

# Byers Gill Solar EN010139

# 6.4.6.2 Environmental Statement Appendix 6.2 Wintering Bird Survey Report

Planning Act 2008

APFP Regulation 5(2)(q)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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**Ove Arup and partners Ltd** 

# **Byers Gill Solar**

6.4.2 Environmental StatementAppendix 6.2 Wintering Bird Survey Report

Project number 2483386





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#### **EXECUTIVE SUMMARY**

- 1. RSK Biocensus was commissioned by Arup (the client) to carry out wintering bird surveys on behalf of RWE (the Applicant). This report has been prepared to accompany Chapter 6 of the Environmental Statement (ES) (Document Reference 6.2.6).
- 2. This report presents the results of surveys for wintering birds undertaken in relation to Byers Gill Solar (the Proposed Development) within land in County Durham between December 2021 and March 2022 inclusive. These surveys were carried out to record the wintering bird populations within the Order Limits of the Proposed Development and adjacent land (i.e. the study area), in order to inform an assessment of the wintering bird assemblage. Ornithology survey work was carried out by Avian Ecology Ltd for inclusion within this Wintering Bird Survey Report produced by RSK Biocensus.
- Background data obtained from Environmental Records Information Centre Northeast identified records of various specially protected and notable bird species which may use the study area in winter, including records of notable waterfowl species from within the Order Limits.
- 4. The four field survey visits of the study area undertaken in 2021/22 recorded a combined total of 50 species, including 39 specially protected and notable species. Based on the species recorded, the wintering bird assemblage was assessed as being of county importance. Regarding individual species, wintering populations of seven species were assessed as being of potential county importance: specifically great crested grebe, grey partridge, herring gull, linnet, pink-footed goose, stock dove and wigeon. A further three species were potentially present in numbers of district importance.
- 5. These wintering bird populations were using a range of habitats within and adjacent to the study area, including a mixture of field types such as pasture, winter wheat, winter stubble and oilseed rape, as well as adjoining hedgerows. Standing water adjacent to the site within Field 177 was of particular value to wintering waterbirds.
- 6. Teesmouth and Cleveland Coast are 5.4 km (SPA & proposed Ramsar) and 7.2 km (Ramsar) from the Proposed Development. Potential impacts have been assessed through a Habitat Regulations Assessment (HRA) screening exercise. Full details of the HRA screening exercise are presented in ES Appendix 6.5 Habitats Regulations Assessment No Significant Effects Report (Document Reference 6.4.6.5).
- 7. Considering the suitability of the study area for wintering birds, and the populations recorded during the field surveys conducted in 2021/22, a detailed impact assessment has been undertaken in ES Chapter 6 Biodiversity (Document Reference 6.2.6).



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#### 1.0 INTRODUCTION

#### 1.1 Purpose of this report

- 1.1.1 RSK Biocensus was commissioned by Arup (the client) to carry out wintering bird surveys on behalf of RWE (the Applicant). This report has been prepared to accompany Chapter 6 of the Environmental Statement (ES) (Document Reference 6.2.6).
- 1.1.2 This report presents the results of surveys for wintering birds undertaken in relation to Byers Gill Solar (hereafter referred to as 'the Proposed Development') of land in County Durham between December 2021 and March 2022 inclusive. These surveys were carried out by Avian Ecology Ltd in order to record the wintering bird populations present within and in close proximity to the site of the Proposed Development (hereafter referred to as 'the site').
- 1.1.3 The following terminology is used throughout this report:
  - the Proposed Development outlined by the red line boundary including all infrastructure, cables and Panel Areas as shown in Figure 6.2.1.
  - study area the land within the application boundary where field surveys were carried out as shown in Figures 6.2.2 to 6.2.6.
  - Order Limits the land area within the application boundary outlined by the red line boundary including all infrastructure, cables and Panel Areas as shown in Figure 6.2.1.

#### 1.2 Ecological context

- 1.2.1 The Order Limits and study area layouts are indicated in Figure 6.2.1. The study area comprises of land consisting of numerous parcels between Darlington and Stockton-on-Tees in County Durham. The study area lies within a largely arable landscape interspersed with villages (namely Bishopton, Little Stainton and Newton Ketton).
- 1.2.2 The study area predominantly comprises agricultural fields separated by hedgerows and smaller patches of broadleaved woodland. Waterbodies within the study area includes ponds and several streams.

#### 1.3 Project background

1.3.1 The Proposed Development consists of a solar farm capable of generating over 50 MW Alternating Current (AC) of electricity with co-located Battery Energy Storage Systems (BESS), located between Darlington and Stockton-on-Tees in north-east England. The Proposed Development comprises six solar photovoltaic (PV) panel areas (Panel Areas A-F). The solar PV panels would be mounted on a metal frame in groups, fixed in position



- and aligned in east-west rows with panels facing south. An on-site substation would be located within Panel Area C.
- 1.3.2 The Proposed Development includes up to 32.5 km of 33 kilovolt (kV) underground cabling between the Panel Areas and the on-site substation, as well as approximately 10 km of 132 kV underground cable to connect the Proposed Development to the grid connection at the existing Norton substation (located to the north-west of Stockton-on-Tees) with both on-road and off-road options. A range of supporting infrastructure is required for the Proposed Development, comprising BESS; transformers and inverters for managing the electricity produced; storage containers to hold this equipment; and security measures such as fencing, CCTV and lighting. The Proposed Development includes environmental mitigation and enhancement measures to avoid or reduce adverse impacts on the surrounding environment and nearby communities.
- 1.3.3 The majority of the Proposed Development's planning boundary (the 'Order Limits') is located within the administrative boundary of Darlington Borough Council, with a section of the cable route situated within the administrative boundary of Stockton-on-Tees Council. A very small section of the Order Limits is within the administrative boundary of Durham County Council.
- 1.3.4 A full description of the Proposed Development and a detailed description of the design and environmental mitigation is provided in ES Chapter 2 The Proposed Development (Document Reference 6.2.2).

#### 1.4 Structure of this report

- 1.4.1 This report is structured as follows:
  - Section 2 presents legislation and guidance relevant to wintering birds;
  - Section 3 describes the methods adopted for the collection and interpretation of wintering bird data;
  - Section 4 presents the results of the desk study and field surveys;
  - Section 5 summarises the findings of the wintering bird survey report;
  - Appendices A-D provide supplementary figures, desk study data and field survey data.



#### 2.0 LEGISLATION AND GUIDANCE

#### 2.1 Overview

2.1.1 Relevant legislation and guidance relating to wintering birds is summarised below. This legislation and guidance have been used to inform the evaluation of the conservation status of the species recorded during the desk study and field surveys, and when assessing the importance of the wintering bird populations present.

#### 2.2 Legislation

#### **European Commission Birds Directive (2009/147/EC)**

- 2.2.1 Certain UK bird species (including some wintering species) are protected at an international level under the European Commission (EC) Directive on the Conservation of Wild Birds 2009 (2009/147/EC). These species are afforded enhanced legal protection and European Union member states have a responsibility to maintain populations of these species. This Directive is transposed into English law through the Conservation of Habitats and Species Regulations 2017 (as amended)¹.
- 2.2.2 Species listed on Annex 1 of the Directive are those for which the UK Government is required to take special conservation measures (including the designation of land as Special Protection Areas (SPAs)) to conserve populations of these species throughout their distributions. These sites form part of the Natura 2000 network of core sites that are protected for rare and threatened species.
- 2.2.3 Bird species listed on Annex 1 of the Directive are those which are deemed to be:
  - in danger of extinction;
  - vulnerable to specific changes to their habitats;
  - considered rare due to their small population sizes and/or restricted local distributions; and
  - in need of particular attention due to the specific nature of their habitat requirements.

#### Wildlife and Countryside Act 1981 (as amended)

- 2.2.4 Wild birds are protected in the UK under Section 1 of the Wildlife and Countryside Act (WCA) 1981 (as amended). This protection was extended by the Countryside Rights of Way (CRoW) Act 2000. Under this legislation it is an offence to:
  - kill, injure or take any wild bird;

<sup>&</sup>lt;sup>1</sup> As such, the requirements of the EC Birds Directive (2009/147/EC) apply despite the UK no longer being a member state of the European Union.



- take, damage or destroy the nest of any wild bird while that nest is in use or being built; and
- take or destroy an egg of any wild bird.
- 2.2.5 In addition, certain species are listed on Schedule 1 of the WCA and receive special protection under Sections 1(4) and 1(5), which confer penalties where the abovementioned offences are committed, in addition to making it an offence to:
  - disturb any such bird whilst building its nest or whilst it is in or near a nest containing eggs or dependent young; and
  - disturb the dependent young of such a bird.
- 2.2.6 As this legislation relates to offences and penalties during the breeding season only, further reference to Schedule 1 of the WCA is not made in this report.

#### **Natural Environment and Rural Communities Act 2006**

- 2.2.7 The Natural Environment and Rural Communities (NERC) Act 2006 requires local and governmental authorities and departments to have regard to the conservation of biodiversity and a range of measures associated with public rights of way and other rural affairs.
- 2.2.8 Forty-nine bird species are listed as being Species of Principal Importance for conservation in England under Section 41 (S41) of the NERC Act 2006, and as such they are a material consideration during the planning process. These Species of Principal Importance are those identified as requiring action under the UK Biodiversity Action Plan (UKBAP), which continue to be regarded as species of conservation priority under the UK Post-2010 Biodiversity Framework (which succeeded the UKBAP in July 2012).

#### 2.3 Guidance

#### **National Planning Policy Framework**

2.3.1 The National Planning Policy Framework (NPPF, 2019) sets out the government's planning policies for England and how these are expected to be applied. This includes requirements for the contribution to and enhancement of the natural environment, including habitats and biodiversity. The NPPF specifies the obligations that local authorities and the UK government have regarding statutory designated sites and protected species under UK and international legislation and how these are to be delivered in the planning system.

#### **Birds of Conservation Concern**

2.3.2 The Birds of Conservation Concern (BoCC) Red, Amber and Green lists categorise the UK's regularly occurring bird species according to their level of conservation concern (Stanbury *et al.*, 2021). Although these listings confer no legal protection, they are useful in guiding conservation action for individual species when birds may be affected by plans or projects.



#### Red list species

- 2.3.3 These are species of high conservation concern, including:
  - species that are globally threatened according to the International Union for the Conservation of Nature (IUCN) criteria;
  - species with a historical breeding decline that have not shown a substantial recent recovery;
  - species that have shown a severe breeding decline over the last 25 years or longer term;
  - species that have shown a severe breeding range decline over the last 25 years or longer term; and
  - species whose non-breeding populations have declined over the last 25 years or longer term.

#### Amber list species

- 2.3.4 These are species of medium conservation concern, including:
  - species of European Conservation Concern;
  - species whose populations have declined historically but which have made a substantial recent recovery;
  - species whose breeding populations have declined moderately over the last 25 years or longer term;
  - species that have shown a moderate breeding range decline over the last 25 years or longer term;
  - species whose non-breeding populations have declined moderately over the last 25 years or longer term; and
  - rare breeders or non-breeding rarity species with internationally important or localised populations.

#### Green list species

- 2.3.5 Green list species fulfil none of the criteria detailed above. As such, they have stable or increasing populations and are not currently of conservation concern.
- 2.3.6 Non-native species such as Canada goose (*Branta canadensis*) are not afforded Red, Amber or Green list status.

#### **Durham Priority Species**

2.3.7 The Durham Biodiversity Partnership sets out habitats and species of particular conservation value within the county in order to raise awareness of biodiversity issues and provide a mechanism through which conservation targets for these habitats and species can be delivered within the county.



- 2.3.8 Priority wintering bird species in Durham<sup>2</sup> relevant to this report include the following:
  - 'coastal birds' including golden plover (*Pluvialis apricaria*) and shelduck (*Tadorna tadorna*);
  - 'farmland birds' including curlew (*Numenius arquata*), grey partridge (*Perdix perdix*), kestrel (*Falco tinnunculus*), lapwing (*Vanellus vanellus*), linnet (*Linaria cannabina*), mistle thrush (*Turdus viscivorus*), peregrine (*Falco peregrinus*), reed bunting (*Emberiza schoeniclus*), skylark (*Alauda arvensis*), snipe (*Gallinago gallinago*), tree sparrow (*Passer montanus*) and yellowhammer (*Emberiza citrinella*);
  - 'urban and garden wildlife' including house sparrow (*Passer domesticus*), song thrush (*Turdus philomelos*) and starling (*Sturnus vulgaris*);
  - 'woodland and scrub' species including willow tit (*Poecile montanus*) and woodcock (*Scolopax rusticola*); and
  - barn owl (Tyto alba).

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<sup>&</sup>lt;sup>2</sup> Further information is available at: <u>Durham Priority Species (neenp.org.uk)</u> (accessed 22/09/2022).



#### 3.0 METHODS

#### 3.1 Desk study

3.1.1 To provide supplementary data on wintering bird species known to be present in the vicinity of the site, wintering bird records from within 2 km of the study area during the last ten years were obtained from Environmental Records Information Centre Northeast. The BDS was undertaken on 17 March 2022.

#### 3.2 Field surveys

- 3.2.1 The field surveys for wintering birds were undertaken between December 2021 and March 2022 inclusive by Avian Ecology Ltd. These surveys involved a suitably experienced ornithologist walking a pre-determined transect route throughout the study area, mapping bird species encountered (either visually or through their vocalisations) using standard British Trust for Ornithology (BTO) species codes and behaviour notation (Marchant, 1983). The transect route was interspersed with stops, during which the ornithologist scanned for birds using optical equipment. Birds observed within 50 m of the study area were also recorded. Special attention was given to undertaking counts of any notable assemblages of feeding and/or roosting birds.
- 3.2.2 Bird species recorded during the field surveys were those included on any of the conservation status categories described in Section 3.3.2, as well as any species which might be relevant in a local context (i.e. species which could potentially be present in significant numbers). The omission of abundant and widespread species when collecting field data is taken into consideration within the relevant evaluation sections (e.g. when assessing species diversity).
- 3.2.3 Due to the size of the study area, four transect routes were devised (T1, T2, T3 and T4), covering four geographically distinct areas of the study area. These transect routes were designed to maximise coverage of suitable habitat for wintering birds, with an emphasis on habitat assessed as being most likely to support significant wintering bird populations. Each transect route was subject to four survey visits (i.e. one per month from December to March inclusive). Transect routes are indicated in Figure 6.2.1, Appendix A.
- 3.2.4 Survey visits were undertaken in suitable weather conditions and at a range of times of day, avoiding extreme temperatures, heavy rain, snow, or fog during which bird activity may be atypical and/or surveying may be impractical. The dates, timings and weather conditions for all survey visits are indicated in Appendix B.

#### 3.3 Interpretation of survey results

#### Overview

3.3.1 In order to assess the importance of the wintering bird populations recorded during the field surveys, interpretation of the survey results considered the following:



- the conservation statuses of the species recorded (i.e. their inclusion on any of the legislation or conservation status categories described in Section 2);
- the sizes of the populations recorded (i.e. species abundance);
- · the overall diversity of the wintering bird assemblage recorded; and
- the spatial patterns of wintering bird usage within the site, including areas and habitat types of particular importance to wintering birds.

#### **Conservation status**

- 3.3.2 The assessment of the importance of the wintering bird populations recorded took into consideration the conservation statuses of the species recorded. Species afforded special statutory protection or included on lists of species of conservation interest were evaluated. These included:
  - EC Birds Directive (2009/147/EC) Annex 1 species;
  - NERC Act 2006 S41 Species of Principal Importance;
  - · BoCC Red and Amber list species; and
  - Durham BAP Priority species.

#### Species abundance

- 3.3.3 The importance of the wintering bird populations recorded was assessed in the context of the sizes of those populations relative to international, national and regional population estimates for the species in question. National 1% population thresholds (i.e. the size at which a population is assessed as being of national importance, as it comprises over 1% of the national population for a given species) were calculated from the national population estimates detailed in *APEP 4 Population estimates of birds in Great Britain and the United Kingdom* (Woodward *et al.*, 2020). International 1% population thresholds (i.e. the size at which a population is assessed as being of international importance, as it comprises over 1% of the international population for a given species) were obtained from Wetlands International<sup>3</sup>.
- 3.3.4 Assessment of county, district or local importance was based on professional judgement and in reference to county population data detailed within *Birds in Durham* Editions 2016 to 2020 (Durham Bird Club, 2017-2021).

#### Species diversity

3.3.5 The overall diversity of the wintering bird assemblage was assessed, taking into consideration the number of species recorded. This took account of the survey methods (as described in Section 3.2.2), during which abundant and widespread species in a national and regional context were not recorded. As such, the number of species reported

<sup>&</sup>lt;sup>3</sup> As detailed by Wetlands International. Available at: Waterbird Population Estimates (wetlands.org) (accessed 12/08/22).



herein does not represent the total number of species present within the site and adjacent land in winter.

#### Site usage by wintering birds

3.3.6 To enable spatial analysis of wintering bird activity recorded during the surveys, such as comparison of peak counts between different areas of the study area, and identification of areas of particular importance to important populations, fields within and adjacent to the site were assigned a reference number. These field numbers are indicated in Figure 6.2.1, Appendix A and referred to when evaluating site usage by wintering birds in Section 5.5.

#### 3.4 Limitations

- 3.4.1 A map outlining the Order Limits was provided by the RWE prior to the start of wintering bird surveys in 2021. This was used to define the extent of the study area for wintering bird surveys for the purposed of this assessment and EIA. A number of amendments were subsequently made to the Order Limits boundary and field numbers with some additional areas added and some areas no longer within the application boundary. It should be noted that the field numbers shown on figures contained within this report are from the Order Limits layout design in 2021, with field numbers altered during subsequent design updates. The Order Limits and study area are shown in Figure 6.2.1.
- 3.4.2 Field surveys for wintering birds were undertaken at the appropriate time of year to record the wintering species potentially present within the study area and took place at appropriate times of day. Survey visits were undertaken in suitable weather conditions, with occasional light rain, fog and frost encountered during the surveys considered to be insufficient to significantly affect the bird populations recorded.
- 3.4.3 Whilst desk study data are useful in providing supplementary ecological information for a site, it should be acknowledged that these data are dependent on the submission of records to the relevant organisation. As such, a lack of records for a particular species does not necessarily mean that the species is absent from the site and/or wider search area. Similarly, records of a particular species do not necessarily mean that the species is still present within the study area and/or wider search area.
- 3.4.4 It should be noted that ecological features (e.g. bird populations) are transient, and that the distributions of habitats and species may be subject to change. As such, in line with Chartered Institute of Ecology and Environmental Management (CIEEM) guidance, the ecological survey data presented in this report are considered valid for at least two years (CIEEM, 2019), after which, if site conditions change markedly, it may be necessary for further field surveys to be undertaken.

#### 3.5 Quality assurance

3.5.1 Avian Ecology Ltd have indicated that these surveys were undertaken by ornithologists who are experienced in conducting ornithology work in relevant habitats. These



- ornithologists are CIEEM members at the appropriate level and follow their code of professional conduct when undertaking ecological work.
- 3.5.2 The assessment and review has been undertaken by RSK Biocensus ornithologists whom are CIEEM members and in the case of the technical and quality review Chartered Ecologists.



#### 4.0 RESULTS

#### 4.1 Desk study

- 4.1.1 The data search identified records of various specially protected and notable bird species from within 2 km of the study area during the last ten years, including species potentially relevant to the site in a wintering context. The results of the data search is provided in *Appendix C*.
- 4.1.2 Species recorded within 2 km of the study area during the last ten years included a diverse assemblage of wintering waterfowl such as barnacle goose (*Branta leucopsis*), Bewick's swan (*Cygnus columbianus*), pink-footed goose (*Anser brachyrhynchus*), pochard (*Aythya ferina*), scaup (*Aythya marila*), Tundra bean goose (*Anser fabalis*), white-fronted goose (*Anser albifrons*) and whooper swan (*Cygnus cygnus*). During this 10-year period pink-footed goose, Tundra bean goose and white-fronted goose were recorded within the Order Limits.
- 4.1.3 The desk study also identified records of a range of declining farmland bird species including Durham BAP Priority species such as curlew, grey partridge, lapwing and tree sparrow. Other records of note included barn owl within the study area in 2012 and short-eared owl (*Asio flammeus*) approximately 140 m from the study area in 2012.
- 4.1.4 The nearest European site, Teesmouth and Cleveland Coast is a special protection area (SPA), Ramsar Site, and proposed Ramsar site which are of international importance and are 5.4 km (SPA & proposed Ramsar) and 7.2 km (Ramsar) from the Order Limits. Regarding wintering birds, this site is designated for its internationally important population of knot (*Calidris canutus*), and for supporting an assemblage of over 20,000 waterbirds (JNCC, 2006; JNCC, 2008). Due to its location and the habitats present, the Order Limits of the Proposed Development is unsuitable for wintering knot which use intertidal habitat. However, the Order Limits is suitable to support wintering wildfowl such as ducks and geese, which contribute to the supporting wintering bird assemblage for which this Natura 2000 site is designated.
- 4.1.5 Four Sites of Special Scientific Interest (SSSI) were identified within 2 km of the study area, including Whitton Bridge Pasture SSSI immediately adjacent to the study area. None of these nationally designated sites are designated on account of wintering bird interest features.

#### 4.2 Field surveys

4.2.1 A total of 50<sup>4</sup> bird species were recorded during the field surveys of the site between December 2021 and March 2022 inclusive. The peak counts for the species recorded on

<sup>&</sup>lt;sup>4</sup> Note that this figure does not include common and widespread species such as certain BoCC Green listed species which are locally and nationally abundant and are considered highly unlikely to be present within the site in significant numbers. As such, the site will have supported a total assemblage of more than 50 species during winter 2021/22.



each transect route are summarised in Table 1 below, with descriptions provided where necessary. Full wintering bird survey data from December 2021 to March 2022 inclusive are provided in *Appendix D*.

Table 1 Summary of species recorded during the 2021/22 surveys

Species			Peak	count		Description
Common name	Scientific name	T1	T2	Т3	T4	
Barn owl	Tyto alba	0	0*	0	0	One pellet in Field 136
Black-headed gull	Chroicocephalus ridibundus	37	32	39	16	
Bullfinch	Pyrrhula pyrrhula	2	6	0	1	
Buzzard	Buteo buteo	5	5	3	2	
Canada goose	Branta canadensis	0	0	140	0	Flocks foraging and loafing in Field 61 and on/around standing water in Field 177
Common gull	Larus canus	25	230	9	78	Frequently recorded throughout the site, particularly towards the east of T2 (e.g. in Fields 30 and 48)
Coot	Fulica atra	0	0	20	0	
Curlew	Numenius arquata	1	1	32	3	Individuals occasionally recorded, as well as a group of 32 in Field 177
Fieldfare	Turdus pilaris	112	212	100	301	Frequently foraging in fields throughout the site, often with redwing
Golden plover	Pluvialis apricaria	5	17	6	1	Occasionally recorded, including a group of 16 in Field 120
Great black- backed gull	Larus marinus	18	0	1	1	
Great crested grebe	Podiceps cristatus	0	0	55	0	55 recorded on the pond in Field 177
Grey heron	Ardea cinerea	1	0	2	0	



Species			Peak	count		Description
Common name	Scientific name	T1	T2	Т3	T4	
Grey partridge	Perdix perdix	13	22	5	80	Frequently foraging throughout the site; generally in smaller groups, but with a group of 80 recorded in Field 80
Grey wagtail	Motacilla cinerea	0	1	0	1	
Greylag goose	Anser anser	0	61	70	28	Flocks foraging in fields, with larger numbers using the pond and adjacent land in Field 177
Herring gull	Larus argentatus	924	42	11	29	Frequently recorded, particularly within T1 including flocks of 350 and 40 using Fields 99 and 100 respectively
Jack snipe	Lymnocryptes minimus	0	1	0	0	
Kestrel	Falco tinnunculus	2	1	2	1	
Lapwing	Vanellus vanellus	0	14	23	24	Small flocks occasionally recorded, including Fields 54, 75, 79, 133 and 174
Linnet	Linaria cannabina	1	161	0	1	Foraging flocks of 30 to 50 in Fields 26, 29, 48 and 124
Little grebe	Tachybaptus ruficollis	0	0	2	0	
Little owl	Athene noctua	0	1	0	0	One roosting in hedge in Field 53
Mallard	Anas platyrhynchos	0	2	50	1	
Meadow pipit	Anthus pratensis	0	3	0	0	
Mistle thrush	Turdus viscivorus	5	1	1	2	
Moorhen	Gallinula chloropus	0	2	2	0	
Mute swan	Cygnus olor	0	0	2	3	



Species			Peak	count		Description
Common name	Scientific name	T1	T2	Т3	T4	
Oystercatcher	Haematopus ostralegus	0	0	1	0	
Peregrine	Falco peregrinus	0	0	1	0	
Pink-footed goose	Anser brachyrhynchus	0	1482	2352	280	Foraging flocks frequently recorded, with greatest activity throughout T3.  Larger flocks in Fields 56, 58, 65, 66, 69, 77, 136, 140, 144, 174 and 197.  Largest flock numbered at least 1500 birds
Pochard	Aythya ferina	0	0	10	0	
Redwing	Turdus iliacus	156	190	22	66	Frequently foraging in fields throughout the site, often with fieldfare
Reed bunting	Emberiza schoeniclus	0	2	0	0	
Shelduck	Tadorna tadorna	0	0	4	0	
Siskin	Spinus spinus	0	0	0	2	
Skylark	Alauda arvensis	10	21	11	13	Singing and calling from fields throughout the site
Snipe	Gallinago gallinago	1	16	0	0	Low numbers consistently recorded within T2, notably using Fields 40 and 41
Song thrush	Turdus philomelos	9	4	1	4	Foraging in fields throughout the site, often with other thrush flocks
Sparrowhawk	Accipiter nisus	2	1	0	0	
Starling	Sturnus vulgaris	20	1539	250	601	Flocks frequently foraging in fields, notably in Fields 30, 48, 50, 51, 79 and 197



Species			Peak	count		Description
Common name	Scientific name	T1	T2	Т3	T4	
Stock dove	Columba oenas	19	251	7	2	Small foraging flocks throughout the site, and a flock of 207 in Field 29
Teal	Anas crecca	0	3	66	0	Flocks feeding and loafing, notably on/around standing water in Field 177
Tree sparrow	Passer montanus	5	20	0	10	Occasional individuals and small flocks, with more frequent records within T2
Tufted duck	Aythya fuligula	0	0	6	0	
Tundra bean goose	Anser serrirostris	0	0	2	0	Two flying over Field 65 before joining foraging pink-footed geese
Wigeon	Mareca penelope	0	0	2000	0	Flocks feeding and loafing on standing water in Field 177, notably a flock of 2000 in March 2022
Willow tit	Poecile montanus	0	1	0	0	One calling from dense hedge in Field 23
Woodcock	Scolopax rusticola	5	3	0	4	Individuals frequently recorded, notably in Fields 10, 12 and 69
Yellowhammer	Emberiza citrinella	8	91	9	5	Small foraging flocks throughout the site, notably within T2
* One barn owl pellet was recorded on Transect 2 during survey visit 4.						

<sup>\*</sup> One barn owl pellet was recorded on Transect 2 during survey visit 4.

#### 4.2.2 In summary, species counts<sup>5</sup> for the four transect routes were as follows:

- Transect 1 24 species;
- Transect 2 34 species (plus evidence of one additional species, barn owl);
- Transect 3 36 species; and
- Transect 4 28 species.

<sup>&</sup>lt;sup>5</sup> Note that these do not represent all species present within and adjacent to the site during winter (as per Section 3.2.2).



### 5.0 EVALUATION

#### 5.1 Overview

- 5.1.1 The assessment of the importance of the wintering bird populations recorded within the site during the field surveys undertaken between December 2021 and March 2022 inclusive is provided below, taking into consideration:
  - the conservation statuses of the species recorded (i.e. their inclusion on the legislation and guidance described in Section 2 of this report);
  - the sizes of the populations of the species recorded (i.e. species abundance);
  - the overall diversity of the wintering bird assemblage (i.e. species diversity); and
  - the spatial patterns of wintering bird usage of the site, including any areas of particular importance to wintering bird populations.

#### 5.2 Conservation status

5.2.1 Of the 50 species recorded during the 2021/22 field surveys for wintering birds, 39 are included on the legislation and guidance described in Section 2 of this report (as indicated in Table 2 below).

Table 2 Specially protected and notable species recorded during the 2021/22 surveys

Species		Conserva	tion status	category	
	Annex 1	S41	Red	Amber	ВАР
Barn owl	-	-	-	-	✓
Black-headed gull	-	-	-	✓	-
Bullfinch	-	✓	-	✓	-
Common gull	-	-	-	✓	-
Curlew	-	✓	✓	-	✓
Fieldfare	-	-	✓	-	-
Golden plover	✓	-	-	-	✓
Great black-backed gull	-	-	-	✓	-
Grey partridge	-	✓	✓	-	✓
Grey wagtail	-	-	-	✓	✓



Species		Conserva	tion status	category	
	Annex 1	S41	Red	Amber	ВАР
Greylag goose	-	-	-	✓	-
Herring gull	-	✓	✓	-	-
Kestrel	-	-	-	✓	✓
Lapwing	-	✓	✓	-	✓
Linnet	-	✓	✓	-	✓
Mallard	-	-	-	✓	-
Meadow pipit	-	-	-	✓	-
Mistle thrush	-	-	✓	-	✓
Moorhen	-	-	-	✓	-
Oystercatcher	-	-	-	✓	-
Peregrine	✓	-	-	-	✓
Pink-footed goose	-	-	-	✓	-
Pochard	-	-	✓	-	✓
Redwing	-	-	-	✓	-
Reed bunting	-	✓	-	✓	✓
Shelduck	-	-	-	✓	✓
Skylark	-	✓	✓	-	✓
Snipe	-	-	-	✓	✓
Song thrush	-	✓	-	✓	✓
Sparrowhawk	-	-	-	✓	-
Starling	-	✓	✓	-	✓
Stock dove	-	-	-	✓	-



Species		Conserva	tion status	category	
	Annex 1	S41	Red	Amber	ВАР
Teal	-	-	-	✓	-
Tree sparrow	-	✓	✓	-	✓
Tundra bean goose	-	-	-	✓	-
Wigeon	-	-	-	✓	-
Willow tit	-	✓	✓	-	✓
Woodcock	-	-	✓	-	✓
Yellowhammer	-	✓	✓	-	✓

Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species S41: NERC Act 2006 S41 Species of Principal Importance

Red: BoCC Red list species

Amber: BoCC Amber list species

BAP: Durham BAP Priority species

- 5.2.2 In summary, the 50 species recorded during the wintering bird surveys of the study area in 2021/22 included the following:
  - two EC Birds Directive Annex 1 species;
  - 13 NERC S41 Species of Principal Importance;
  - 14 BoCC Red list species;
  - 22 BoCC Amber list species; and
  - 21 Durham BAP Priority species.

#### 5.3 Species abundance

- 5.3.1 Peak counts for species recorded in numbers that were potentially of international or national importance were compared with relevant population estimates as described in Section 3.3.3.
- 5.3.2 Populations were assessed as being important at an international or national level if they exceeded 1% of the relevant population estimate. This evaluation is presented in Table 3 below. Species omitted from Table 3 were recorded in numbers that were far below international and national importance thresholds and therefore did not require further evaluation.



5.3.3 As the four transects were not surveyed simultaneously, and bird populations are transient, peak counts from the four transects were not summed to produce a total peak count, as this would be likely to introduce errors due to double counting. As such, the peak count recorded for a species during a single visit of one transect has been used.

Table 3 Evaluation of wintering bird population importance at international and national level

Species	Peak count	International 1% population threshold	National 1% population threshold	Peak count as % of national population estimate
Great crested grebe	55	6300	165	0.33
Grey partridge	80	-	740	0.11
Herring gull	924	9300	7300	0.13
Pink-footed goose	2352	5400	5100	0.46
Wigeon	2000	14000	4450	0.45

- 5.3.4 As indicated in Table 3, no species were recorded in numbers of international or national importance.
- 5.3.5 Considering the analysis undertaken above, and in reference to *Birds in Durham* Editions 2016 to 2020 and professional judgement, the following species are assessed as having been present in numbers of potential county and district level importance, as detailed in Table 4 below.

Table 4 Evaluation of wintering bird population importance at a county and district level

Species	Peak count	Importance level	Justification
Common gull	230	District	Abundant passage and winter visitor in Durham, with counts of 2000+ recorded at two sites in 2020, and counts of 100+ recorded at multiple sites.
Great crested grebe	55	County	Common resident and passage visitor in Durham, with a peak count at a single site of 47 recorded in 2020.
Grey partridge	80	County	Common but declining resident in Durham, recorded at 100+ sites in 2020, with a peak count at a single site of 30.



Species	Peak count	Importance level	Justification
Herring gull	924	County	Abundant passage and winter visitor in Durham, with a peak count at a single site of c.2000 recorded in 2020, and counts of 1000+ recorded at two sites.
Linnet	161	County	Very common resident and passage migrant in Durham, with a peak count at a single site of 150 recorded in 2020, and several flocks of 200+ recorded in 2019.
Pink-footed goose	2352	County	Very common passage and winter visitor in Durham, with monthly total counts for the county recorded in 2020 as follows:  - January: 1040 - February: 664 - March: 3281 - October: 7400 - November: 5658 - December: 3021
Starling	1539	District	Abundant resident and winter visitor in Durham, with a peak count at a single site of 5000+ recorded in 2020, and counts of 1000+ recorded at two other sites.
Stock dove	251	County	Very common resident in Durham, recorded at 140 sites in 2020, with a peak count at a single site of 210.
Tree sparrow	20	District	Common but sparsely distributed resident in Durham, with a peak count of c.150 recorded in 2020, and counts of 50+ recorded at several other sites.
Wigeon	2000	County	Abundant passage and winter visitor in Durham, recorded at c.60 sites in 2020, with a peak count at a single site of 4075, and counts of 500+ recorded at three other sites.

5.3.6 The remaining species are assessed as having been present in numbers of no more than local importance.

## 5.4 Species diversity

5.4.1 In view of the assemblage of 50 species recorded within and adjacent to the study area during the field surveys and taking into consideration the survey methods described in



Section 3.2.2, the wintering bird assemblage recorded is assessed as being of county importance.

#### 5.5 Site usage by wintering birds

- 5.5.1 The study area (including field numbers) is indicated in Figure 6.2.1, Appendix A. It should be noted that the field numbers shown on this figure are from the Order Limits layout design in 2021 which may have been altered during subsequent design updates. The distributions of wintering bird populations of county significance recorded within the site are indicated in Figures 6.2.2-6.2.6, Appendix A.
- 5.5.2 The four areas of the study area surveyed (i.e. following Transects 1 to 4) were broadly similar in the species they supported in Winter 2021/22, with the species recorded generally comprising typical species of farmland habitat and associated standing water and hedgerows. The diversity of notable bird species was slightly higher at Transects 2 and 3 compared with Transects 1 and 4.
- 5.5.3 Regarding species recorded in numbers of county significance, great crested grebe and wigeon were using standing water within Field 177. Grey partridge activity was recorded throughout the study area, particularly in winter wheat and stubble fields towards the centre of the site (e.g. Fields 44-49 and 80). Herring gulls were recorded throughout the study area, with the largest aggregations observed towards the west of the site in winter wheat and pasture fields (e.g. Fields 99-100). Linnet and stock dove activity was concentrated in fields towards the centre of the study area (e.g. Fields 26, 29, 48, 124 and 149) comprising set-aside, stubble and winter wheat. Pink-footed goose activity was greatest in winter wheat and pasture towards the centre and south-east of the study area (e.g. Fields 58, 65, 66, 140, 174 and 197).
- 5.5.4 Regarding other wintering bird populations recorded during the field surveys, pasture and arable fields (e.g. winter wheat, winter stubble, oilseed rape) provided a range of foraging opportunities, which was reflected in the diversity of bird species recorded. Standing water and adjacent land within Field 177 was used by an array of wetland species. Whilst hedgerows separating fields were not of significant value to populations of county importance (with the possible exception of grey partridge), they were used by low numbers of a diverse range of species, including various species that have undergone significant national decline. Species recorded in hedgerows included little owl, tree sparrow, willow tit, and yellowhammer.



#### 6.0 CONCLUSIONS

- 6.1.1 The field surveys undertaken in December 2021 to March 2022 inclusive to inform the Proposed Development recorded an array of wintering bird species, including 39 notable species in reference to the legislation and conservation status criteria described in Section 2. Based on the species recorded, the wintering bird assemblage is assessed as being of county importance. Regarding populations of individual species, the following species were recorded in numbers assessed as being of potential county importance:
  - great crested grebe;
  - grey partridge;
  - herring gull;
  - linnet:
  - pink-footed goose;
  - stock dove; and
  - wigeon.
- 6.1.2 A further three species were potentially present in numbers of district importance. No species were present in numbers of international or national importance.
- 6.1.3 The study area contained a range of habitats of value to the wintering bird populations described; notably fields of mixed usage including pasture, winter wheat, winter stubble and oilseed rape, as well as standing water (e.g. within Field 177) and hedgerows.
- 6.1.4 Teesmouth and Cleveland Coast is a special protection area (SPA), Ramsar Site, and proposed Ramsar site which are of international importance and are 5.4 km (SPA & proposed Ramsar) and 7.2 km (Ramsar) from the Proposed Development. Potential impacts have been assessed through a Habitat Regulations Assessment (HRA) screening exercise. Full details of the HRA screening exercise are presented in ES Appendix 6.5 Habitats Regulations Assessment No Significant Effects Report (Document Reference 6.4.6.5).
- 6.1.5 Considering the suitability of the study area for wintering birds, and the populations recorded during the field surveys undertaken in 2021/22, a detailed impact assessment will be undertaken in ES Chapter 6 Biodiversity (Document Reference 6.2.6) to determine the potential impacts of the Proposed Development on wintering birds. The impact assessment will identify the requirement for mitigation and enhancement measures.



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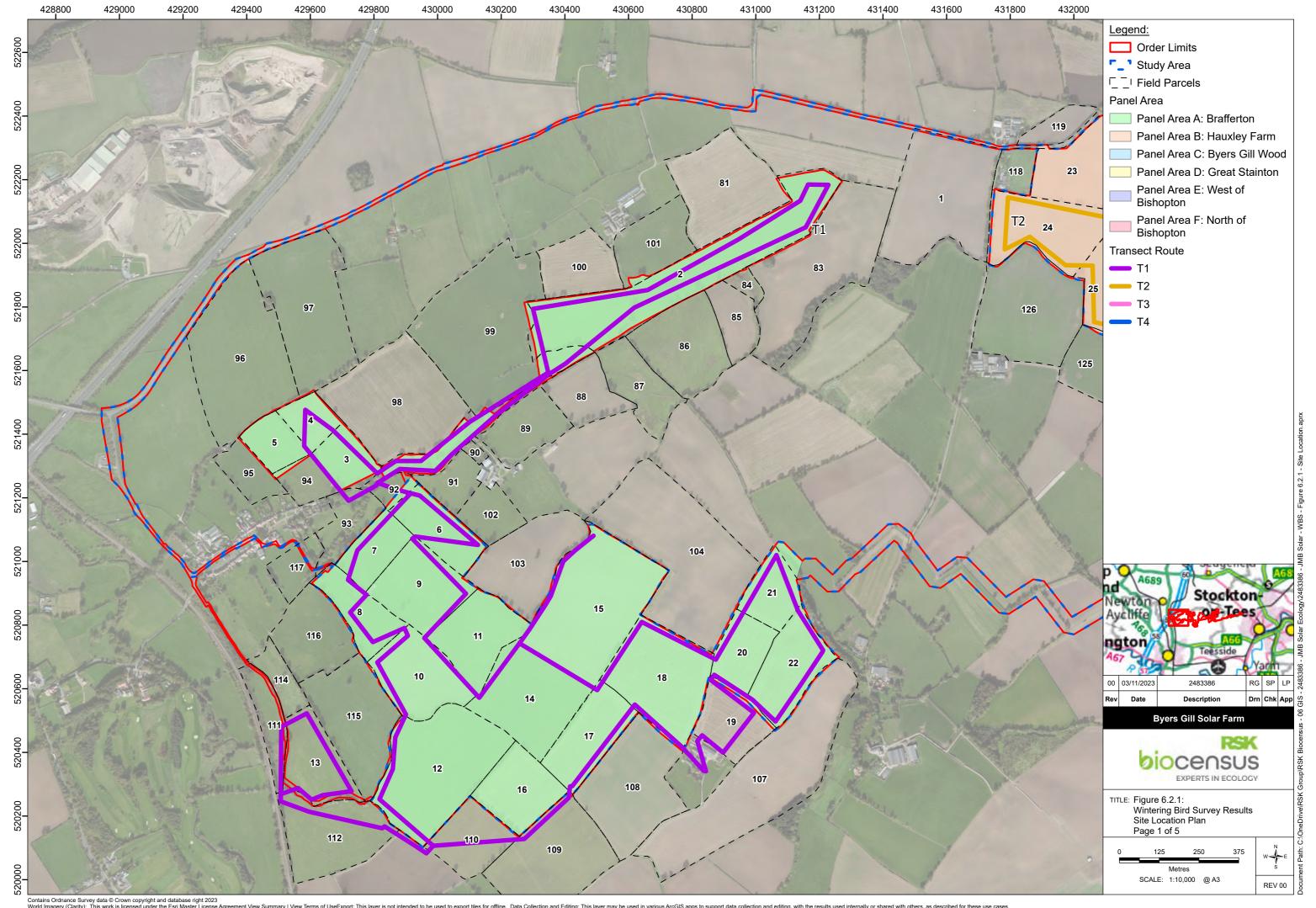


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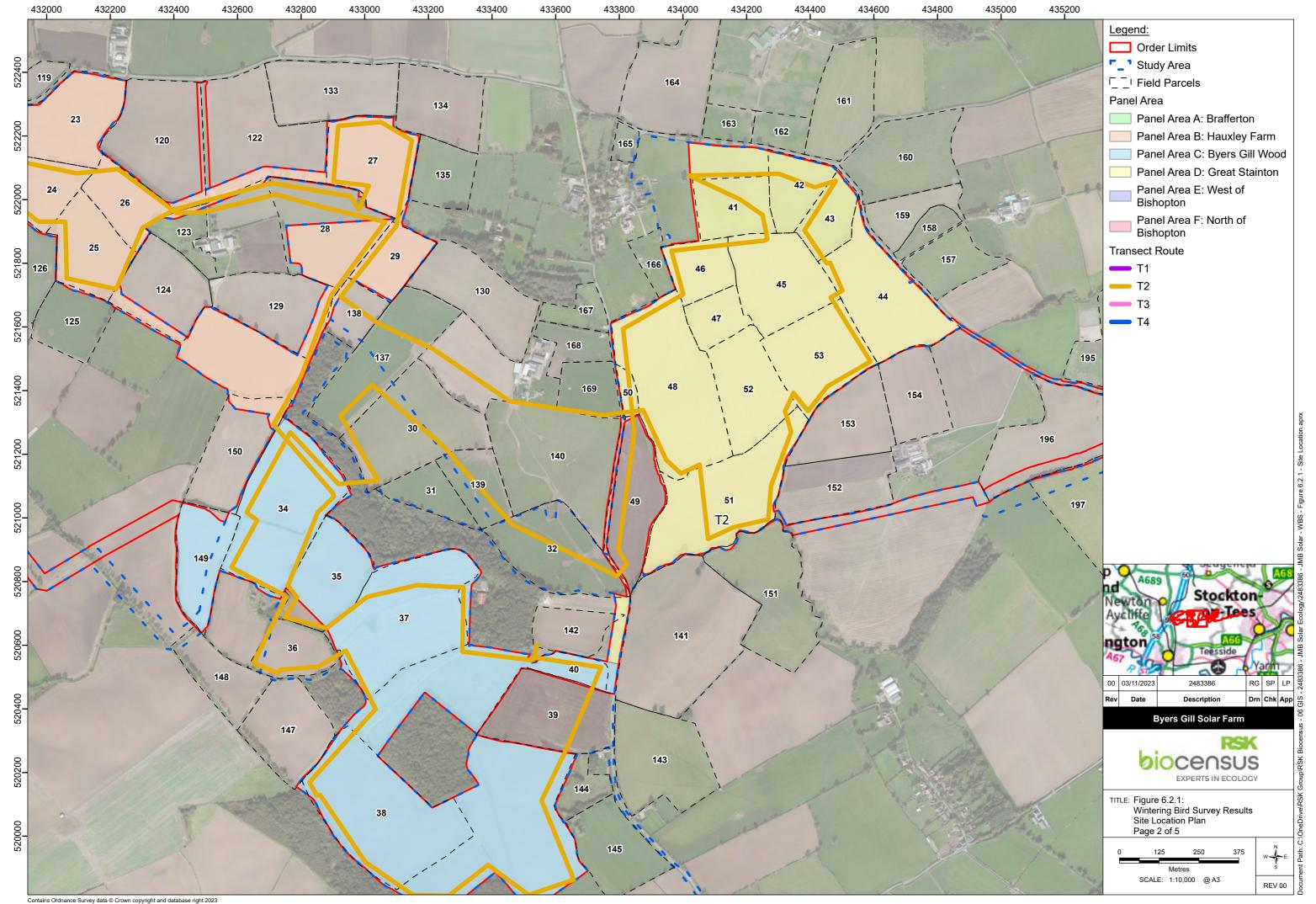
# **APPENDIX A - FIGURES**

Figure 6.2.1 Site layout

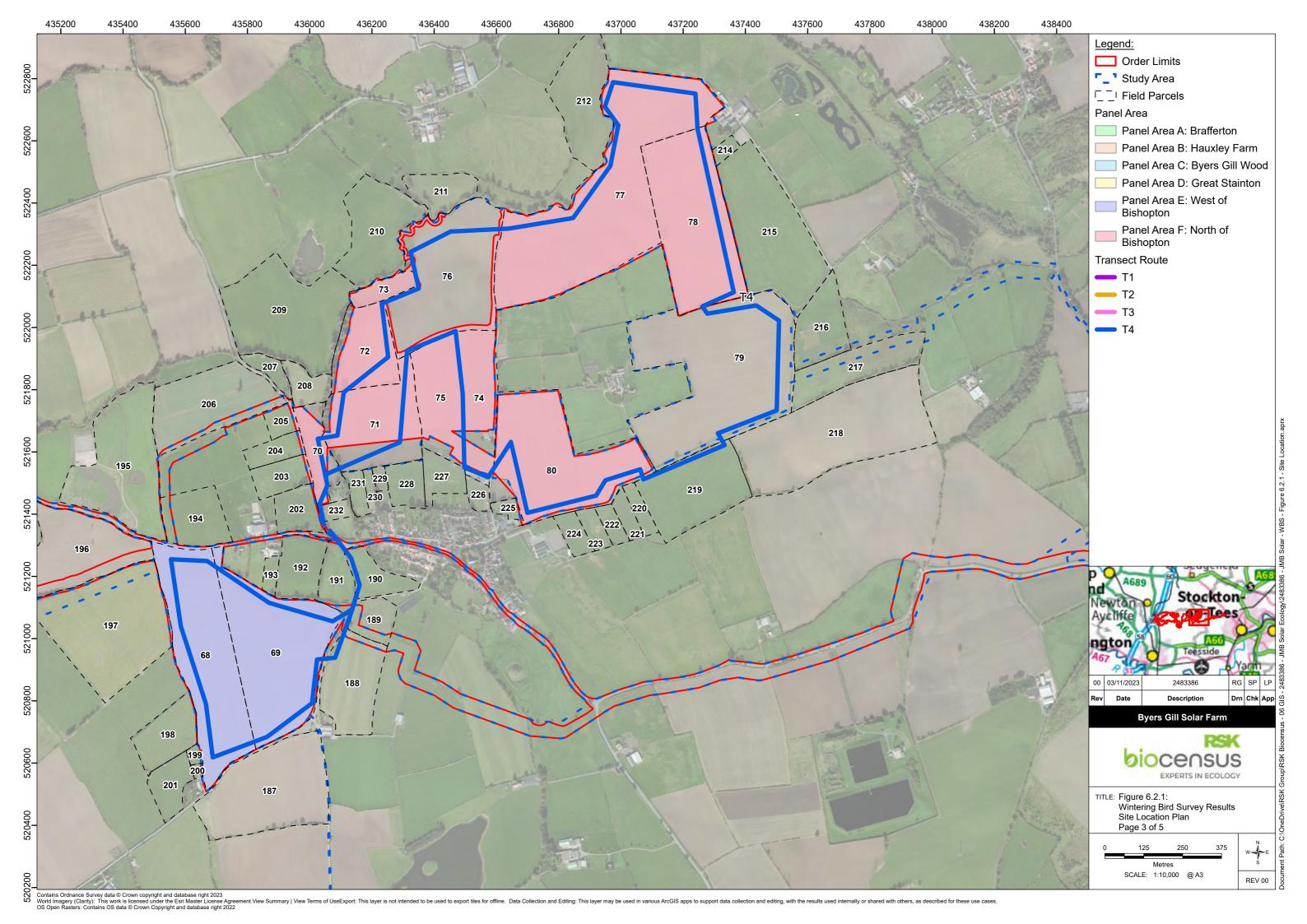


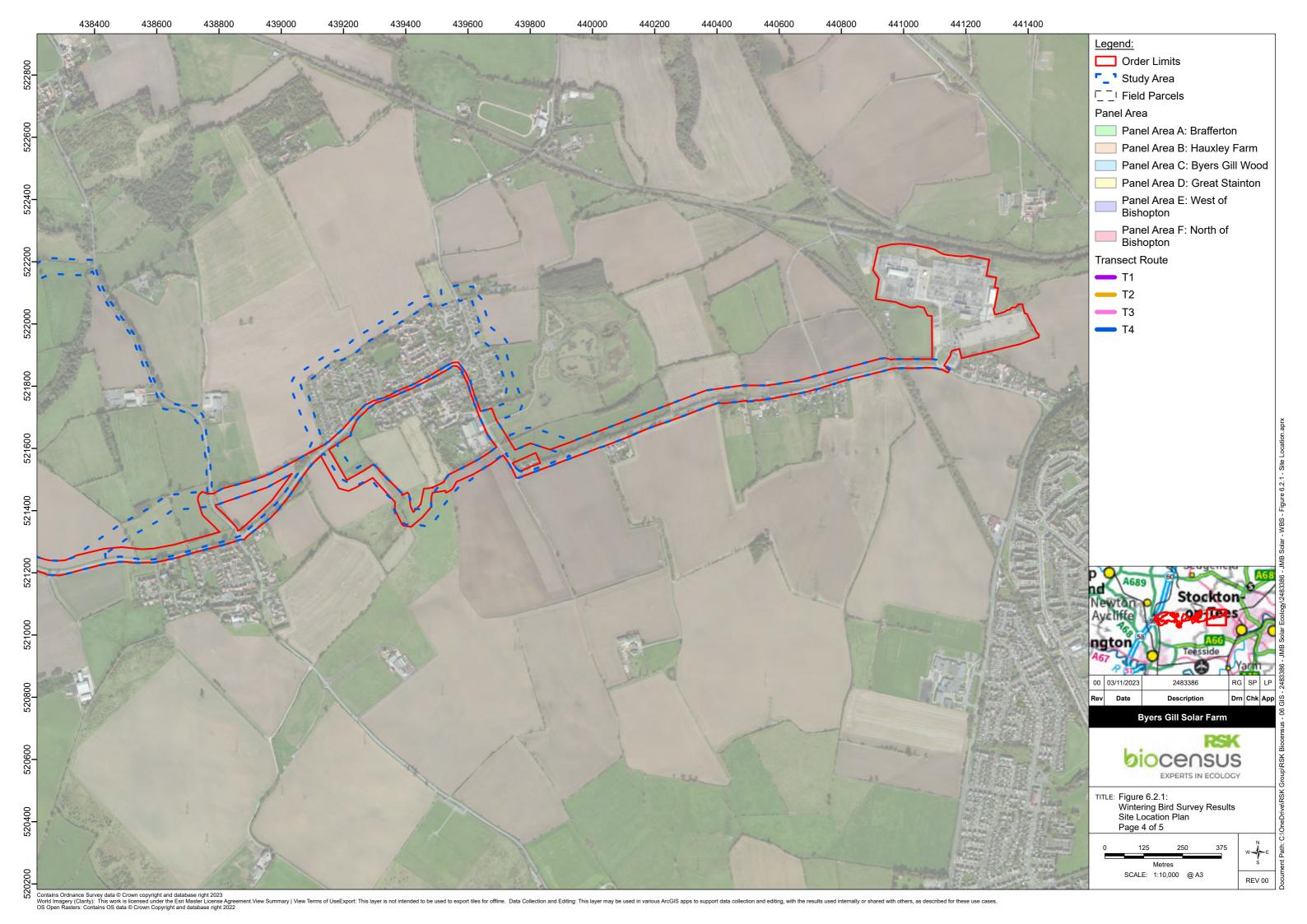
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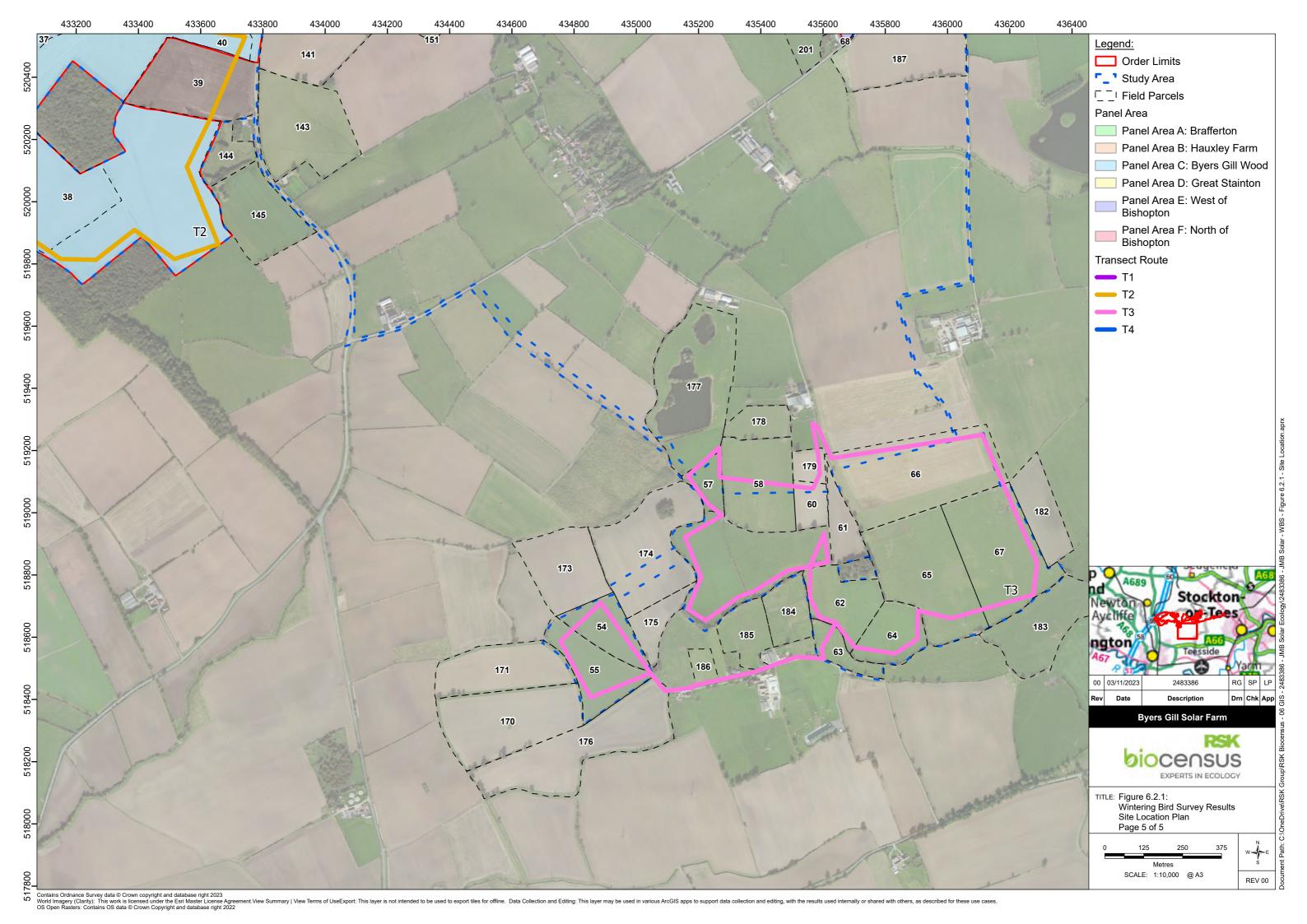
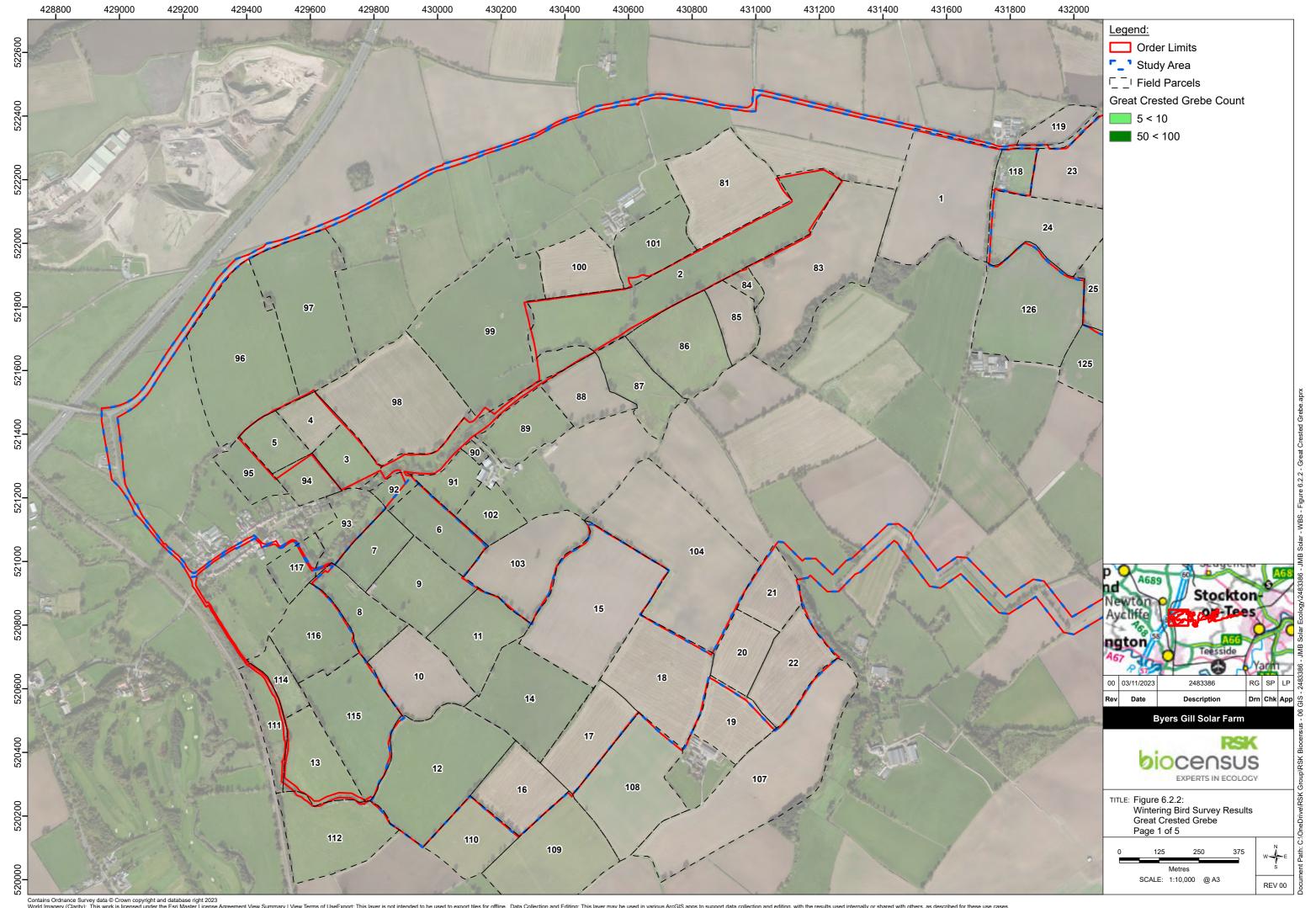
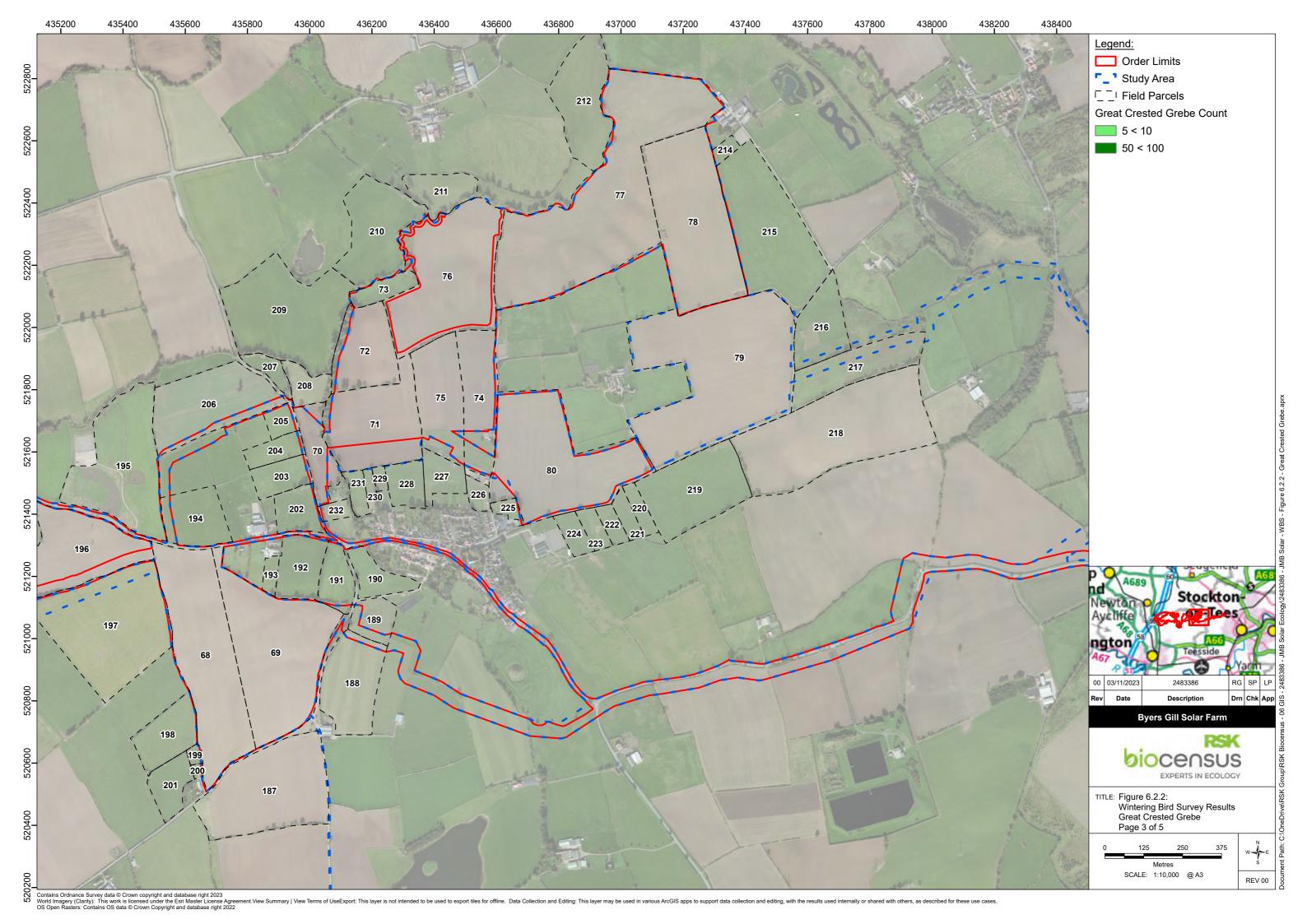


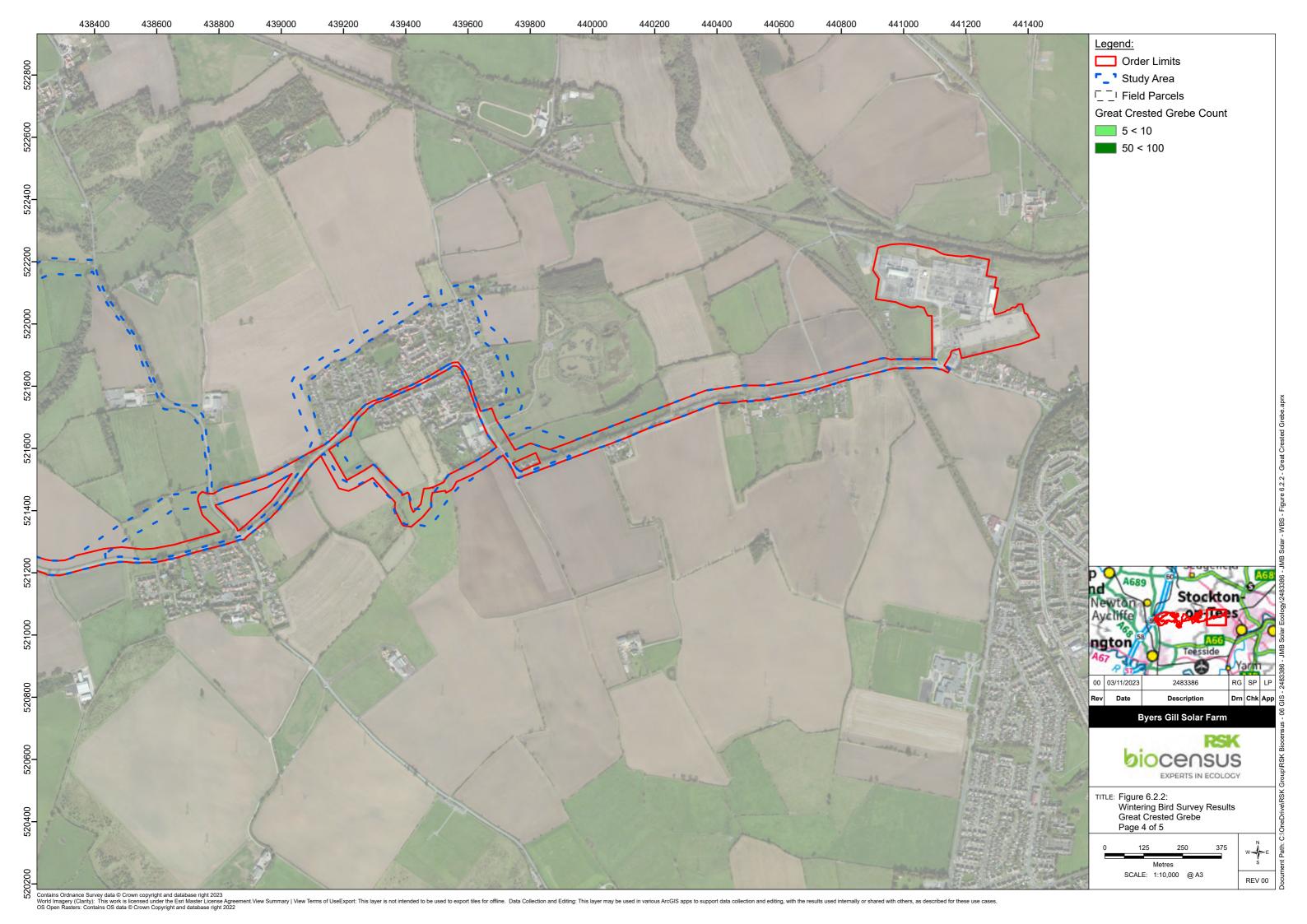


Figure 6.2.2 Great crested grebe count









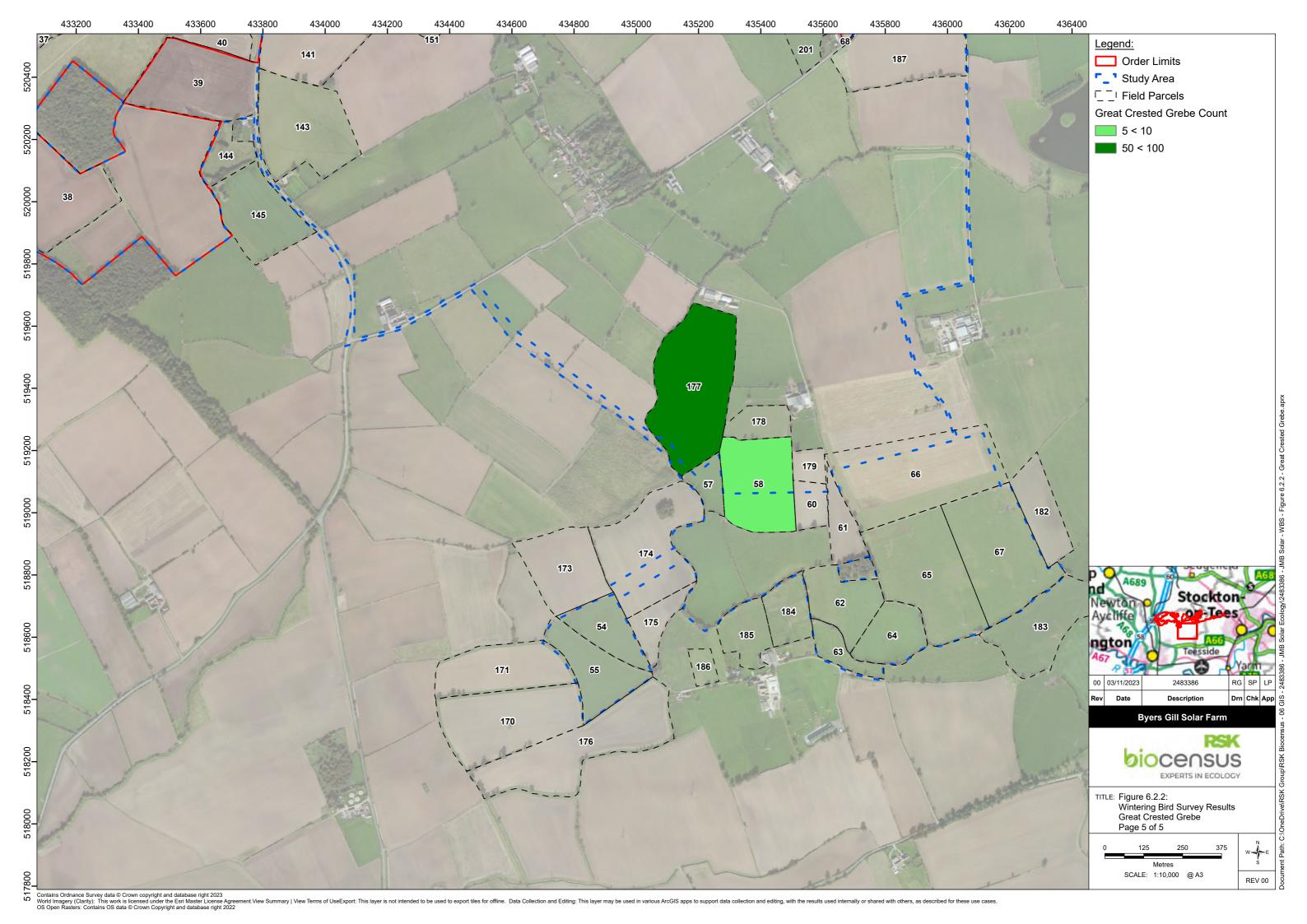
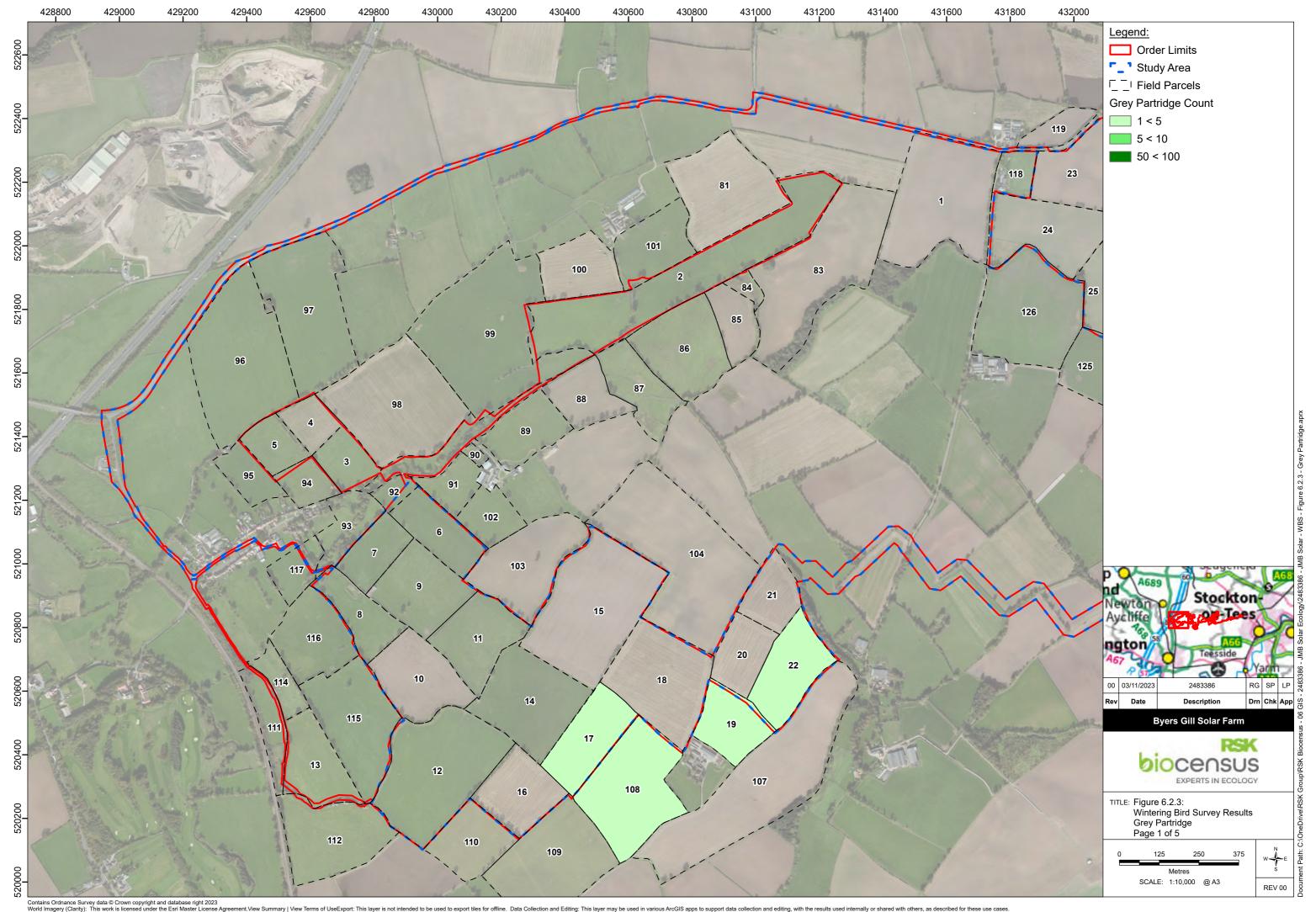
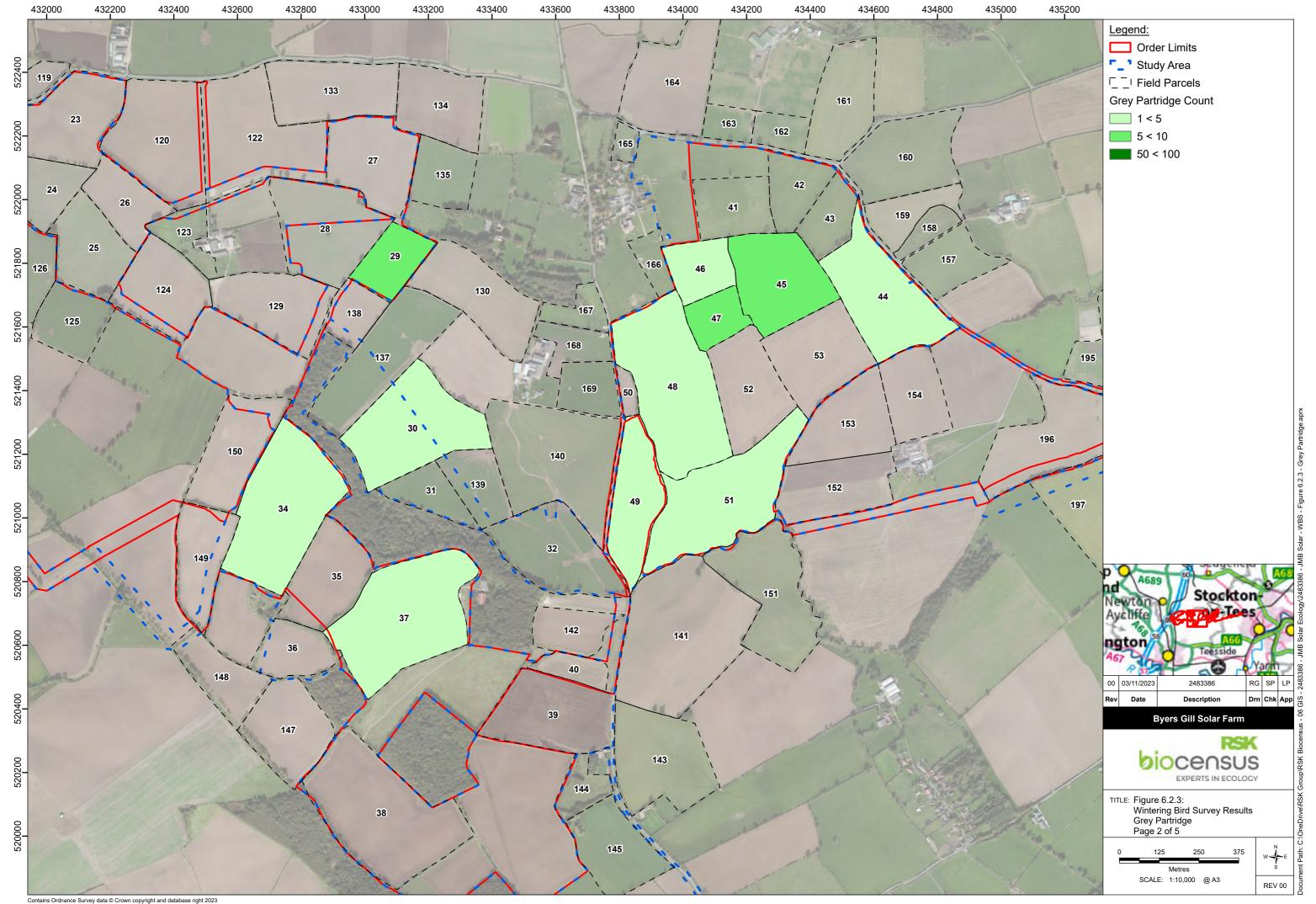
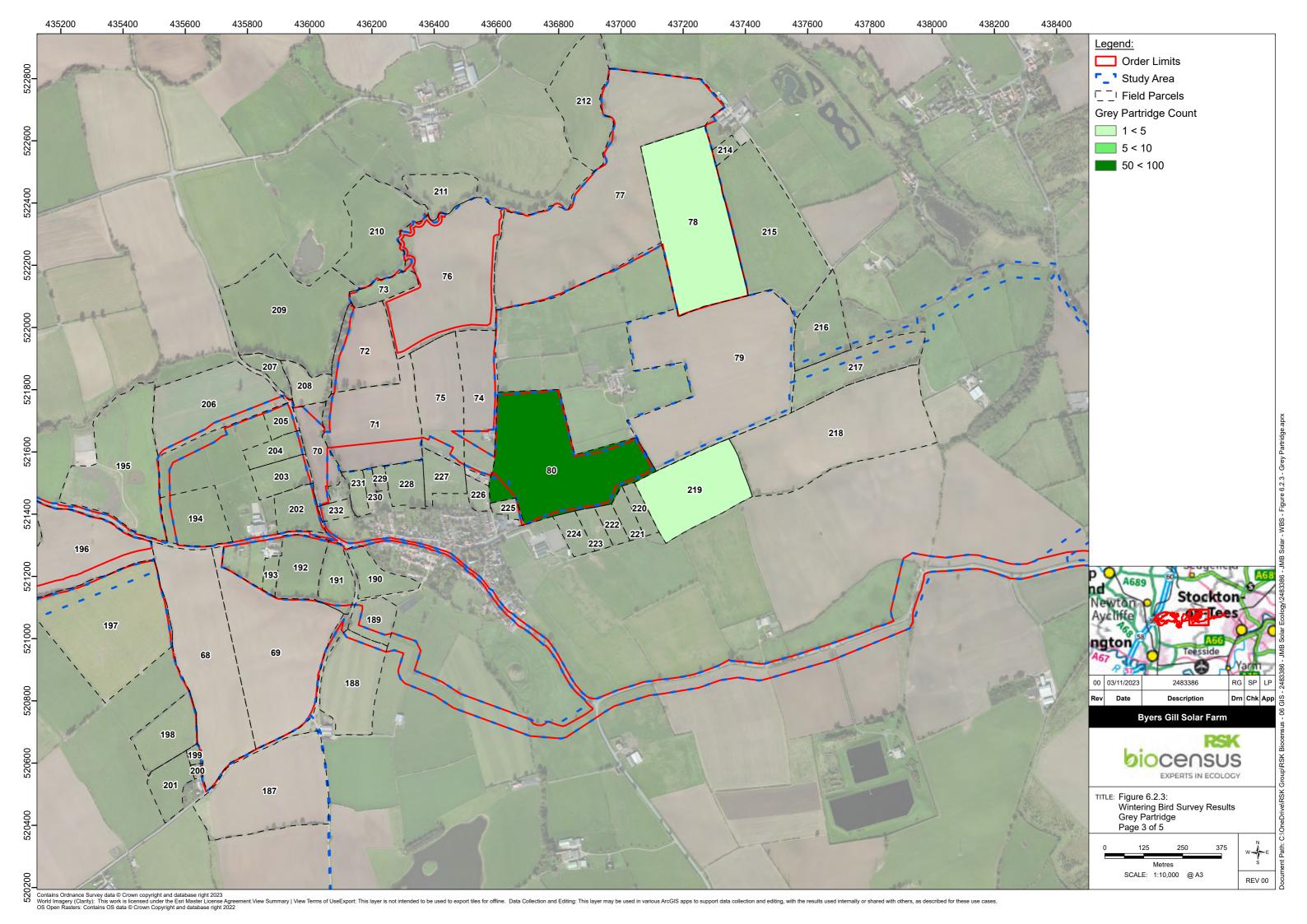


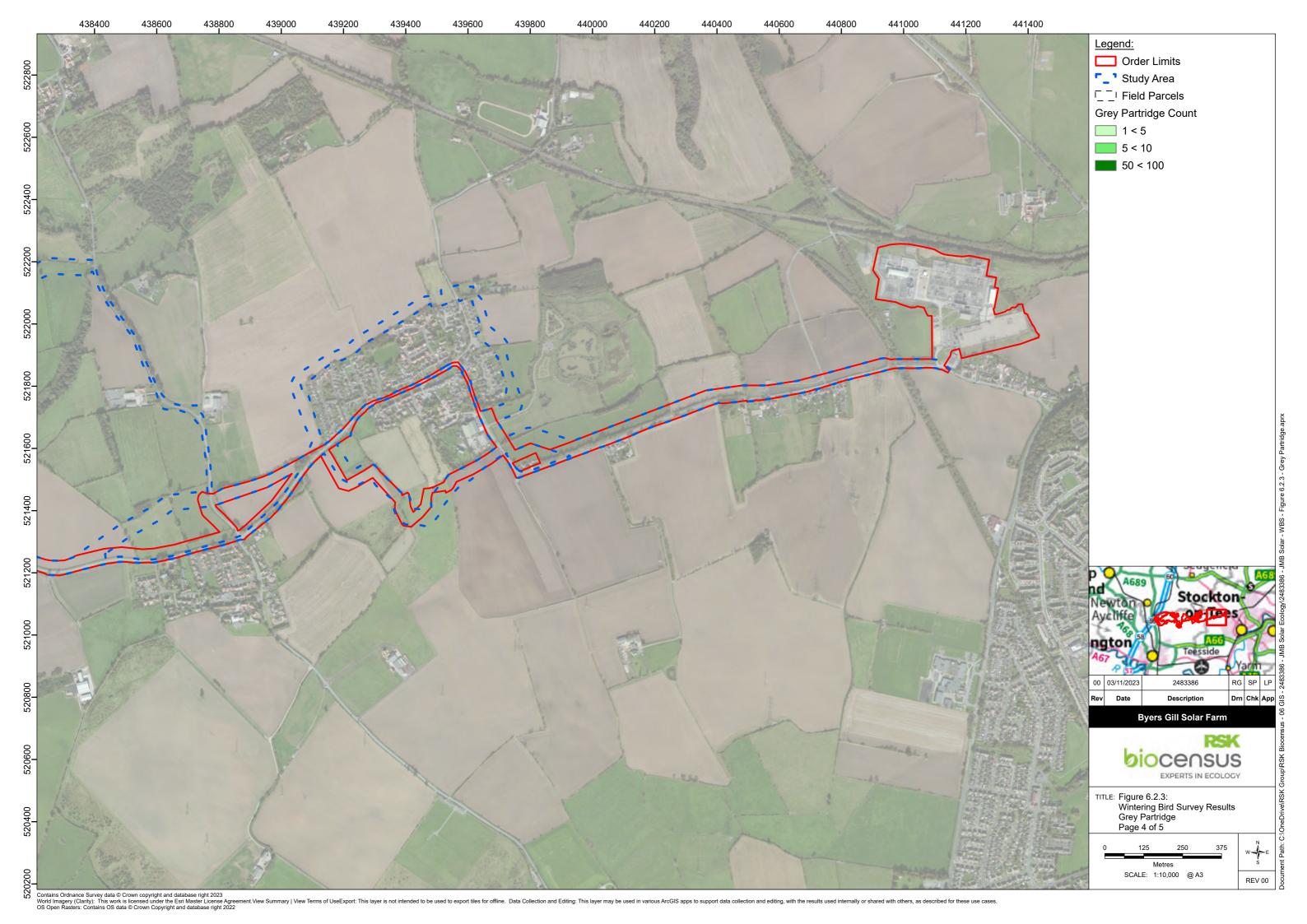


Figure 6.2.3 Grey partridge count









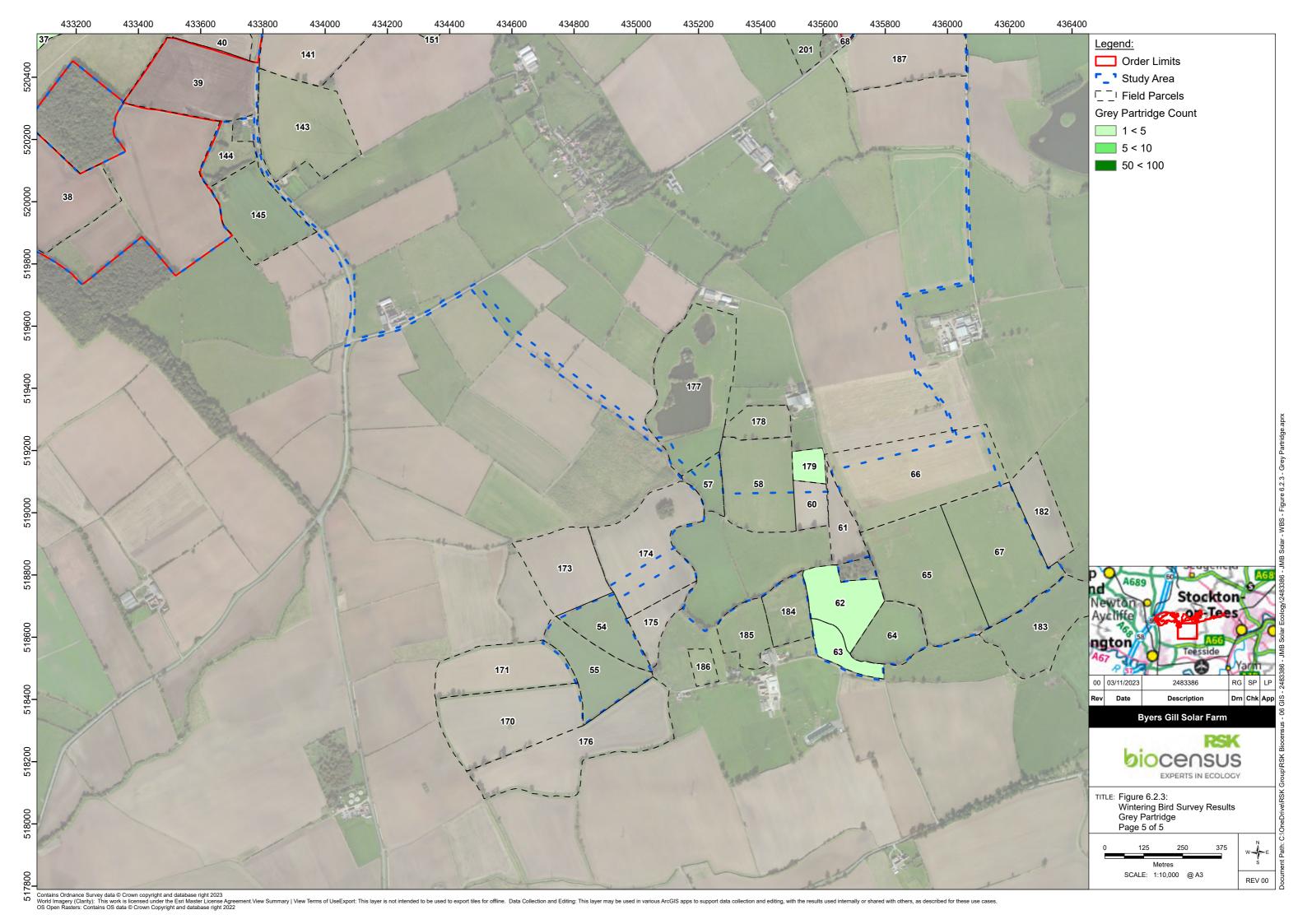
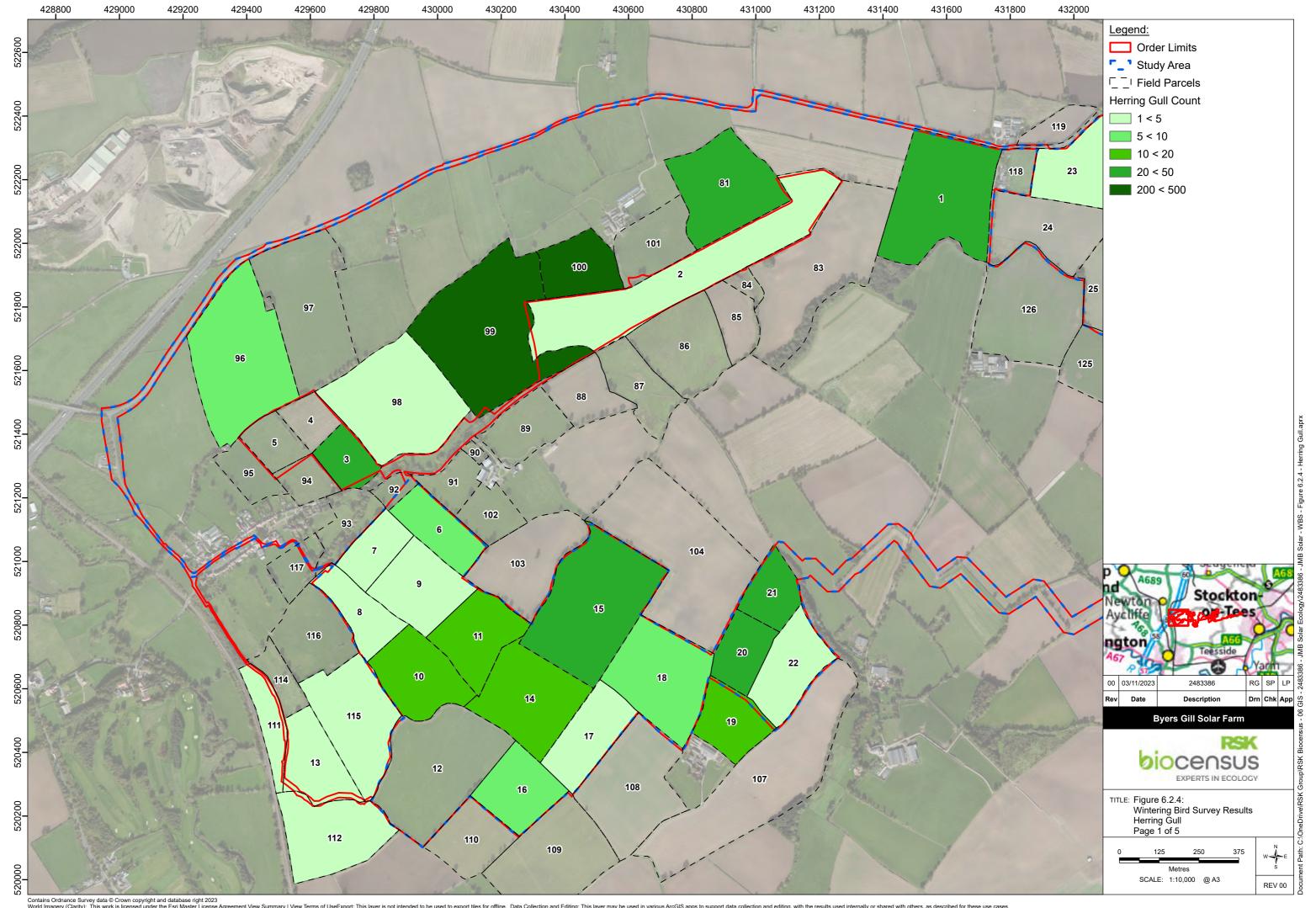
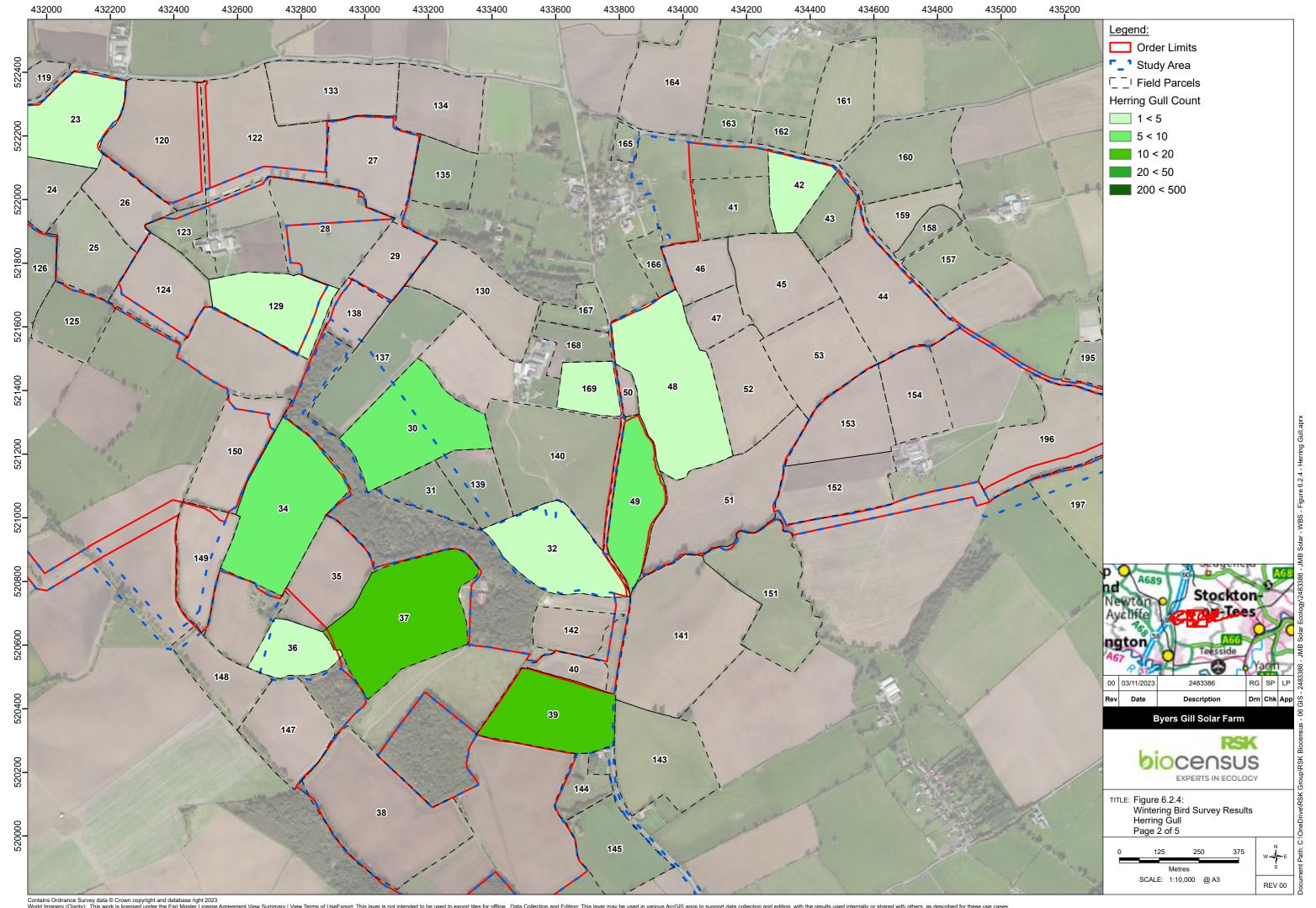
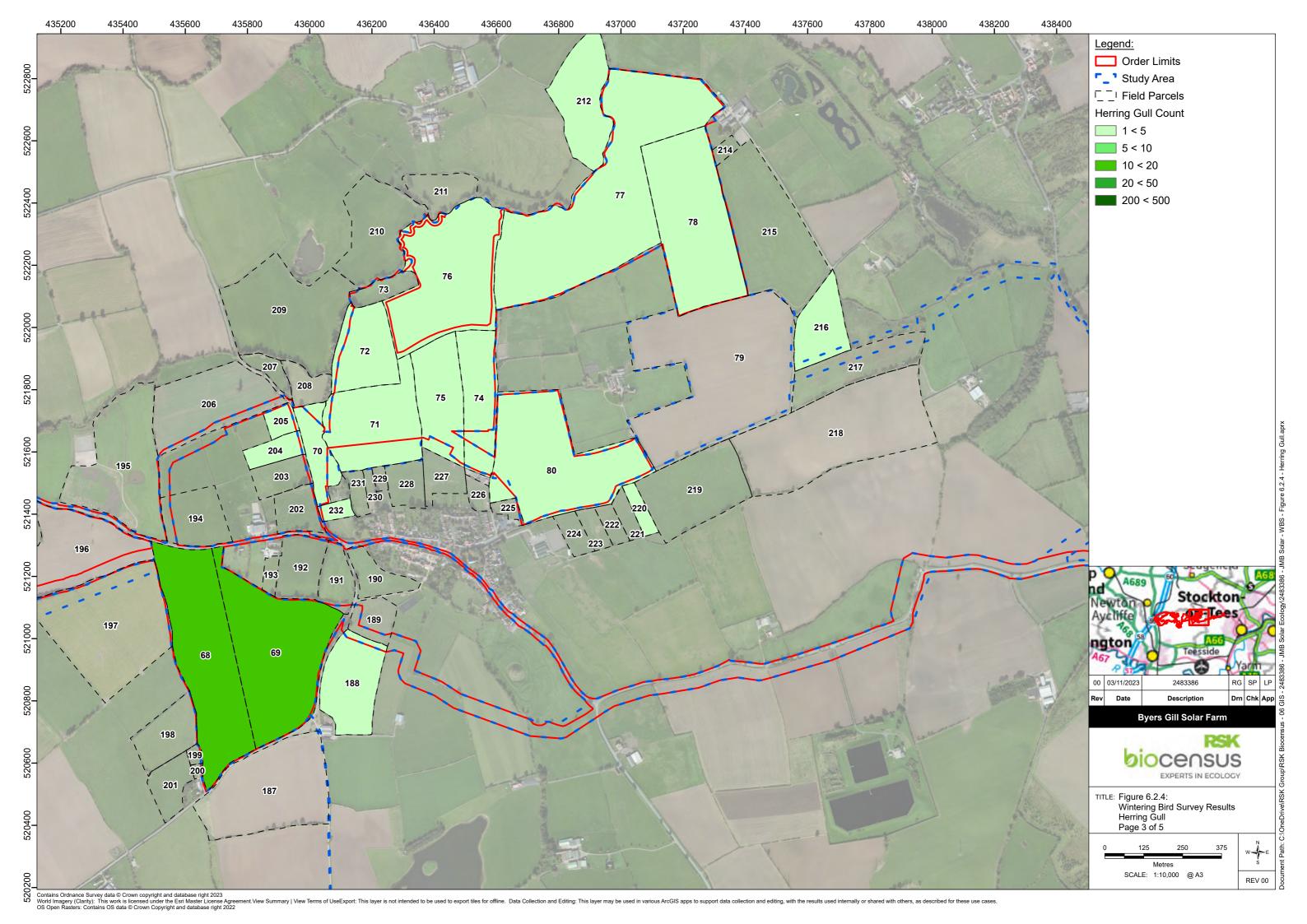


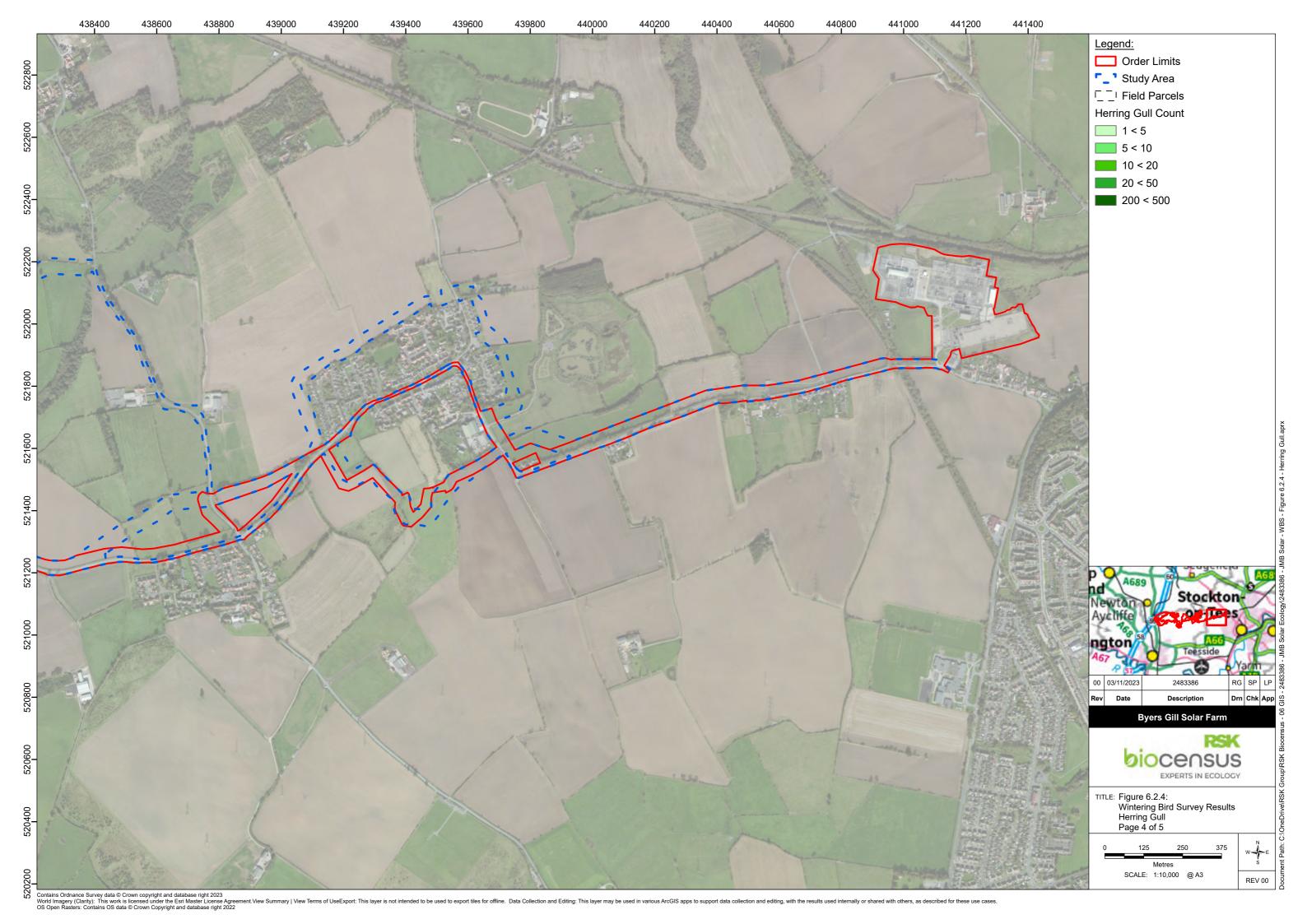


Figure 6.2.4 Herring gull count









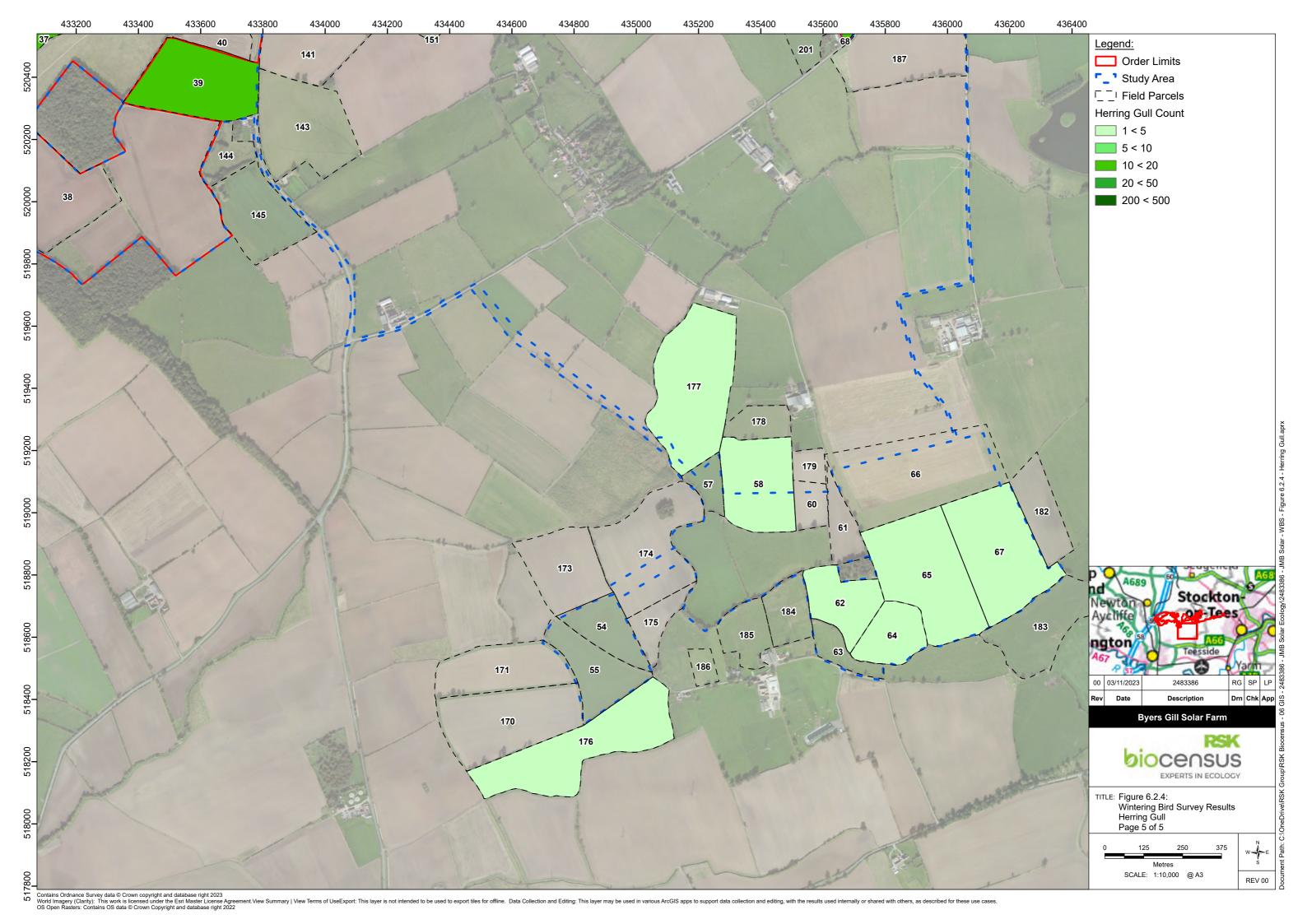
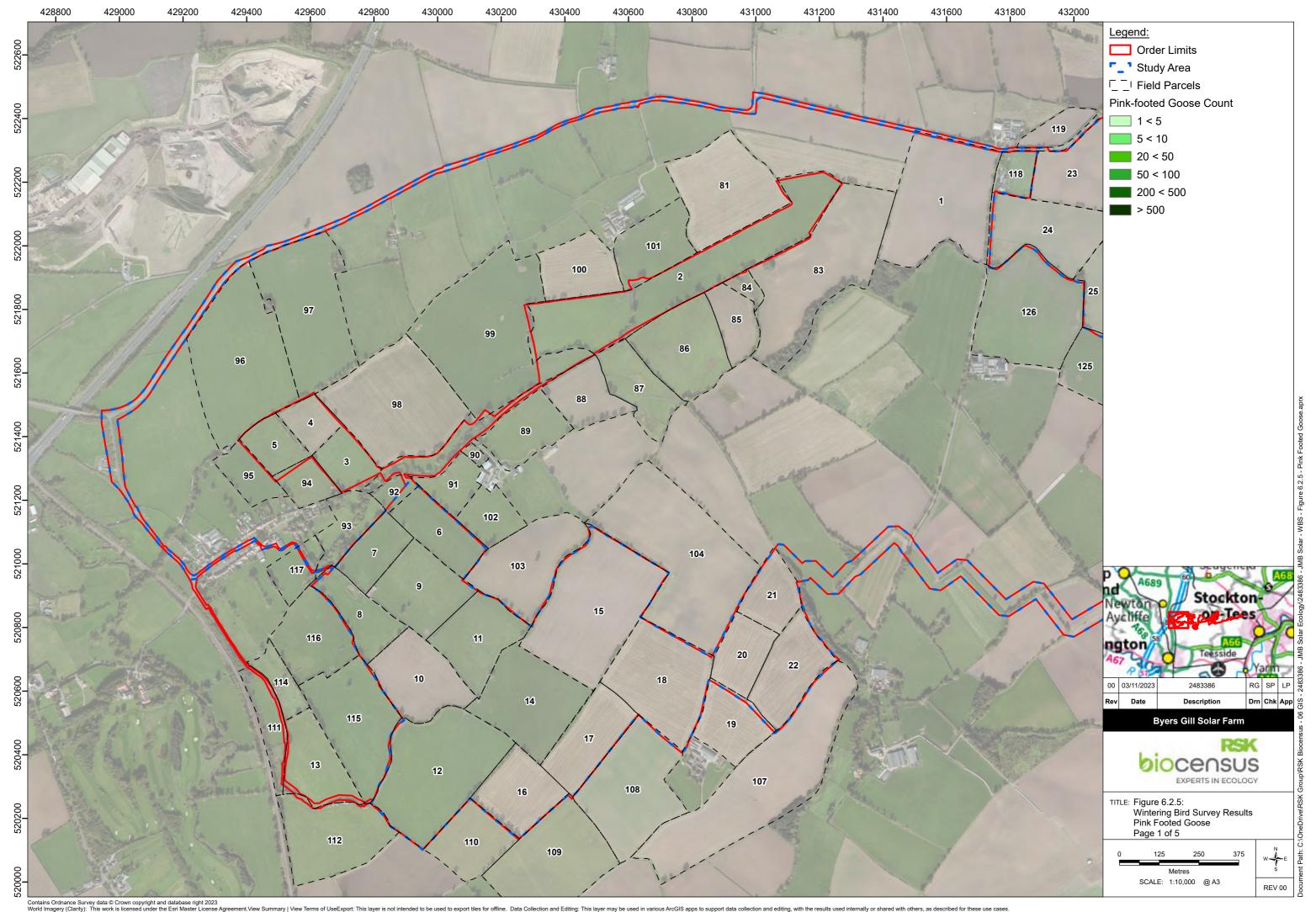
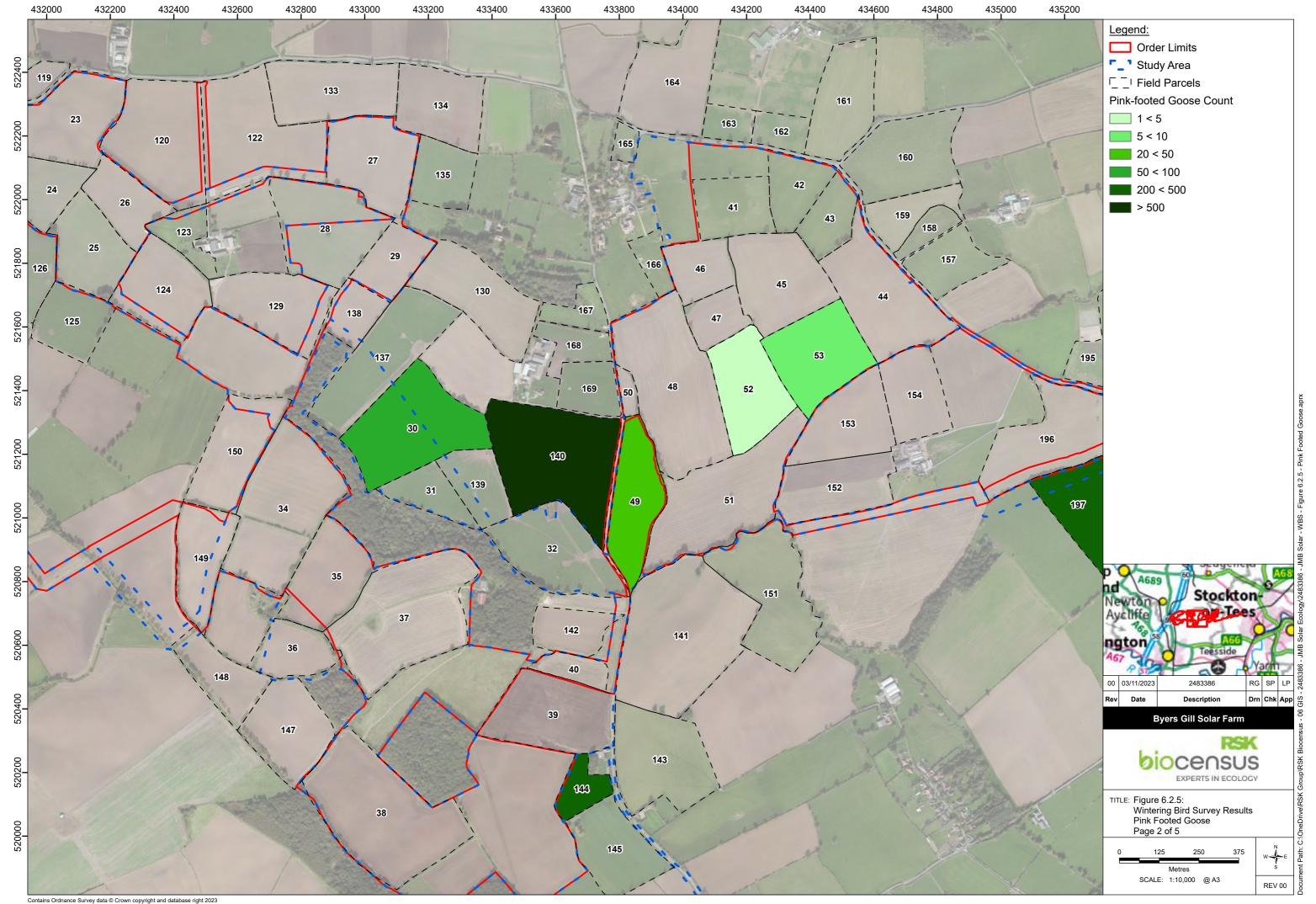
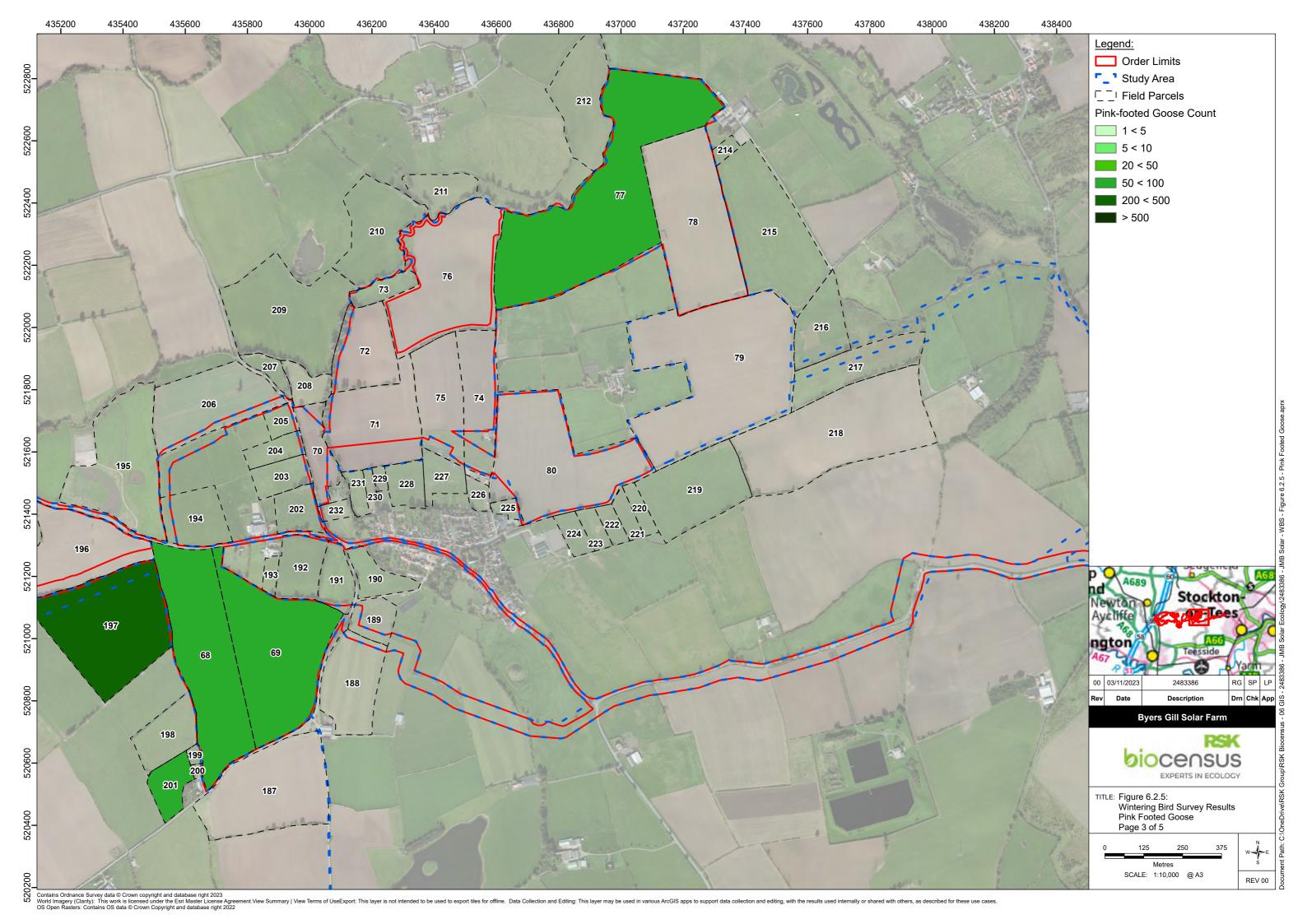




Figure 6.2.5 Pink-footed goose count







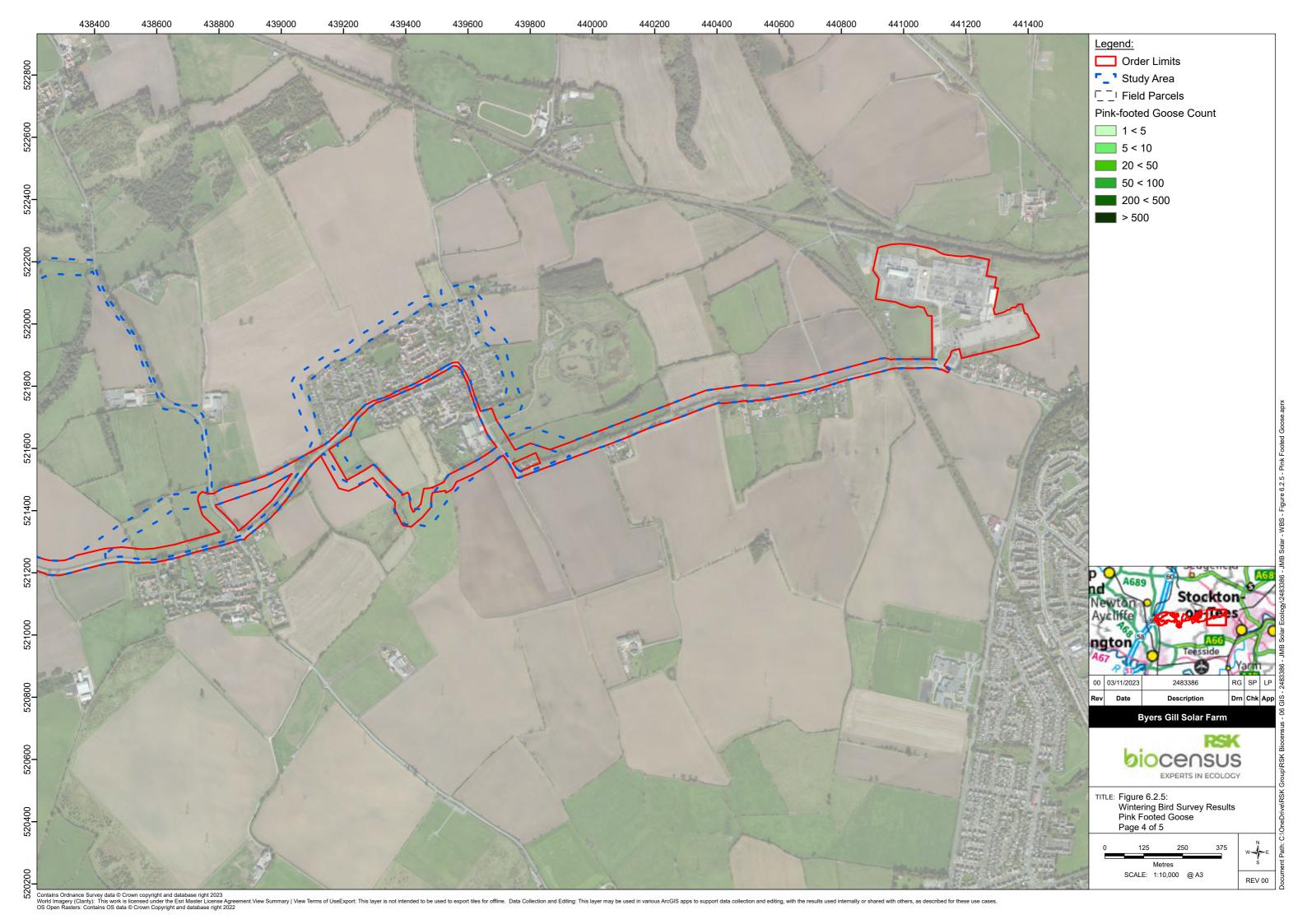
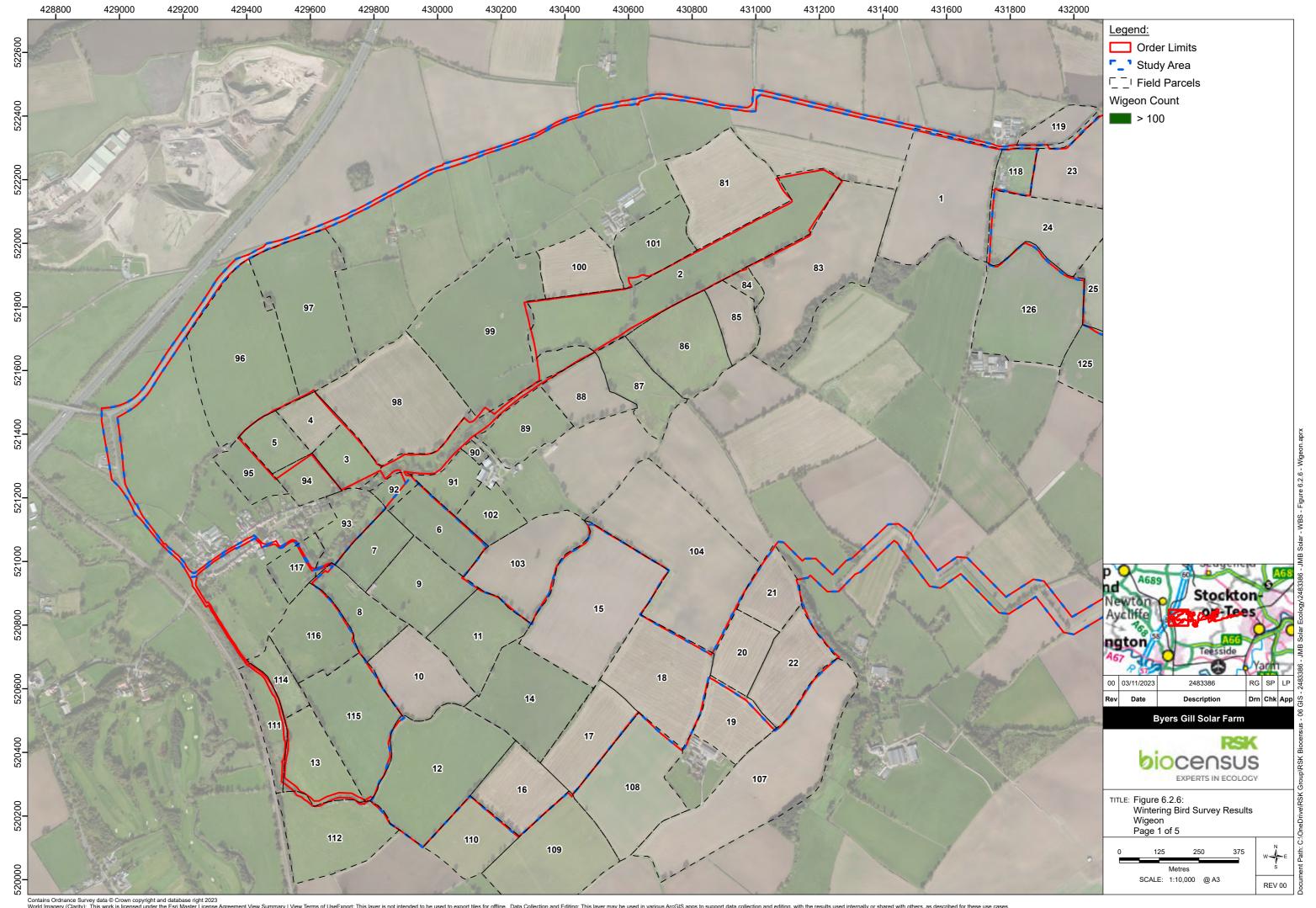


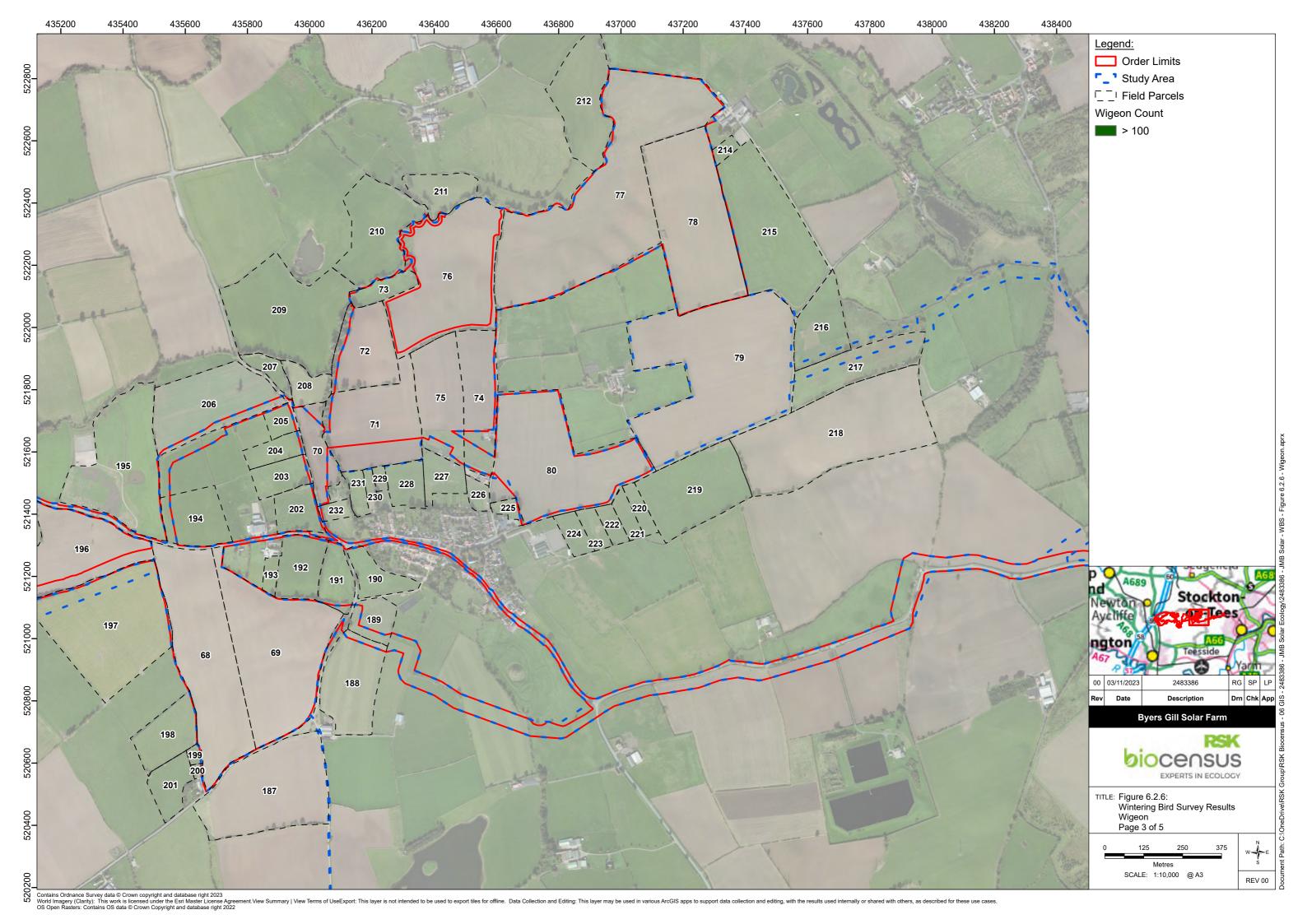


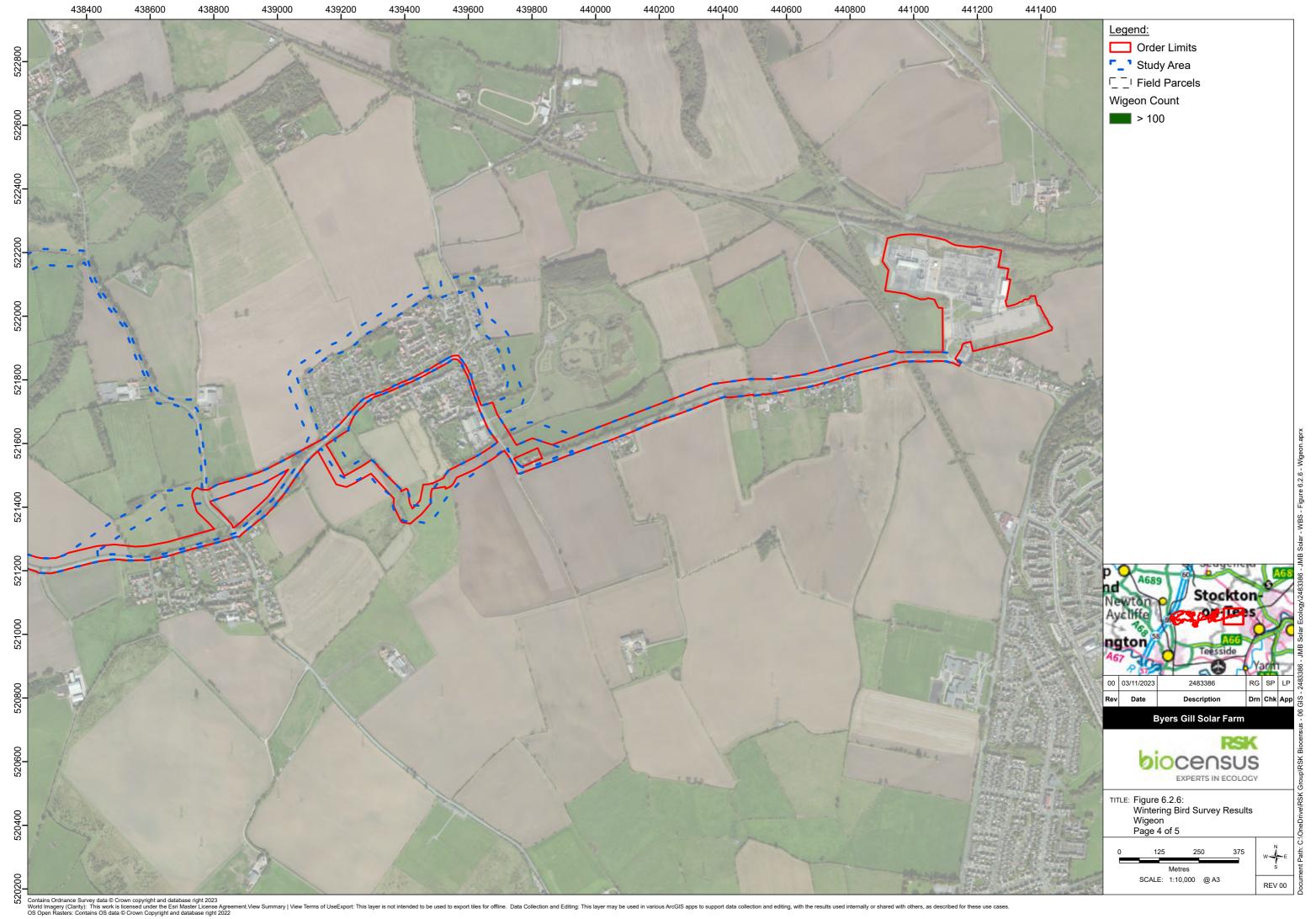


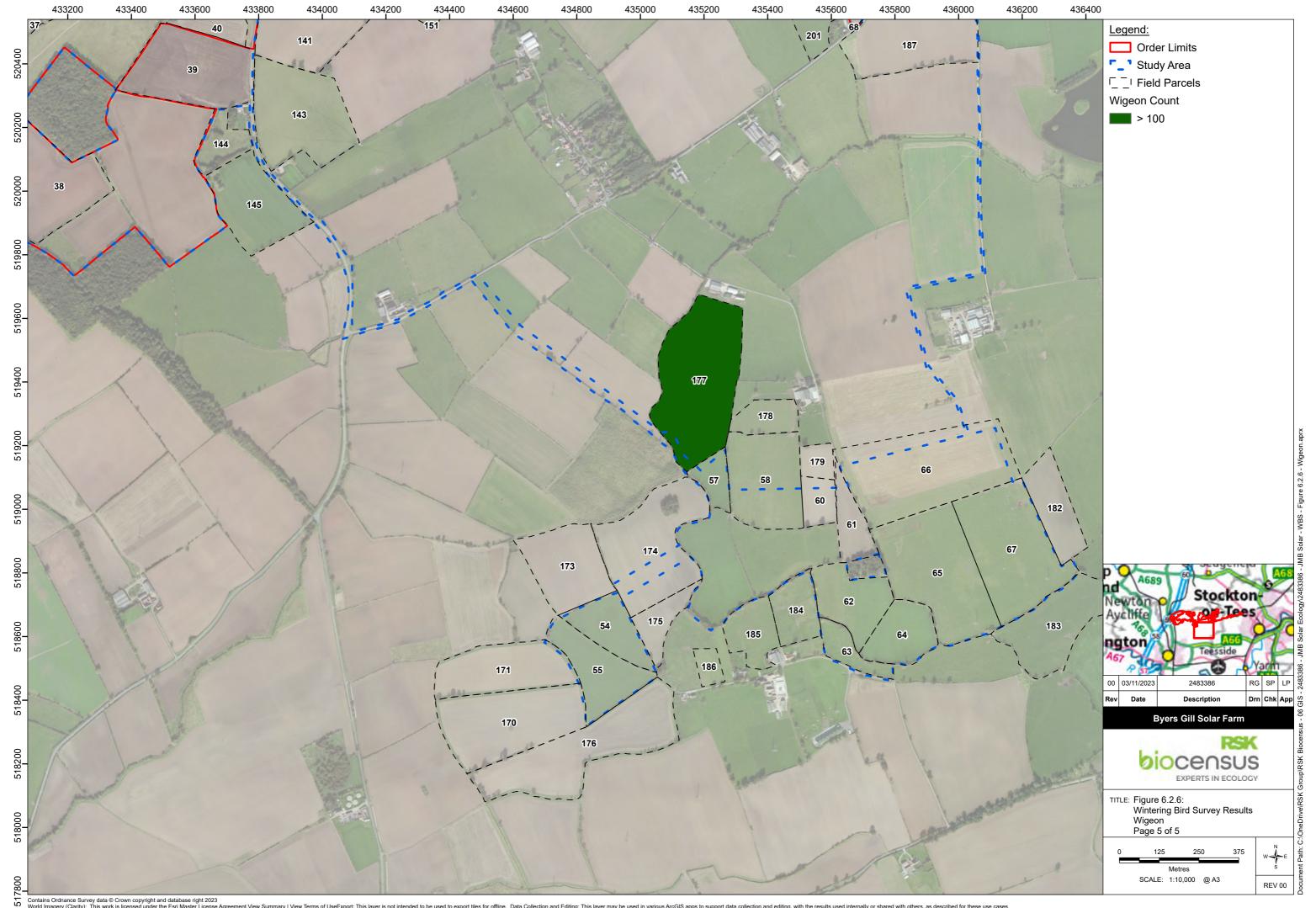
Figure 6.2.6 Wigeon count











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# **APPENDIX B - SURVEY DETAILS**

### Survey dates and weather conditions for Transect 1

Survey visit	Date	Timing	Wind (speed in mph, direction)	Weather conditions
1	19/12/2021	08:45-14:35	1, NW	Overcast (8 oktas), moderate visibility due to fog, dry
2	08/01/2022	09:45-14:45	8-15, S/SW	Overcast (8 oktas), excellent visibility, rain from 11:00-11:20 / 12:00-12:35
3	06/02/2022	07:40-11:45	15-25, W/NW	Initially overcast before partially clearing (4-8 oktas), excellent visibility, dry
4	01/03/2022	08:40-13:10	2-3, N/E	Clear (0 oktas), excellent visibility, dry (initial light frost)

#### Survey dates and weather conditions for Transect 2

Survey visit	Date	Timing	Wind (speed in mph, direction)	Weather conditions
1	20/12/2021	08:45-15:00	3-4, E	Partial cloud (6 oktas), excellent visibility, dry
2	15/01/2022	08:20-14:00	3-4, E	Overcast (8 oktas), initially poor visibility before becoming good for majority of survey, dry
3	15/02/2022	09:15-14:25	12-15, W/SW	Partial cloud (4 oktas), excellent visibility, dry
4	02/03/2022	08:40-13:55	4-5, E/NE	Overcast (8 oktas), excellent visibility, occasional showers

Survey dates and weather conditions for Transect 3



Survey visit	Date	Timing	Wind (speed in mph, direction)	Weather conditions
1	23/12/2021	09:00-11:00	7, S/SW	Overcast (8 oktas), good visibility, dry
2	23/01/2022	12:50-15:20	7-10, S/SW	Partial cloud (5 oktas), excellent visibility, dry
3	19/02/2022	08:40-10:40	3-4, S/SW	Partial cloud (3 oktas), excellent visibility, dry
4	07/03/2022	10:20-12:20	2-3, S/SE	Overcast (8 oktas), excellent visibility, dry (initial light frost)

### Survey dates and weather conditions for Transect 4

Survey visit	Date	Timing	Wind (speed in mph, direction)	Weather conditions
1	22/12/2021	12:05-14:35	9, S	Overcast (8 oktas), good visibility, dry
2	23/01/2022	09:30-12:15	1-2, SW	Largely overcast (7 oktas), excellent visibility, dry
3	19/02/2022	10:55-13:25	3-4, S/SW	Overcast (8 oktas), excellent visibility, rain from 12:40
4	07/03/2022	07:20-10:05	2-3, S/SW	Clear (0 oktas), excellent visibility, dry



# **APPENDIX C – DESK STUDY DATA**

Records of specially protected and notable bird species potentially relevant to the project in a non-breeding context from within 2 km of the site, obtained from Environmental Records Information Centre Northeast, are detailed below.

	Species		Most recent record (year,	Nearest record (year,
Common name	Scientific name	Conservation status	distance from site)	distance from site)
Avocet	Recurvirostra avosetta	Schedule 1, Annex 1, Amber, BAP	2012, 1.5 km	2012, 1.5 km
Barn owl	Tyto alba	Schedule 1, Green, BAP	2012, 0 m	2012, 0 m
Barnacle goose	Branta leucopsis	Annex 1, Amber	2017, 60 m	2017, 60 m
Bewick's swan	Cygnus columbianus	Schedule 1, Annex 1, S41, Red	2013, 0.9 km	2013, 0.9 km
Black-headed gull	Chroicocephalus ridibundus	Amber	2012, 1.5 km	2012, 1.5 km
Brambling	Fringilla montifringilla	Schedule 1, Green	2017, 0.2 km	2017, 0.2 km
Bullfinch	Pyrrhula pyrrhula	S41, Amber	2013, 0.2 km	2013, 0.2 km
Corn bunting	Emberiza calandra	S41, Red, BAP	2012, 0.6 km	2012, 0.6 km
Curlew	Numenius arquata	S41, Red, BAP	2013, 1.5 km	2012, 50 m
Dipper	Cinclus cinclus	Amber	2020, 0.9 km	2020, 0.9 km
Dunnock	Prunella modularis	S41, Amber	2013, 1.5 km	2012, 50 m
Fieldfare	Turdus pilaris	Schedule 1, Red	2013, 0.2 km	2013, 0.2 km
Gadwall	Mareca strepera	Amber	2012, 1.5 km	2012, 1.5 km
Goldeneye	Bucephala clangula	Red	2012, 1.5 km	2012, 1.5 km
Greenfinch	Chloris chloris	Red	2012, 1.5 km	2012, 1.5 km
Grey partridge	Perdix perdix	S41, Red, BAP	2021, 0.7 km	2012, 0.6 km
Grey wagtail	Motacilla cinerea	Amber, BAP	2020, 0.7 km	2020, 0.7 km
Greylag goose	Anser anser	Amber	2012, 1.5 km	2012, 1.5 km
House sparrow	Passer domesticus	S41, Red, BAP	2014, 0.4 km	2014, 0.4 km
Kestrel	Falco tinnunculus	Amber, BAP	2013, 1.5 km	2012, 0.6 km



	Species		Most recent	Nearest
Common name	Scientific name	Conservation status	record (year, distance from site)	record (year, distance from site)
Kingfisher	Alcedo atthis	Schedule 1, Annex 1, Green	2017, 1.1 km	2017, 1.1 km
Lapwing	Vanellus vanellus	S41, Red, BAP	2013, 1.5 km	2012, 1.5 km
Lesser black- backed gull	Larus fuscus	Amber	2013, 1.5 km	2012, 1.5 km
Lesser redpoll	Acanthis cabaret	Red, BAP	2013, 0.2 km	2013, 0.2 km
Linnet	Linaria cannabina	S41, Red, BAP	2020, 0.6 km	2012, 0.6 km
Little ringed plover	Charadrius dubius	Schedule 1, Green, BAP	2012, 1.5 km	2012, 1.5 km
Mallard	Anas platyrhynchos	Amber	2013, 1.1 km	2013, 1.1 km
Meadow pipit	Anthus pratensis	Amber	2020, 0.9 km	2020, 0.9 km
Mistle thrush	Turdus viscivorus	Red, BAP	2012, 0.6 km	2012, 0.6 km
Moorhen	Gallinula chloropus	Amber	2012, 1.5 km	2012, 1.5 km
Oystercatcher	Haematopus ostralegus	Amber	2012, 1.5 km	2012, 1.5 km
Peregrine	Falco peregrinus	Schedule 1, Annex 1, Green, BAP	2013, 0.3 km	2013, 0.3 km
Pink-footed goose	Anser brachyrhynchus	Amber	2017, 60 m	2013, 0 m
Pochard	Aythya ferina	Red, BAP	2017, 60 m	2017, 60 m
Redshank	Tringa totanus	Amber, BAP	2012, 1.5 km	2012, 1.5 km
Redwing	Turdus iliacus	Schedule 1, Amber	2013, 1.2 km	2013, 1.2 km
Reed bunting	Emberiza schoeniclus	S41, Amber BAP	2021, 0.8 km	2012, 0.6 km
Rook	Corvus frugilegus	Amber	2013, 1.1 km	2013, 1.1 km
Ruff	Philomachus pugnax	Schedule 1, Annex 1, Red	2012, 1.6 km	2012, 1.6 km
Scaup	Aythya marila	Schedule 1, S41, Red	2017, 0.6 km	2017, 0.6 km
Shelduck	Tadorna tadorna	Amber, BAP	2012, 1.5 km	2012, 1.5 km
Short-eared owl	Asia flammeus	Annex 1, Amber	2012, 0.1 km	2012, 0.1 km
Shoveler	Spatula clypeata	Amber	2012, 1.5 km	2012, 1.5 km
Skylark	Alauda arvensis	S41, Red, BAP	2013, 1.1 km	2013, 1.1 km
Song thrush	Turdus philomelos	S41, Amber, BAP	2013, 1.5 km	2012, 50 m
Sparrowhawk	Accipiter nisus	Amber	2013, 0.6 km	2013, 0.6 km



	Species		Most recent record (year,	Nearest record (year,
Common name	Scientific name	Conservation status	distance from site)	distance from site)
Starling	Sturnus vulgaris	S41, Red, BAP	2013, 0.9 km	2013, 0.9 km
Stock dove	Columba oenas	Amber	2013, 0.6 km	2013, 0.6 km
Teal	Anas crecca	Amber	2012, 0.2 km	2012, 0.2 km
Tree sparrow	Passer montanus	S41, Red, BAP	2017, 0.8 km	2013, 0.6 km
Tundra bean goose	Anser fabalis	Amber	2017, 0.6 km	2013, 0 m
Wheatear	Oenanthe oenanthe	Amber	2017, 0.7 km	2017, 0.7 km
White-fronted goose	Anser albifrons	Annex 1, S41, Red	2017, 60 m	2012, 0 m
Whooper swan	Cygnus cygnus	Schedule 1, Annex 1, Amber	2013, 0.9 km	2013, 0.9 km
Wigeon	Mareca penelope	Amber	2012, 1.5 km	2012, 1.5 km
Willow tit	Poecile montanus	S41, Red, BAP	2017, 0.8 km	2017, 0.8 km
Woodpigeon	Columba palumbus	Amber	2013, 1.1 km	2012, 50 m
Wren	Troglodytes troglodytes	Amber	2014, 0.4 km	2014, 0.4 km
Yellowhammer	Emberiza citrinella	S41, Red, BAP	2013, 1.5 km	2012, 50 m

Schedule 1: Wildlife and Countryside Act 1981 (as amended) Schedule 1 species

**Annex 1**: EC Birds Directive (2009/147/EC) Annex 1 species **S41**: NERC Act 2006 S41 Species of Principal Importance

Red: BoCC Red list species

Amber: BoCC Amber list species

Green: BoCC Green list species

BAP: Durham BAP Priority species



## **APPENDIX D – SURVEY DATA**

### **Transect 1**

Full wintering bird survey data for the transect surveys of the site undertaken of Transect 1 between December 2021 and March 2022 inclusive are provided below.

	Species Specie				Number of individuals recorded			
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (19/12/21)	Visit 2 (08/01/22)	Visit 3 (06/02/22)	Visit 4 (01/03/22)	
Black-headed gull	Chroicocephalus ridibundus	ВН	Amber	32	37	21	0	
Bullfinch	Pyrrhula pyrrhula	BF	S41, Amber	0	1	2	1	
Buzzard	Buteo buteo	BZ	Green	0	2	3	5	
Common gull	Larus canus	CM	Amber	0	25	5	0	
Curlew	Numenius arquata	CU	S41, Red, BAP	0	0	0	1	
Fieldfare	Turdus pilaris	FF	Red	56	35	60	112	
Golden plover	Pluvialis apricaria	GP	Annex 1, Green	5	0	0	0	
Great black-backed Gull	Larus marinus	GB	Amber	0	7	18	0	
Grey heron	Ardea cinerea	H.	Green	0	0	0	1	
Grey partridge	Perdix perdix	P.	S41, Red, BAP	13	2	0	7	
Herring gull	Larus argentatus	HG	S41, Red	129	924	61	46	



	Species			Number of individuals recorded			
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (19/12/21)	Visit 2 (08/01/22)	Visit 3 (06/02/22)	Visit 4 (01/03/22)
Kestrel	Falco tinnunculus	K.	Amber, BAP	0	0	2	0
Linnet	Linaria cannabina	LI	S41, Red, BAP	0	0	1	0
Mistle thrush	Turdus viscivorus	M.	Red, BAP	5	1	0	0
Redwing	Turdus iliacus	RE	Amber	156	155	33	47
Skylark	Alauda arvensis	S,	S41, Red, BAP	10	0	3	4
Snipe	Gallinago gallinago	SN	Amber, BAP	0	0	0	1
Song thrush	Turdus philomelos	ST	S41, Amber, BAP	1	9	3	4
Sparrowhawk	Accipiter nisus	SH	Amber	0	0	2	0
Starling	Sturnus vulgaris	SG	S41, Red, BAP	12	0	20	0
Stock dove	Columba oenas	SD	Amber	0	0	1	19
Tree sparrow	Passer montanus	TS	S41, Red, BAP	0	0	2	5
Woodcock	Scolopax rusticola	WK	Red, BAP	5	3	1	2
Yellowhammer	Emberiza citrinella	Y.	S41, Red, BAP	8	1	1	0
Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species S41: NERC Act 2006 S41 Species of Principal Importance Red: BoCC Red list species			Green: BoCC Green list BAP: Durham BAP Prior - None of the above con	ority species	categories apply		
Amber: BoCC Amber list	species						



**Transect 2** 

Full wintering bird survey data for the transect surveys of the site undertaken of Transect 2 between December 2021 and March 2022 inclusive are provided below.

Species				Number of individuals recorded			
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (20/12/21)	Visit 2 (15/01/22)	Visit 3 (15/02/22)	Visit 4 (02/03/22)
Barn owl	Tyto alba	ВО	Green, BAP	0	0	0	0*
Black-headed gull	Chroicocephalus ridibundus	ВН	Amber	32	9	10	20
Bullfinch	Pyrrhula pyrrhula	BF	S41, Amber	0	6	5	0
Buzzard	Buteo buteo	BZ	Green	5	2	3	3
Common gull	Larus canus	CM	Amber	75	53	62	230
Curlew	Numenius arquata	CU	S41, Red, BAP	1	0	0	0
Fieldfare	Turdus pilaris	FF	Red	193	212	41	10
Golden plover	Pluvialis apricaria	GP	Annex 1, Green	0	0	0	17
Grey partridge	Perdix perdix	P.	S41, Red, BAP	0	22	9	13
Grey wagtail	Motacilla cinerea	GL	Amber, BAP	1	0	0	0
Greylag goose	Anser anser	GJ	Amber	61	0	0	0
Herring gull	Larus argentatus	HG	S41, Red	42	10	20	31
Jack snipe	Lymnocryptes minimus	JS	Green	1	0	0	0
Kestrel	Falco tinnunculus	K.	Amber, BAP	1	0	0	0



	Species Specie				Number of individuals recorded			
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (20/12/21)	Visit 2 (15/01/22)	Visit 3 (15/02/22)	Visit 4 (02/03/22)	
Lapwing	Vanellus vanellus	L.	S41, Red, BAP	0	0	0	14	
Linnet	Linaria cannabina	LI	S41, Red, BAP	21	70	161	110	
Little owl	Athene noctua	LO	-	1	0	0	0	
Mallard	Anas platyrhynchos	MA	Amber	0	0	2	0	
Meadow pipit	Anthus pratensis	MP	Amber	0	1	0	3	
Mistle thrush	Turdus viscivorus	M.	Red, BAP	0	0	0	1	
Moorhen	Gallinula chloropus	MH	Amber	0	2	0	1	
Pink-footed goose	Anser brachyrhynchus	PG	Amber	1482	1	0	0	
Redwing	Turdus iliacus	RE	Amber	190	57	46	40	
Reed bunting	Emberiza schoeniculs	RB	S41, Amber, BAP	2	1	0	0	
Skylark	Alauda arvensis	S,	S41, Red, BAP	21	1	15	6	
Snipe	Gallinago gallinago	SN	Amber, BAP	3	16	11	6	
Song thrush	Turdus philomelos	ST	S41, Amber, BAP	0	3	4	4	
Sparrowhawk	Accipiter nisus	SH	Amber	0	0	1	0	
Starling	Sturnus vulgaris	SG	S41, Red, BAP	500	850	1539	56	
Stock dove	Columba oenas	SD	Amber	14	22	251	32	
Teal	Anas crecca	T.	Amber	2	0	0	3	



	Species Specie				Number of individuals recorded			
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (20/12/21)	Visit 2 (15/01/22)	Visit 3 (15/02/22)	Visit 4 (02/03/22)	
Tree sparrow	Passer montanus	TS	S41, Red, BAP	20	10	2	0	
Willow tit	Poecile montanus	WT	S41, Red, BAP	1	1	0	0	
Woodcock	Scolopax rusticola	WK	Red, BAP	0	2	0	3	
Yellowhammer	Emberiza citrinella	Y.	S41, Red, BAP	91	13	77	14	
* One barn owl pellet was	s recorded during survey visit 4.							
			Green: BoCC Green li BAP: Durham BAP Pri - None of the above co	iority species	categories apply			



**Transect 3** 

Full wintering bird survey data for the transect surveys of the site undertaken of Transect 3 between December 2021 and March 2022 inclusive are provided below.

Species				Number of individuals recorded				
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (23/12/21)	Visit 2 (23/01/22)	Visit 3 (19/02/22)	Visit 4 (07/03/22)	
Black-headed gull	Chroicocephalus ridibundus	ВН	Amber	39	8	0	2	
Buzzard	Buteo buteo	BZ	Green	1	1	1	3	
Canada goose	Branta canadensis	CG	-	9	140	60	12	
Common gull	Larus canus	СМ	Amber	4	9	0	0	
Coot	Fulica atra	CO	Green	7	20	10	5	
Curlew	Numenius arquata	CU	S41, Red, BAP	32	1	0	2	
Fieldfare	Turdus pilaris	FF	Red	67	100	0	18	
Golden plover	Pluvialis apricaria	GP	Annex 1, Green	0	6	0	0	
Great black-backed gull	Larus marinus	GB	Amber	0	1	0	0	
Great crested grebe	Podiceps cristatus	GG	Green	55	0	0	0	
Grey heron	Ardea cinerea	Н,	Green	2	0	0	0	
Grey partridge	Perdix perdix	P.	S41, Red, BAP	3	0	2	5	
Greylag goose	Anser anser	GJ	Amber	7	70	12	0	
Herring gull	Larus argentatus	HG	S41, Red	2	11	6	2	



	Species				Number of individuals recorded				
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (23/12/21)	Visit 2 (23/01/22)	Visit 3 (19/02/22)	Visit 4 (07/03/22)		
Kestrel	Falco tinnunculus	K.	Amber, BAP	1	0	2	1		
Lapwing	Vanellus vanellus	L.	S41, Red, BAP	0	0	11	23		
Little grebe	Tachybaptus ruficollis	LG	Green	2	0	1	1		
Mallard	Anas platyrhynchos	MA	Amber	35	50	34	5		
Mistle thrush	Turdus viscivorus	M.	Red, BAP	0	1	0	1		
Moorhen	Gallinula chloropus	МН	Amber	2	0	0	1		
Mute swan	Cygnus olor	MS	Green	2	0	2	2		
Oystercatcher	Haematopus ostralegus	ОС	Amber	0	0	0	1		
Peregrine	Falco peregrinus	PE	Annex 1, Green, BAP	0	0	0	1		
Pink-footed goose	Anser brachyrhynchus	PG	Amber	2	2352	550	350		
Pochard	Aythya ferina	PO	Red, BAP	2	0	10	0		
Redwing	Turdus iliacus	RE	Amber	0	22	0	15		
Shelduck	Tadorna tadorna	SU	Amber, BAP	4	0	0	0		
Skylark	Alauda arvensis	S,	S41, Red, BAP	0	0	2	11		
Song thrush	Turdus philomelos	ST	S41, Amber, BAP	0	1	0	0		
Starling	Sturnus vulgaris	SG	S41, Red, BAP	150	76	0	250		



Species				Number of individuals recorded				
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (23/12/21)	Visit 2 (23/01/22)	Visit 3 (19/02/22)	Visit 4 (07/03/22)	
Stock dove	Columba oenas	SD	Amber	5	4	2	7	
Teal	Anas crecca	T.	Amber	51	7	66	0	
Tufted duck	Aythya fuligula	TU	Green	6	0	0	5	
Tundra bean goose	Anser serrirostris	XR	Amber	0	2	0	0	
Wigeon	Mareca penelope	WN	Amber	10	170	100	2000	
Yellowhammer	Emberiza citrinella	Y.	S41, Red, BAP	9	0	1	6	
Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species S41: NERC Act 2006 S41 Species of Principal Importance Red: BoCC Red list species Amber: BoCC Amber list species			Green: BoCC Green list species  BAP: Durham BAP Priority species  None of the above conservation status categories apply					



**Transect 4** 

Full wintering bird survey data for the transect surveys of the site undertaken of Transect 4 between December 2021 and March 2022 inclusive are provided below.

Species				Number of individuals recorded				
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (22/12/21)	Visit 2 (23/01/22)	Visit 3 (19/02/22)	Visit 4 (07/03/22)	
Black-headed gull	Chroicocephalus ridibundus	ВН	Amber	16	2	3	11	
Bullfinch	Pyrrhula pyrrhula	BF	S41, Amber	0	1	0	0	
Buzzard	Buteo buteo	BZ	Green	1	1	2	2	
Common gull	Larus canus	CM	Amber	39	6	12	78	
Curlew	Numenius arquata	CU	S41, Red, BAP	0	1	1	3	
Fieldfare	Turdus pilaris	FF	Red	31	283	301	86	
Golden plover	Pluvialis apricaria	GP	Annex 1, Green	0	0	0	1	
Great black-backed gull	Larus marinus	GB	Amber	0	1	0	0	
Grey partridge	Perdix perdix	P.	S41, Red, BAP	80	5	4	4	
Grey wagtail	Motacilla cinerea	GL	Amber, BAP	1	0	0	0	
Greylag goose	Anser anser	GJ	Amber	28	23	0	0	
Herring gull	Larus argentatus	HG	S41, Red	4	29	8	4	
Kestrel	Falco tinnunculus	K.	Amber, BAP	0	1	0	0	
Lapwing	Vanellus vanellus	L.	S41, Red, BAP	23	0	0	24	



Species				Number of individuals recorded				
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (22/12/21)	Visit 2 (23/01/22)	Visit 3 (19/02/22)	Visit 4 (07/03/22)	
Linnet	Linaria cannabina	LI	S41, Red, BAP	1	0	0	0	
Mallard	Anas platyrhynchos	MA	Amber	0	0	0	1	
Mistle thrush	Turdus viscivorus	M.	Red, BAP	0	1	0	2	
Mute swan	Cygnus olor	MS	Green	0	0	0	3	
Pink-footed goose	Anser brachyrhynchus	PG	Amber	90	280	0	220	
Redwing	Turdus iliacus	RE	Amber	20	30	66	50	
Siskin	Spinus spinus	SK	Green	0	2	0	0	
Skylark	Alauda arvensis	S,	S41, Red, BAP	1	2	2	13	
Song thrush	Turdus philomelos	ST	S41, Amber, BAP	0	1	3	4	
Starling	Sturnus vulgaris	SG	S41, Red, BAP	150	16	601	63	
Stock dove	Columba oenas	SD	Amber	0	0	0	2	
Tree sparrow	Passer montanus	TS	S41, Red, BAP	0	0	0	10	
Woodcock	Scolopax rusticola	WK	Red, BAP	2	4	1	1	
Yellowhammer	Emberiza citrinella	Υ.	S41, Red, BAP	1	0	0	5	
Annex 1: EC Birds Directive (2009/147/EC) Annex 1 species S41: NERC Act 2006 S41 Species of Principal Importance Red: BoCC Red list species		<b>Green:</b> BoCC Green lis <b>BAP</b> : Durham BAP Prid	•					



Species			Number of individuals recorded				
Common name	Scientific name	BTO species code	Conservation status	Visit 1 (22/12/21)	Visit 2 (23/01/22)	Visit 3 (19/02/22)	Visit 4 (07/03/22)
Amber: BoCC Amber list species			- None of the above co	onservation status	categories apply		