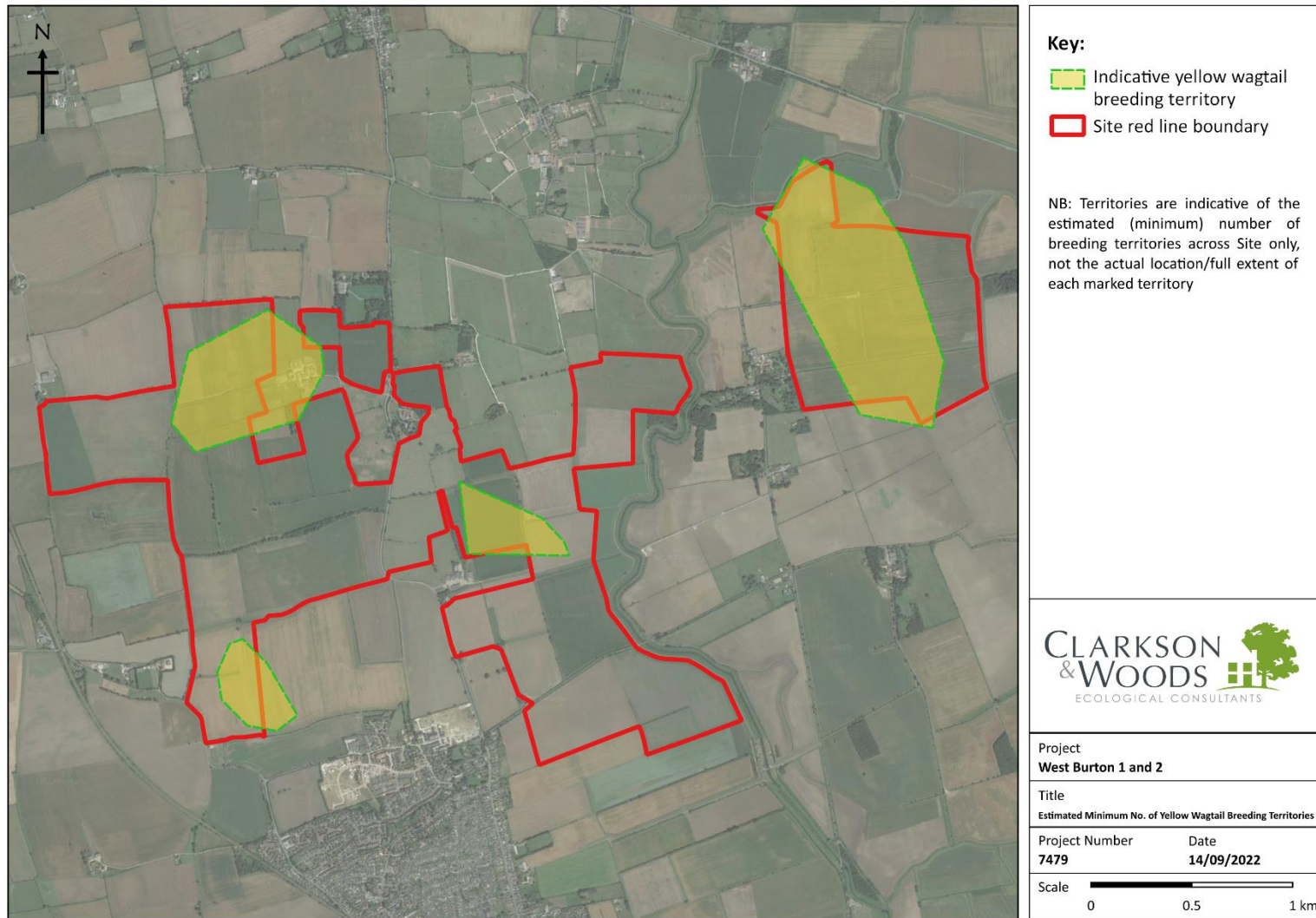


Figure D6: Estimated (Minimum) Number of Breeding Yellow Wagtail Territories - West Burton 1 and West Burton 2

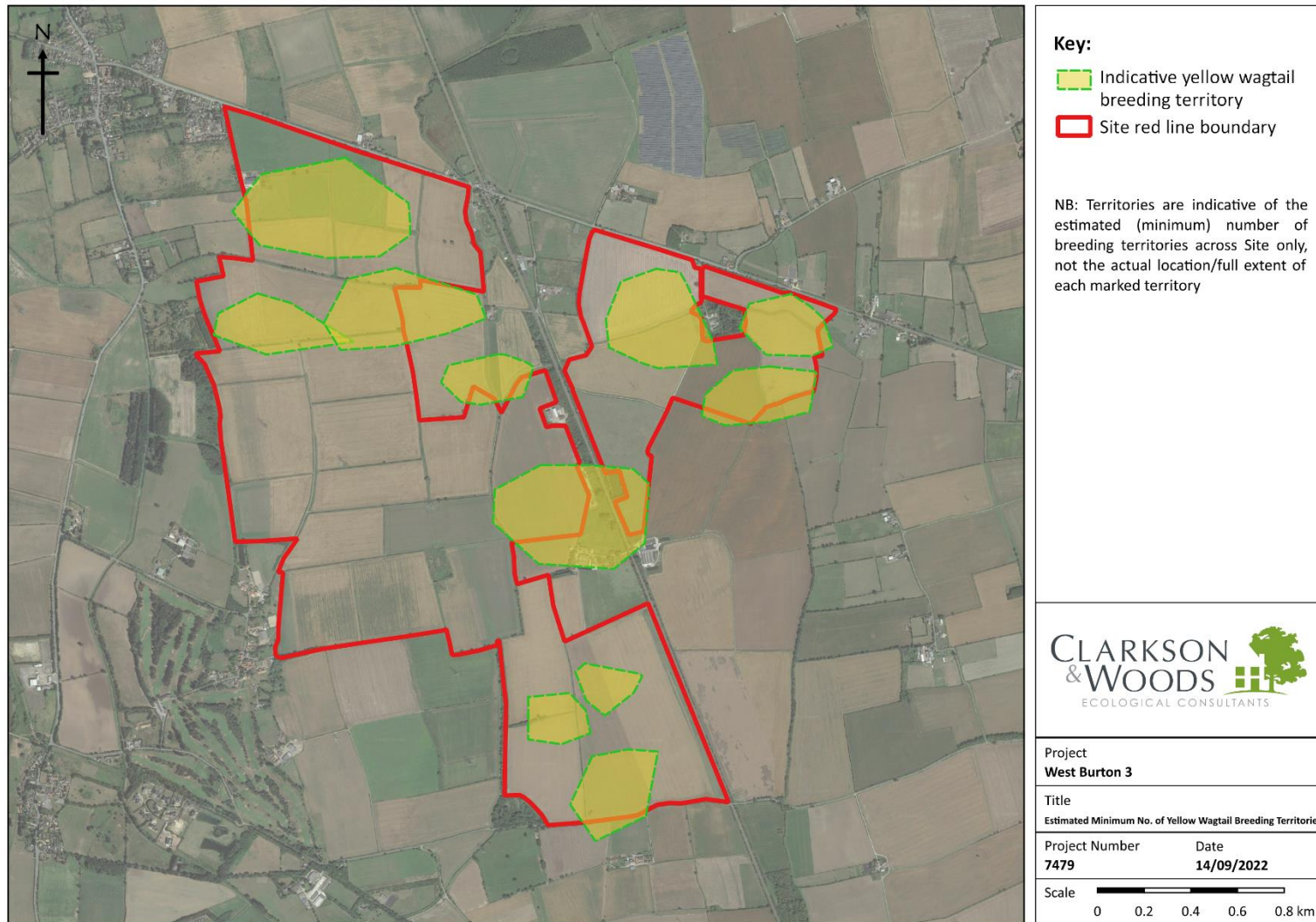


Figure D7: Estimated (Minimum) Number of Breeding Yellow Wagtail Territories - West Burton 3

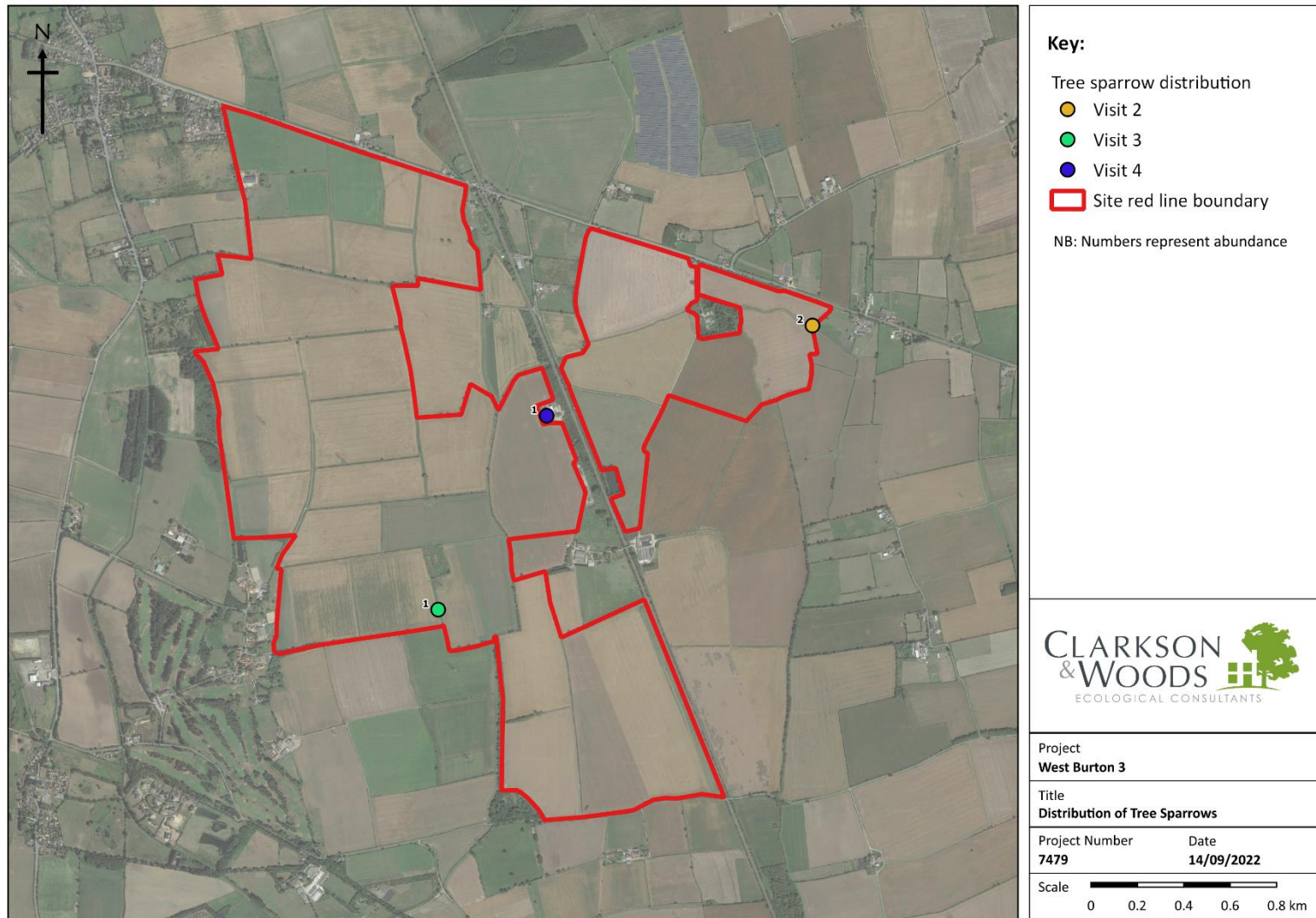


Figure D8: Distribution of Tree Sparrows Across All Visits, West Burton 3

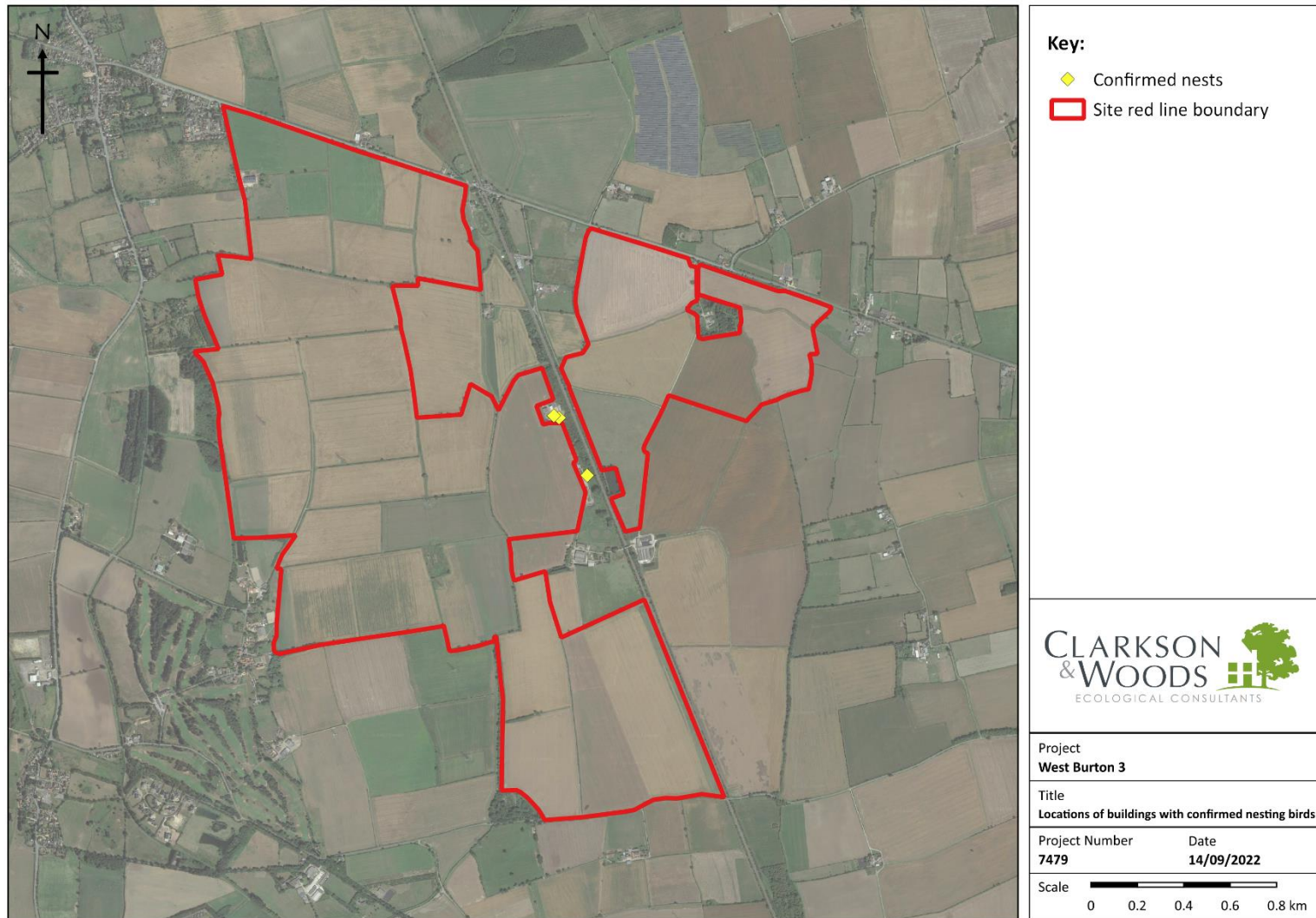


Figure D9: Location of Buildings with Confirmed Nesting Birds, West Burton 3



APPENDIX E: DESK STUDY RESULTS

Table E1: Subset of Data Search Results for Protected and Notable Bird Species Records from within 2km of Each Site

Species	Conservation Status*	Overview WB1	Overview WB2	Overview WB3
Barn owl	Sch1	97 records within 2km (>2000). Closest approx. 860m SW Site (2009)	101 records within 2km (>2000). Closest <250m of Site (2009).	180 records within 2km (>2000). Closest approx. 370m NW Site (2015).
Bullfinch	Amber BoCC, S41	3 records within 2km (>2000). All beyond 250m from Site.	7 records within 2km (>2000). Exact location unknown.	125 records within 2km (>2000). Closest approx. 375m NW Site (2015).
Cetti's warbler	Sch1	N/A	N/A	12 records within 2km (>2000). Exact location unknown.
Corn bunting	Red BoCC, S41, UKFBI	10 records within 2km (>2000). Exact location unknown.	3 records within 2km (>2000). Exact location unknown.	1 record within 2km (>2000). Exact location unknown.
Corn crane	Red BoCC, Sch 1, S41	N/A	2 records within 2km (>2000). Exact location unknown.	2 records within 2km (>2000). Exact location unknown.
Cuckoo	Red BoCC, S41	1 record within 2km (1976). Exact location unknown.	5 records within 2km (>2000). Closest approx. 700m S Site (2006).	31 records within 2km (>2000). Exact location unknown.
Curlew	Red BoCC, S41, UKFBI	4 records within 2km (>2000). Exact location unknown.	4 records within 2km (>2000). Exact location unknown.	N/A
Grasshopper warbler	Red BoCC, S41	N/A	N/A	30 records within 2km (>2000). Exact location unknown.
Hobby	Sch 1	6 records within 2km (>2000). Exact location unknown.	1 record within 2km (>2000). Exact location unknown.	60 records within 2km (>2000). Exact location unknown.
Honey buzzard	Amber BoCC, Sch 1	1 record within 2km (2009). Exact location unknown.	2 records within 2km (>2000). Exact location unknown.	4 records within 2km (>2000). Exact location unknown.



Species	Conservation Status*	Overview WB1	Overview WB2	Overview WB3
House sparrow	Red BoCC, S41	9 records within 2km (>2000). Closest approx. 385m SW Site (2009).	90 records within 2km (>2000). All >250m from Site.	85 records within 2km (>2000). 7 records within red line boundary (2008/9).
Kingfisher	Amber BoCC, Sch 1	9 records including one within 250m of Site (2009).	20 records within 2km (>2000). Closest within 250m of Site (2009).	106 records within 2km (>2000). All beyond 250m of Site.
Lapwing	Red BoCC, S41, UKFBI	14 records within 2km (>2000). Closest approx. 895m SW Site (2016).	19 records within 2km (>2000). Closest within 250m of Site (2016).	169 records within 2km (>2000). Closest approx. 825m S Site (2006).
Lesser redpoll	Red BoCC, S41	N/A	3 records within 2km (>2000). Exact location unknown.	33 records within 2km (>2000). Exact location unknown.
Marsh harrier	Amber BoCC, Sch 1	1 record within 2km (2007). Exact location unknown.	1 record within 2km (>2000). Exact location unknown.	12 records within 2km (>2000). Exact location unknown.
Peregrine	Sch1	4 records within 2km (>2000). Exact location unknown.	2 records within 2km (>2000). Exact location unknown.	44 records within 2km (>2000). Exact location unknown.
Quail	Amber BoCC, Sch1	1 record within 2km (1999). Exact location unknown.	2 records within 2km (pre-2000). Exact location unknown.	2 records within 2km (>2000). Exact location unknown.
Red kite	Sch1	2 records within 2km (>2000). Exact location unknown.	4 records within 2km (>2000). Exact location unknown.	7 records within 2km (>2000). Exact location unknown.
Redshank	Amber BoCC	N/A	N/A	68 records within 2km (>2000). Exact location unknown.
Skylark	Red BoCC, S41, UKFBI	6 records within 2km (>2000). Closest within 250m Site (2016).	8 records within 2km (>2000). Exact location unknown.	57 records within 2km (>2000). All beyond 250m of Site.
Snipe	Amber BoCC	4 records within 2km (most recent 2004). Exact location unknown.	2 records within 2km (>2000). Exact location unknown.	157 records within 2km (>2000). Exact location unknown.
Starling	Red BoCC, S41, UKFBI	15 records within 2km (>2000). Closest approx. 385m SW Site (2009).	91 records within 2km (>2000). All beyond 250m of Site.	101 records within 2km (>2000). 7 records



Species	Conservation Status*	Overview WB1	Overview WB2	Overview WB3
				within 250m of Site (2008/9).
Spotted flycatcher	Red BoCC, S41	2 records within 2km (most recent 2009). Exact location unknown.	1 record within 2km (>2000). Exact location unknown.	56 records within 2km (>2000). Exact location unknown.
Swift	Red BoCC	4 records within 2km (>2000). Closest approx. 660m N Site (2011).	8 records within 2km (>2000). All beyond 250m of Site.	62 records within 2km (>2000). Closest approx. 375 NW Site (2009).
Tree pipit	Red BoCC, S41	N/A	N/A	2 records within 2km (>2000). Exact location unknown.
Tree sparrow	Red BoCC, S41	20 records within 2km (>2000). Exact location unknown.	38 records within 2km (>2000). All beyond 250m of Site.	161 records within 2km (>2000). Closest approx. 375m NW Site (2015).
Turtle dove	Red BoCC, S41	5 records within 2km (>2000). Exact location unknown.	10 records within 2km (>2000). All beyond 250m of Site.	40 records within 2km (>2000). Closest approx. 970m S Site (2006).
Yellow wagtail	Red BoCC, S41	9 records within 2km (>2000). Exact location unknown.	16 records within 2km (>2000). Exact location unknown.	87 records within 2km (>2000). Exact location unknown.

*All species protected under the W&CA 1981 - Wildlife and Countryside Act 1981 with the following abbreviations included as follows: S41 – Schedule 41 Priority Species; BoCC – Birds of Conservation Concern; UKFBI – UK Farmland Bird Indicator (taken from populations distribution trends 1970 - 2007)

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