

SUNNICA ENERGY FARM

EN010106

Volume 6

Environmental Statement

6.2 Appendix 8H: Wintering Bird Survey Report

APFP Regulation 5(2)(a)

Planning Act 2008

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



Planning Act 2008

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

Sunnica Energy Farm

Environmental Statement Appendix 8H: Wintering Bird Survey Report

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Sunnica Energy Farm
Environmental Statement
Appendix 8H: Wintering Bird Survey Report



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Executive summary

AECOM undertook surveys of wintering birds within the Order limits and an appropriate survey buffer (the survey areas) to record the species, distributions and numbers of wintering birds within the Order limits and adjacent habitat for the proposed Sunnica Energy Farm (hereafter referred to as the Scheme).

The wintering bird survey was undertaken between November 2018 and March 2019 (six survey visits) and, following updates to the Order limits, areas previously un-surveyed were surveyed between October 2019 and March 2020 (six survey visits). Surveys across the Order limits were repeated between November 2020 and March 2021, with five survey visits being undertaken.

Seventy bird species were recorded during wintering bird surveys for the Scheme between November 2018 to March 2019; and October 2019 to March 2020, whilst 72 bird species were recorded during wintering bird surveys for the Scheme between November 2020 and March 2021.

In total, 81 bird species were recorded during wintering bird surveys for the Scheme. Of these 81 bird species, 41 species meet at least one of a range of criteria relating to conservation importance, as listed in section 2 of this report.

No peak counts of any species form a significant proportion (i.e. 1% or more) of the national wintering population estimates.

The wintering population of Skylark and Linnet within the Order limits is of district importance.

No other species recorded in the survey area were recorded in a figure approaching 1% of the county wintering population estimates in Cambridgeshire or Suffolk.

The total number of species recorded across the Order limits was 81 and would place the importance of the species diversity occurring within the entirety of the Order limits as being of regional importance. However, when evaluating the number of species recorded within each Scheme Area (Sunnica West Site A and Site B, Sunnica East Site A and Site B, the cable corridors and the Burwell National Grid Substation Extension) and in consideration of the Scheme being split over two counties, the number of species occurring within each Scheme area is lower and of no more than county importance.

Concentrations of species were found within the most suitable habitats to support each individual species' needs (i.e. species reliant on waterbodies were found on Site close to water, species that require woodland habitat, were found within woodland habitat on Site.



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1 Introduction

1.1.1 AECOM was instructed by Sunnica Energy Limited to undertake a survey of wintering birds for the proposed Sunnica Energy Farm (hereafter referred to as the Scheme). As part of the Preliminary Ecological Appraisal (PEA) (Ref 1), a review of Ordnance Survey (OS) mapping of the Scheme identified that the habitat within the Scheme boundary (the Development Consent Order (DCO) Site) (also referred to as the Order limits) was suitable to support birds during the non-breeding (wintering) season and that surveys were required to determine the presence and any assemblages of protected or notable¹ wintering bird species within the Order limits. Therefore, AECOM undertook surveys of wintering birds within the Order limits and an appropriate survey buffer (the survey areas) to record the species, distributions and numbers of wintering birds within the Order limits and adjacent habitat.

1.2 The Scheme

- 1.2.1 Sunnica Energy Farm (the Scheme) is a new solar energy farm proposal that will deliver electricity to the national electricity transmission network. Sunnica Limited is proposing to install ground mounted solar photovoltaic (PV) panel arrays to generate electrical energy from the sun and combine these with a Battery Energy Storage System (BESS) which will connect to Burwell National Grid Substation in Cambridgeshire.
- 1.2.2 Electricity will be generated at Sunnica East Site A, near Isleham in Cambridgeshire; Sunnica East Site B, near Worlington and Freckenham in Suffolk; Sunnica West Site A near Chippenham and Kennett in Cambridgeshire; and Sunnica West Site B, near Snailwell in Cambridgeshire. All locations will comprise ground mounted solar PV panel arrays, supporting electrical infrastructure and, with the exception of Sunnica West Site B, a BESS.
- 1.2.3 Supporting electrical infrastructure will include on-site substations on Sunnica East Site A and Sunnica East Site B and Sunnica West Site A, and on-site cabling between the different electrical elements across the Scheme. The generating equipment of the Scheme will be fenced and protected via security measures such as Closed Circuit Television. Inside the fenced areas, in addition to the generating equipment will be, internal access tracks, and drainage. It is not proposed for any area to be continuously lit.
- 1.2.4 Visual, ecological and archaeological mitigation is proposed which includes proposed grassland planting and new woodland; retention of existing woodland, wetlands and other vegetation; provision of replacement habitat; and offsetting areas, where there will be no development. The BESSs will consist of a compound and battery array to allow for the importation, storage and exportation of energy to the National Grid. There will also be areas at Sunnica East Site A and Sunnica East Site B for office and storage facilities for use during the Scheme's operation.
- 1.2.5 The Scheme will be connected to a new substation extension at the existing Burwell National Grid Substation, using 132 kilovolt (kV) cables buried underground. The cables will run between Sunnica East Site A, Sunnica East Site

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¹ A notable species is a species with a conservation designation, but no legal protection. Planning Inspectorate Scheme Ref: EN010106



B and Sunnica West Site A (Grid Connection Route A), and then from Sunnica West Site A to Sunnica West B and onwards to the Burwell National Grid Substation (Grid Connection Route B). The Burwell National Grid Substation Extension will convert the 132kV to 400kV. The 400kV cables will be buried and will connect the Scheme to the existing Burwell National Grid Substation to allow distribution to the national transmission network.

- 1.2.6 The Scheme will have two main access points, one north of Elms Road at Sunnica East Site B and one south of La Hogue Road at Sunnica West Site A. The main access route to Sunnica West Site A will be via the Chippenham junction of the A11, to the north of junction 38 of the A14. Sunnica East Site B will be accessed via the A11 and B1085. A number of secondary access points are proposed to access the individual land parcels through construction, operation, and decommissioning phases.
- 1.2.7 The Scheme is defined as a Nationally Significant Infrastructure Project (NSIP) and will require a Development Consent Order (DCO) from the Secretary of State for Business, Energy and Industrial Strategy (Secretary of State), due to its generating capacity exceeding 50 megawatts (MW).
- 1.2.8 The Scheme therefore comprises the following key areas:
 - a. Solar Farm Sites:
 - i. Sunnica East Site A:
 - ii. Sunnica East Site B;
 - iii. Sunnica West Site A; and
 - iv. Sunnica West Site B.
 - associated electrical infrastructure areas for connection to the national transmission system:
 - Grid Connection Route A ('A1' connecting the Sunnica East Site A with the Sunnica East Site B and then 'A2' connecting to the Sunnica West Site A);
 - ii. Grid Connection Route B ('B1' connecting the Sunnica West Site A and Sunnica West Site B and 'B2' connecting the Burwell National Grid Substation); and
 - iii. Burwell National Grid Substation Extension.
- 1.2.9 **Figure 1** in Annex A shows the locations of these key areas.

1.3 Site description

1.3.1 A summary description of the habitats within the Order limits (made up of the four Sites (see section 1.2.8)) is provided below and a more detailed description of the habitats is provided in the PEA report (Ref 1). The extent of the Scheme is shown in Annex A, **Figure 1**.

Sunnica East Site

1.3.2 Sunnica East is split into two sub-sites, one to the north of Freckenham (referred to as Sunnica East Site A) and the other to the south of Worlington (referred to as Sunnica East Site B). These two sites are approximately 1km apart and are separated by agricultural fields. The Sunnica East Site A encompasses an area of approximately 224ha and includes land within the county of Suffolk and



Cambridgeshire. Sunnica East Site B lies within Suffolk and encompasses an area of approximately 319ha (**Figure 1**).

- 1.3.3 The landscape features within the Sunnica East Site A and Sunnica East Site B consist of arable agricultural fields interspersed with individual trees, hedgerows, linear tree belts, small woodland blocks, farm access tracks and local roads.
- 1.3.4 The landscape features immediately surrounding the Sunnica East Site A and Sunnica East Site B comprise small rural villages, including Worlington to the north, Barton Mills to the north-east, Red Lodge and Freckenham to the south and Isleham to the west. Industrial land uses adjoin the A11 to the south of the Sunnica East Site with an industrial installation of a 7.5MW solar farm situated adjacent to the south-eastern extent of the Sunnica East Site and an anaerobic digestion (AD) plant located to the south of the Sunnica East Site.

Sunnica West Site

- 1.3.5 The Sunnica West Site is located within the East Cambridgeshire District Council administrative area, approximately 3km north east of Newmarket and 6.5km east of Burwell.
- 1.3.6 Sunnica West is split into two sub-sites, one to the south-east (referred to as Sunnica West Site A) and the other to the north-west of Snailwell (referred to as Sunnica West Site B). These two sites are approximately 1km apart, separated by agricultural fields and Chippenham Road. The Sunnica West Site A encompasses an area of approximately 373ha and includes land to the east and west of the A11, consisting of agricultural fields bounded by trees, managed hedgerows, linear tree shelter belts, small woodland and copses and farm access tracks. Sunnica West Site B encompasses an area of approximately 66ha and comprise of agricultural fields, grassland, small woodland and copses, farm access tracks and irrigation ditches fed by the River Snail which runs along the western and northern boundaries of the Site (Figure 1).
- 1.3.7 The surrounding landscape comprises regularly shaped arable fields interspersed with managed hedgerows, tall shelter belts of trees and in the Chippenham Hall area, a parkland landscape with mature individual trees. Much of the area is also characterised by grazed paddocks, horse gallops and exercise tracks.

Cable route corridors

1.3.8 The Scheme will connect to the existing Burwell National Grid Substation via a cable route corridor. The cable route corridors under consideration are Grid Connection Route A, which connects the Sunnica East Site A with the Sunnica East Site B and then runs between the Sunnica West Site A and the Sunnica East Site B; and Grid Connection Route B, between the Sunnica West Site A and Sunnica West Site B and the Burwell National Grid Substation.

Grid Connection Route A

1.3.9 Grid Connection Route A connects the Sunnica East Site A with Sunnica East Site B and crosses two minor roads and arable farmland (**Figure 1**).



1.3.10 Heading south from the Sunnica East Site B, the cable route corridor for Grid Connection Route A crosses the River Kennett, pastoral farmland, the Chippenham footpath 49/7 (a Public Right of Way (PRoW)) and B1085 (**Figure 1**).

Grid Connection Route B

- 1.3.11 Heading east from the Burwell National Grid Substation, the cable route corridor for Grid Connection Route B crosses agricultural fields and a number of roads including the B1102 and A142. Grid Connection Route B also crosses a number of watercourses, including the Burwell Lode, New River, and the River Snail, as well as a number of drainage ditches associated with Burwell Fen, Little Fen, the Broads, and agricultural drains (**Figure 1**).
- 1.3.12 The cable route corridor for Grid Connection Route B crosses a PRoW (footpath 92/19) before crossing the railway line and the A142 Newmarket / Fordham Road. The Route then runs alongside Snailwell Road and across the River Snail into Sunnica West Site B.

Burwell National Grid Substation Extension

1.3.13 The habitat within the Burwell National Grid Substation Extension (surrounding the existing substation) comprises small grassland fields to the east of the existing substation (bordered by hedgerows and mature trees) and arable land to the south and west of the existing substation (**Figure 1**).

1.4 Scope of the report

- 1.4.1 The objective of the wintering bird survey, reported in this document, is to determine the presence and any assemblages of wintering bird species, including notable species, within the Order limits and identify any potential impacts of the Scheme on wintering birds.
- 1.4.2 This report includes the following information:
 - a. relevant legislation and policy;
 - b. methods for desk and field-based assessments undertaken between 2018 and 2021;
 - c. limitations to the surveys undertaken and any assumptions made as a result of incomplete data;
 - d. survey results;
 - e. the approach for determining the nature conservation importance of wintering bird populations recorded during the assessments; and
 - f. conclusions.
- 1.4.3 This report is a technical appendix to accompany the Environmental Statement (ES) for the DCO application.



2 Relevant Legislation and Policy

2.1 Legislation

Directive of the Conservation of Wild Birds

- 2.1.1 A number of bird species recorded within the UK (including those that are resident, overwintering and migratory) are protected under European legislation through the Directive of the Conservation of Wild Birds (Ref 2), which lists 193 species, or sub-species, of birds in Annex 1 which are:
 - a. in danger of extinction;
 - b. are rare, or have restricted local distribution;
 - c. are vulnerable to specific changes in their habitat; or
 - d. require particular attention for reasons of the specific nature of habitat.
- 2.1.2 These species are afforded enhanced legal protection and EU member states have a responsibility to maintain the populations of these species at a level that corresponds to their ecological, scientific and cultural requirements (Article 2). This Directive is transposed into English law through the Conservation of Habitats and Species Regulations 2017 (as amended²) (Ref 3).
- 2.1.3 Species listed on Annex 1 of the Wild Birds Directive are those for which the UK Government are also required to take special measures, including the designation of Special Protection Areas, to ensure the survival and reproduction of these species throughout their area of distribution. These sites are then automatically included within the Natura 2000, which is a network of core breeding and resting sites that are protected for rare and threatened species.

Wildlife and Countryside Act

- 2.1.4 The legislative provisions for the protection of wild birds in the UK are contained primarily in Sections 1-7 of the Wildlife and Countryside Act (WCA) 1981 (as amended) (Ref 4). Under the WCA, a wild bird is defined as any bird of a species that occurs in a wild state as a resident or a visitor to the European Territory of any member state.
- 2.1.5 Reference is not made in this report to species afforded special protection under Schedule 1 of the Wildlife and Countryside Act (1981) as the protection measures in this Act only apply to bird species within the breeding season.

Priority Species

2.1.6 In addition to the above legislation, 49 bird species are listed as being Species of Principal Importance for conservation in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (Ref 5). These species are of material consideration during the planning process. Section 41 of the NERC Act 2006 requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in

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² As such, the requirements of the EC Birds Directive (2009/147/EC) are still applicable despite the UK no longer being a member state of the European Union



England. The list has been drawn up in consultation with Natural England, as required by the Act. The Section 41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act, to have regard to the conservation of biodiversity in England when carrying out their normal functions.

2.1.7 The Joint Nature Conservation Committee (JNCC) UK Biodiversity Action Plan (UKBAP) (Ref 6) was launched in 1994 and identified UK BAP priority species of conservation concern that are the most threatened in the UK and requiring action under the UKBAP and for which action plans have been published. However, the work undertaken for the UKBAP is now focussed at a country level, rather than UK level, and the UKBAP has subsequently been succeeded by the UK Post-2010 Biodiversity Framework (July 2012) (Ref 7). However, the UK list of priority species remains an important reference source and has been used to help draw up statutory lists of priority species in England, Scotland, Wales and Northern Ireland. For the purpose of this assessment, the UK BAP is still used as one of the criteria to assist in assigning national value to any given ecological receptor.

2.2 National and local planning policy

2.2.1 National and local planning policy relevant to nature conservation is provided in detail in the PEA report for the Scheme (Ref 1), which is also included as Appendix 8B of the ES [EN010106/APP/6.2].

2.3 Other guidance

Local biodiversity action plan species

- 2.3.1 The Scheme is located in two counties, Cambridgeshire and Suffolk (see Section 1.3 of this report). The Cambridgeshire and Peterborough Biodiversity Action Plan (Ref 8) and Suffolk Biodiversity Action Plan (Ref 9) provide the local nature conservation strategy for identifying threats to species within the county and setting out the actions necessary to conserve them. The Biodiversity Action Plans (BAPs) provide context to inform the identification of threatened and, or uncommon species within the district and, or county. The BAPs also identify priorities for conservation and enhancement but confer no particular legislative or policy protection to the species identified, however in some cases this is provided through related legislation and local planning policy.
- 2.3.2 The Cambridgeshire and Peterborough BAP and the Suffolk BAP list 26 priority bird species (plus three additional birds of interest); and 35 priority bird species respectively. These species are presented in **Table 2-1**.

Table 2-1: Priority bird species listed in the Cambridgeshire and Peterborough and Suffolk BAPs

Common name	Scientific name	Cambridgeshire and Peterborough Biodiversity Action Plan species	Suffolk Biodiversity Action Plan species
Barn Owl	Tyto alba	√	-
Bewick's Swan	Cygnus columbianus	√	-
Bittern	Botaurus stellaris	√	✓



Common name	Scientific name	Cambridgeshire and Peterborough Biodiversity Action Plan species	Suffolk Biodiversity Action Plan species
Black-tailed Godwit	Limosa limosa	√	√
Bullfinch	Pyrrhula pyrrhula	√	✓
Common Crane	Grus grus	✓	-
Cuckoo	Cuculus canorus	-	✓
Corn Bunting	Emberiza calandra	√	✓
Corncrake	Crex crex	√	-
Curlew	Numenius arquata	√	√
Dunnock	Prunella modularis	-	✓
Grasshopper Warbler	Locustella naevia	√	√
Grey Partridge	Perdix perdix	✓	✓
Hawfinch	Coccothraustes coccothraustes	✓	√
Herring Gull	Larus argentatus subsp. argenteus	/	√
House Sparrow	Passer domesticus	✓	✓
Lapwing	Vanellus vanellus	✓	✓
Lesser Redpoll	Acanthis cabaret	✓	✓
Lesser Spotted Woodpecker	Dryobates minor	/	√
Linnet	Linaria cannabina	√	✓
Little Tern	Sterna albifrons	-	✓
Marsh Tit	Poecile palustris	√	✓
Nightjar	Caprimulgus europaeus	-	✓
Reed Bunting	Emberiza schoeniclus	√	✓
Savi's Warbler	Locustella luscinioides	-	✓
Skylark	Alauda arvensis	√	✓
Song Thrush	Turdus philomelos	√	✓
Spotted Flycatcher	Muscicapa striata	√	✓
Starling	Sturnus vulgaris	-	✓
Stone-curlew	Burhinus oedicnemus	✓	✓
Swift	Apus apus	✓	-
Tree Pipit	Anthus trivialis	-	✓
Tree Sparrow	Passer montanus	√	✓
Turtle Dove	Streptopelia turtur	✓	✓
Twite	Carduelis flavirostris	-	✓
Willow Tit	Poecile montanus	-	✓
Wood Lark	Lullula arborea	-	✓
Wood Warbler	Phylloscopus sibilatrix	-	✓
Yellow Wagtail	Motacilla flava	✓	✓
Yellowhammer	Emberiza citrinella	√	✓



Birds of conservation concern

- 2.3.3 The Birds of Conservation Concern (BoCC) (Ref 10) is an assessment of the conservation status of all regularly occurring British birds. The lists (Red, Amber and Green), that indicate the level of conservation importance for each species, are derived from quantitative assessments from standardised criteria. The assessment is based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance. The lists are drawn together by the UK's leading bird conservation organisations, including the Royal Society for the Protection of Birds (RSPB) and British Trust for Ornithology (BTO).
- 2.3.4 The criteria for birds being included in the BoCC lists are as follows.

Red list:

- a. globally threatened;
- b. historical population decline in UK during 1800–1995; and
- c. severe (at least 50%) decline in UK breeding population over last 25 years, or longer-term period (the entire period used for assessments since the first BoCC review, starting in 1969). Severe (at least 50%) contraction of UK breeding range over last 25 years, or the longer-term period.

Amber list:

- a. species with unfavourable conservation status in Europe (SPEC = Species of European Conservation Concern);
- b. historical population decline during 1800–1995, but recovering; population size has more than doubled over last 25 years;
- moderate (25-49%) decline in UK breeding population over last 25 years, or the longer-term period;
- d. moderate (25-49%) contraction of UK breeding range over last 25 years, or the longer-term period;
- e. moderate (25-49%) decline in UK non-breeding population over last 25 years, or the longer-term period;
- f. rare breeder; 1–300 breeding pairs in UK;
- g. rare non-breeders; less than 900 individuals;
- h. localised; at least 50% of UK breeding or non-breeding population in 10 or fewer sites, but not applied to rare breeders or non-breeders; and
- i. internationally important; at least 20% of European breeding or non-breeding population in UK (NW European and East Atlantic Flyway populations used for non-breeding wildfowl and waders respectively).

Green list:

a. species that occur regularly in the UK but do not qualify under any of the above criteria.



2.3.5 Although the BoCC lists confer no legal status in themselves, they are useful in evaluating the conservation significance of bird assemblages, and for assessing the potential significance of impacts and informing appropriate levels of mitigation with respect to bird populations.



3 Methods

3.1 Desk study

- 3.1.1 A desk study was undertaken in December 2018 through Cambridgeshire & Peterborough Environmental Records Centre (CPERC) and Suffolk Biodiversity Information Service (SBIS) to obtain records of protected and notable bird species within a 2km radius of the Order limits.
- 3.1.2 Only records up to ten years old were considered within the assessment, as any records older than ten years are unlikely to be still representative of bird species in the local area.

3.2 Field survey

Survey area

- 3.2.1 The survey area included all habitat within the Order limits and a 50m survey buffer. Standardised survey buffers for assessing the impacts of development on bird populations do not exist, however, the survey area used provides information on the wintering birds within the area immediately surrounding the Scheme and includes areas contiguous with the Order limits, where birds may potentially be adversely affected. Depending on the sensitivity of the species, birds occurring outside of the survey area may also be adversely affected. The survey area is sufficient to determine the likely impacts of the Scheme on the wintering bird species occurring or likely to occur in the area.
- 3.2.2 For ease of analysis, in consideration of the size of the Scheme and geographical location, the survey area was split into compartment areas (see **Table 3-1** and **Figure 2**).

Table 3-1: Survey Compartments within the Order limits

Scheme area	Survey compartment reference	County		
Sunnica East Site A	Sunnica East Site A1	Cambridgeshire		
Summed East Site A	Sunnica East Site A2	Suffolk		
Sunnica East Site B		Suffolk		
Sunnica West Site A		Cambridgeshire		
Sunnica West Site B		Cambridgeshire		
Grid Connection Route A	Grid Connection Route A1	Suffolk		
Grid Connection Route A	Grid Connection Route A2	Cambridgeshire		
Crid Connection Doute D	Grid Connection Route B1	Combridgeshire		
Grid Connection Route B	Grid Connection Route B2	Cambridgeshire		
Burwell National Grid Substation	n Extension	Cambridgeshire		



3.2.3 Modifications to the Scheme extent through the survey period resulted in minor modifications to the survey area used during the course of the wintering bird survey and reflected the extent of access at the time. However, the survey covered the Order limits and provides a robust baseline of the wintering bird community present within the Order limits and allows determination of the presence of any protected or sensitive ornithological receptors.

Field survey

- 3.2.4 The wintering bird survey was broadly based on a transect methodology as detailed in Bibby et al. (2000) (Ref 11) and Gilbert et al. (1998) (Ref 12). The wintering bird survey was undertaken between November 2018 and March 2019 (six survey visits) and, following updates to the Order limits, areas previously unsurveyed were surveyed between October 2019 and March 2020 (six survey visits).
- 3.2.5 Surveys across the Order limits were repeated between November 2020 and March 2021, with five survey visits being undertaken.
- 3.2.6 The habitat within the Order limits was surveyed either through walked routes or strategic viewing points where access was restricted.
- 3.2.7 The routes were walked by surveyors using suitable optical equipment to observe bird behaviour. Regular stopping points were included along the routes to record any species that may be passing through the survey area. Strategic viewing points were chosen on the basis of:
 - a. the extent of view;
 - b. access permission; and
 - c. safety considerations.
- 3.2.8 A total of four viewing points were used to survey wintering birds within the cable corridors A2 and B2; and one viewing point was used to survey the habitat around the proposed Burwell National Grid Substation Extension (see **Figure 2**). Each viewing point was surveyed for 10 to 20 minutes. The survey duration was considered proportionate to the duration of undertaking a walkover survey over a similar area. Surveys did not start until five minutes after the surveyor had reached the point to allow birds to settle down from any disturbance caused by the surveyor's arrival. Survey routes were mapped, and the direction walked alternated on each visit, to ensure that all areas were covered at various times of day across the duration of the survey. Surveys were undertaken during a range of daylight hours, between sunrise and sunset.
- 3.2.9 On each visit, the survey routes were walked at a slow pace with start and finish times noted. All birds seen and heard were recorded directly onto an ArcGIS base map using ESRI software on hand-held PDA devices, with a 1:10,000 scale Ordnance Survey base map of the survey area. Registrations of birds were recorded using standard British Trust for Ornithology (BTO) two letter species codes and all bird species were recorded and mapped across the whole survey area.



- 3.2.10 Each survey was undertaken during appropriate weather conditions for survey and avoided, where possible, days with adverse weather conditions such as heavy rain or strong winds as birds may be harder to detect in such conditions.
- 3.2.11 The survey dates and weather conditions can be found in Annex B, **Table B-1**.

3.3 Assessment of ornithological importance

- 3.3.1 The assessment of the ornithological importance of the survey area during the non-breeding (winter) season was made by evaluating any species afforded special statutory protection or those included on one, or more, of the lists of species of conservation interest, as detailed in section 2 of this report.
- 3.3.2 These include:
 - a. species listed on Annex 1 of the EU Birds Directive (Ref 2);
 - b. priority bird species in the UK (Ref 5);
 - species listed as priority species or additional species of interest on the Cambridgeshire and Peterborough BAP (Table 2-1);
 - d. species listed as a priority species on the Suffolk BAP (Table 2-1); and
 - e. species included in the Birds of Conservation Concern (BoCC) Red and Amber Lists (Ref 10).

Species abundance

- 3.3.3 In addition to evaluating a site based on its populations of wintering birds in relation to legal status, rarity and biodiversity importance, consideration has to be given to the value of the survey area for the population of individual species that it supports. This can be done by comparing the population present within the survey area with the national and county wintering population for certain species. National estimates for non-breeding birds are published in a paper: 'Population estimates of birds in Great Britain and the United Kingdom' (Ref 13). The BTO Bird Atlas 2007-2011 (Ref 14) was also reviewed for species information on a national level.
- 3.3.4 Information on the population status of non-breeding bird species at a county level was sourced from the Cambridgeshire Bird Atlas 2007 2011 (Ref 15) and the Suffolk Bird Atlas 2007 2011 (Ref 16).
- 3.3.5 County-level estimates on the wintering bird populations of the majority of species in Cambridgeshire and Suffolk were also obtained from county avifauna reports, where this information was available.

Species diversity

- 3.3.6 The number of species recorded in an area is a simple measure of diversity that can indicate its importance at each season of the year.
- 3.3.7 Local Wildlife Sites (LWS) (or County Wildlife Sites (CWS)) are among the most important places for wildlife in Cambridgeshire and Suffolk, together with legally protected land such as Sites of Special Scientific Interest (SSSIs).



- 3.3.8 In Cambridgeshire, an individual CWS can be selected for birds if it meets the criteria within 'Wildlife Trust, Cambridgeshire and Peterborough County Wildlife Sites Selection Guidelines' (Ref 17). These guidelines state that the criterion for selection of County Wildlife Sites applies to a site "which regularly contains 0.5 % or more of the total British non-breeding population of any bird species during any period". Additionally, the criteria relating to wintering birds are localities with 60 wintering species recorded in the last five years.
- 3.3.9 In Suffolk, CWSs are selected for their habitats and subsequently have no specific criteria for birds. Therefore, species diversity in Suffolk has been measured using professional judgement, considering species presence within distinct habitat types within the Order limits, e.g. farmland passerines.

Importance of the wintering bird population

- 3.3.10 To support a focussed assessment of the population of wintering birds within the Order limits, their biodiversity value was defined with reference to the geographical level at which it matters. The frames of reference used in this report were made using the values presented in the 'Guidelines for Ecological Impact Assessment in the United Kingdom: Terrestrial, Freshwater, Coastal and Marine' (Ref 18) (hereafter referred to as the CIEEM Guidelines); and professional judgement.
- 3.3.11 The evaluation uses a framework linked to a geographical scale at which the receptor has been valued (i.e. international, national, regional, county, local or site) and this method represents best practice guidance. These assessment criteria, set out in **Table 3-2**, have been used in conjunction with species rarity, abundance and diversity within the survey area to assess the biodiversity importance of the wintering bird populations recorded during the field surveys.

Table 3-2: Importance of ornithological features

Importance of ornithological features	Descriptors and examples of criteria
International or European	Resident or regularly occurring populations of species which may be considered of value at an international or European level ¹ where:
	 a. the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale; b. the population forms a critical part² of a wider population at this scale; or c. the species is at a critical phase³ of its life cycle at this scale.
UK or National	Areas of habitats with priority species identified in the UK Post-2010 Biodiversity Framework i.e. UK Biodiversity Action Plan (BAP), including those published in accordance with Section 41 of the Natural Environment and Rural Communities Act (2006) and those considered to be of principal importance for the conservation of biodiversity. Resident or regularly occurring populations of species which may be considered of value at a UK or a national level ⁴ where:



Importance of ornithological features	Descriptors and examples of criteria
	a. the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale;
	b. the population forms a critical part of a wider population at this scale; orc. the species is at a critical phase of its life cycle at this scale.
Regional	Populations of species of value at a regional level (i.e. East Anglia).
	Resident or regularly occurring populations of species which may be considered of value at a regional level ⁵ where:
	a. the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale;
	 the population forms a critical part of a wider population at this scale; or
	c. the species is at a critical phase of its life cycle at this scale.
County or Unitary Authority or District	Populations of species of value at a County (i.e. Cambridgeshire and Suffolk) level or District (e.g. East Cambridgeshire).
	Resident or regularly occurring populations of species which may be considered of value at a County (or District) ⁶ level where:
	a. the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale;
	b. the population forms a critical part of a wider population at this scale; or,
	the species is at a critical phase of its life cycle at this scale.
Local	Species populations of value in a local (i.e. within ~ 2 km of the site) context.
	Populations and, or communities of species considered to appreciably enrich the habitat resource within the local context (such as veteran trees), including features of value for migration, dispersal or genetic exchange.
Site	Habitats and associated species that are of value in the context of the site only.
	Populations of common and widespread species.

¹ Such species include those listed within the Directive 2009/147/EC on the Conservation of Wild Birds (i.e. EC Birds Directive) (codified version of Council Directive 79/409/EEC as amended) or animal or plant species listed within Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (i.e. Habitats Directive).

² Such populations include sub-populations that are essential to maintenance of metapopulation dynamics, e.g. critical emigration and, or immigration links between otherwise discrete populations.

³ Seasonal activity or behaviour upon which survival or reproduction depends.

⁴ Species which may be considered at the UK or national level mean: birds, other animals and plants which receive legal protection on the basis of their conservation interest (those listed within the Wildlife and Countryside Act 1981 (as amended) Schedule 1, 5 and 8); species listed for their principal importance for biodiversity (in accordance with the Natural Environment and Communities



Importance of ornithological features

Descriptors and examples of criteria

Act 2006 Section 41 England), priority species listed within the UK Post 2010 Biodiversity Framework (i.e. UK Biodiversity Action Plan (UKBAP)), or species listed within the Red Data Book.

- ⁵ Such species include those listed in the appropriate Natural Character Area description.
- ⁶ Such species include those at county level (i.e. Cambridgeshire and Suffolk) including unitary authority area i.e. District level (i.e. East of England); as listed on the LBAPs; and listed as a county designated site.
- *As well as assigning importance there is also a need to identify all legally protected species that could be affected by the proposed scheme in order that measures can be taken to ensure that adherence to the relevant legislation is observed. This may include the adoption of mitigation and appropriate licensing which are acceptable to Natural England.

3.4 Assumptions and limitations

Desk study

- 3.4.1 The information collected from the desk study represents only those records submitted to records centres and is therefore not considered to be a definitive list of protected and priority bird species identified within the desk study area. If records have not been provided, this does not confirm absence of wintering birds from within the Order limits.
- 3.4.2 The aim of a desk study was to help characterise the baseline context of the Scheme and provide valuable background information that would not be captured by site surveys alone. Information obtained during the course of a desk study was dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular species does not necessarily mean that the species does not occur in the study area. Likewise, the presence of records for particular species does not automatically mean that these still occurred within the area of interest or were relevant in the context of the Scheme.

Field survey

- 3.4.3 During the course of the survey, there were a number of modifications to the Order limits, which in turn resulted in minor modifications to the survey area used during the course of the wintering bird survey. However, it is considered that sufficient representatives of all habitat types were covered within the entirety of the survey period, to allow for a comprehensive assessment of bird species and assemblages present. The buffer around the Order limits forming the survey area was such that it allowed for minor modifications to the Scheme without reducing efficacy of the survey. Any modifications to the Scheme during the course of the surveys are therefore not considered to have significantly altered the conclusions drawn within this report.
- 3.4.4 It is considered that sufficient information has been gathered during the assessment to provide a representative sample of the wintering bird population present within the Order limits.



4 Results

4.1 Desk study

4.1.1 Records of 108 protected and, or notable bird species from the preceding ten years were returned within 2km of the Order limits and a list of these species is included in Annex C.

4.2 Field Survey

November 2018 to March 2019; and October 2019 to March 2020

- 4.2.1 The following sections present the wintering bird data collected within the Order limits between November 2018 and March 2019; and October 2019 and March 2020. These data are broken down into the respective Scheme areas (see section 1.2.8 of this report). Species lists in the following tables are listed in taxonomic order, as defined by the British Ornithologists Union (BOU) British List.
- 4.2.2 A total of 70 species were recorded within the survey area during the wintering bird surveys undertaken for the whole Scheme in 2018/2019 and 2019/2020.
- 4.2.3 A breakdown of the number of species recorded per Scheme area is presented in **Table 4-1**.

Table 4-1: Number of species recorded per Scheme area in 2018/2019 and 2019/2020

			Sunnica		Burwell			
East Site A	East Site B	West Site A	West Site B	A 1	A2	B1	B2	National Grid Substation Extension
36	58	54	25	19	21	25	38	23

- 4.2.4 The 70 species, along with their respective peak counts and conservation status are presented in **Table 4-2**. Given the surveys were undertaken over two winter periods (due to access arrangements and Scheme modifications), peak counts for the Order limits have been derived from the summed peaks for a species recorded, irrespective of the survey date, at each component of the Order limits. This represents the minimum number of individual species using the survey area during the survey period.
- 4.2.5 For species which are widespread throughout the survey area (e.g. Woodpigeon *Columba palumbus*), common within Cambridgeshire, Suffolk and the UK and not of conservation concern (i.e. not listed on one or more of the lists of conservation concern as detailed in this report), the number of these species have not been calculated and these are referred to in **Table 4-2** as being present (P).



Table 4-2: Peak count data and conservation status of birds recorded within the Order limits, during the winter period of 2018/2019 and 2019/2020

Species (English name) and	Conservation status		nnica Site A	Sunnica East Site	Sunnica West	Sunnica West	Grid Connection			Grid Connection	Burwell National	Summed peak
scientific name		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Grid Substation Extension	
Pink-footed Goose Anser brachyrhynchus	BoCC Amber	0	0	0	0	11	0	0	0	0	0	11
Mute Swan Cygnus olor	BoCC Amber	0	0	1	0	0	0	0	0	0	0	1
Shelduck Tadorna tadorna	BoCC Amber	0	0	2	0	0	0	0	0	0	0	2
Mallard Anas platyrhynchos	BoCC Amber	0	2	0	0	0	0	0	0	2	0	4
Red-legged Partridge Alectoris rufa	-	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р
Pheasant Phasianus colchicus	-	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р
Grey Heron Ardea cinerea	-	0	0	0	1	1	0	0	0	0	0	2
Little Egret Egretta garzetta	Annex 1	0	0	0	0	0	0	0	0	4	0	4
Cormorant Phalacrocorax carbo	-	0	0	1	4	0	0	0	0	1	0	6
Sparrowhawk Accipiter nisus	-	1	0	1	2	0	0	0	0	0	0	4
Red Kite Milvus milvus	Annex 1	0	0	1	0	0	0	0	1	0	0	2
Buzzard	-	3	0	5	6	0	0	0	2	2	0	18



Species (English name) and	Conservation status		nnica Site A	Sunnica East Site		West	Grid Connection				Burwell National	Summed peak
scientific name		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Grid Substation Extension	
Buteo buteo												
Moorhen Gallinula chloropus	-	0	1	0	0	0	0	0	0	0	0	1
Lapwing Vanellus vanellus	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	29	0	37	11	5	0	0	0	0	0	82
Golden Plover Pluvialis apricaria	Annex 1	0	0	2	59	0	0	0	1	0	0	62
Curlew Numenius arquata	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	0	0	1	0	0	0	0	0	0	1
Woodcock Scolopax rusticola	BoCC Red	0	0	1	1	0	0	0	0	0	0	2
Snipe Gallinago gallinago	BoCC Amber	0	0	0	1	7	0	0	0	0	0	8
Black-headed Gull Chroicocephalus ridibundus	BoCC Amber	0	50	87	24	0	20	19	0	11	0	211
Common Gull Larus canus	BoCC Amber	0	50	66	3	0	20	7	0	12	2	160
Great Black-backed Gull Larus marinus	BoCC Amber	0	0	1	0	0	0	0	0	0	0	1



Species (English name) and	Conservation status	East	nnica Site A	Sunnica East Site B	Sunnica West Site A	Sunnica West Site B	Grid Connection Route A1	Grid Connection Route A2	Grid Connection Route B1	Grid Connection Route B2	Burwell National Grid	Summed peak
scientific name		A1	A2		Site A	Site D	Noute A1	Noute A2	Noute B1	Noute B2	Substation Extension	
Herring Gull Larus argentatus	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	20	34	6	0	2	1	0	10	9	82
Lesser Black-backed Gull Larus fuscus	BoCC Amber	25	20	16	3	0	4	17	0	0	0	85
Stock Dove Columba oenas	BoCC Amber	4	0	25	8	6	0	0	0	4	5	52
Woodpigeon Columba palumbus	-	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р
Collared Dove Streptopelia decaocto	-	0	0	4	0	0	0	0	1	3	1	9
Great Spotted Woodpecker Dendrocopos major	-	0	0	1	2	1	0	0	0	1	0	5
Green Woodpecker Picus viridis	-	0	0	1	1	0	0	0	0	0	1	3
Peregrine Falco peregrinus	Annex 1	1	0	0	0	0	0	0	0	0	0	1
Kestrel Falco tinnunculus	BoCC Amber	0	0	1	2	0	1	0	0	0	1	5
Jay Garrulus glandarius	-	0	0	3	6	0	0	0	1	1	0	11
Magpie	-	0	0	5	6	0	0	0	0	6	2	19



Species (English name) and	Conservation status		nnica Site A	Sunnica East Site	West	Sunnica West Site B	Connection	Grid Connection			Burwell National Grid	Summed peak
scientific name		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Substation Extension	
Pica pica												
Jackdaw Coloeus monedula	-	5	0	40	100	0	46	1	3	0	0	195
Rook Corvus frugilegus	-	10	0	100	62	0	0	2	0	25	0	199
Carrion Crow Corvus corone	-	3	10	20	5	0	0	2	0	9	0	49
Raven Corvus corax	-	0	0	3	0	0	0	0	0	0	0	3
Coal Tit Periparus ater	-	0	0	10	8	0	0	2	3	1	1	25
Marsh Tit Poecile palustris	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	0	2	1	0	0	0	0	0	0	3
Blue Tit Cyanistes caeruleus	-	1	1	27	44	3	2	5	5	6	8	102
Great Tit Parus major	-	2	1	21	30	3	1	2	1	4	3	68
Skylark Alauda arvensis	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	13	2	11	133	5	0	30	3	1	0	198
Long-tailed Tit Aegithalos caudatus	-	0	0	49	97	0	0	11	0	5	5	167



Species (English name) and	Conservation status		nnica Site A	Sunnica East Site	Sunnica West	West	Grid Connection	Grid Connection			Burwell National	Summed peak
scientific name		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Grid Substation Extension	
Chiffchaff Phylloscopus collybita	-	0	0	1	0	0	0	0	0	0	0	1
Blackcap Sylvia atricapilla	-	0	0	1	0	0	0	0	0	0	0	1
Goldcrest Regulus regulus	-	0	2	16	11	0	0	1	2	0	1	33
Wren Troglodytes troglodytes	-	1	1	5	11	1	1	1	1	3	4	29
Treecreeper Certhia familiaris	-	0	0	2	2	0	0	0	0	0	0	4
Starling Sturnus vulgaris	Priority Species, BoCC Red, Suffolk BAP	6	1,000	267	45	0	25	5	0	41	0	1,389
Blackbird Turdus merula	-	2	2	28	24	1	1	2	6	6	4	76
Fieldfare Turdus pilaris	BoCC Red	5	45	50	216	2	8	0	35	3	0	364
Redwing Turdus iliacus	BoCC Red	2	10	48	220	2	6	0	10	6	2	306
Song Thrush Turdus philomelos	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	0	4	17	3	0	1	2	3	0	30
Mistle Thrush	BoCC Red	0	0	6	0	0	0	0	0	1	0	7



Species (English name) and	Conservation status		nnica Site A	Sunnica East Site	Sunnica West	Sunnica West	Connection				Burwell National	Summed peak
scientific name		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Grid Substation Extension	
Turdus viscivorus												
Robin Erithacus rubecula	-	1	1	17	24	1	2	2	2	6	2	58
Stonechat Saxicola rubicola	-	0	0	0	2	0	0	0	0	0	0	2
Dunnock Prunella modularis	Priority Species, BoCC Amber, Suffolk BAP	1	1	17	14	1	1	0	1	2	3	41
Grey Wagtail Motacilla cinerea	BoCC Red	0	0	1	0	0	0	0	0	0	0	1
Pied Wagtail Motacilla alba	-	7	0	4	27	0	0	0	0	60	1	99
Meadow Pipit Anthus pratensis	BoCC Amber	28	4	6	22	3	0	0	0	3	0	66
Chaffinch Fringilla coelebs	-	21	0	75	16	6	0	0	1	20	2	141
Brambling Fringilla montifringilla	-	0	0	13	6	0	0	0	0	0	0	19
Bullfinch Pyrrhula pyrrhula	Priority Species, BoCC Amber, Cambs BAP, Suffolk BAP	0	0	1	2	2	0	0	2	0	0	7
Greenfinch Chloris chloris	-	0	0	4	1	2	0	0	0	5	0	12
Linnet	Priority Species,	2	3	70	166	4	0	0	0	3	0	248



Species (English name) and	Conservation status		nnica Site A	Sunnica East Site		West	Connection		Grid Connection		Burwell National	Summed peak
scientific name		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Grid Substation Extension	
Linaria cannabina	BoCC Red, Cambs BAP, Suffolk BAP											
Lesser Redpoll Acanthis cabaret	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	0	0	2	0	0	0	0	0	0	2
Goldfinch Carduelis carduelis	-	2	0	60	75	3	2	2	3	16	9	172
Siskin Spinus spinus	-	0	0	0	1	0	0	0	0	0	0	1
Yellowhammer Emberiza citrinella	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	2	4	13	0	0	0	4	4	0	27
Reed Bunting Emberiza schoeniclus	Priority Species, BoCC Amber, Cambs BAP, Suffolk BAP	1	0	2	7	0	0	0	0	0	0	10
Corn Bunting Emberiza calandra	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	2	0	0	0	0	0	0	0	0	0	2
TOTAL NUMBER O	FSPECIES	29	24	58	54	25	19	21	25	38	23	70

November 2020 to March 2021

- 4.2.6 The following sections present the wintering bird data collected for the Order limits between November 2020 and March 2021 and then broken down into the respective Scheme areas (see section 1.2.8 of this report). Species lists in the following tables are listed in taxonomic order, as defined by the British Ornithologists Union (BOU) British List³.
- 4.2.7 A total of 72 species were recorded within the survey area during the wintering bird surveys undertaken for the whole Scheme in 2020/21.
- 4.2.8 A breakdown of the number of species recorded per Scheme area is presented in **Table 4-3**.

Table 4-3: Number of species recorded per Scheme area in 2020/21

	Sunnica			(Grid Conne	ction Route		Burwell
East Site A	East Site B	West Site A	West Site B	A 1	A2	B1	B2	National Grid Substation Extension
48	60	48	41	10	13	24	28	25

- 4.2.9 The 72 species, along with their respective peak counts and conservation status are presented in **Table 4-4**. Peak counts for the Order limits have been derived from the summed peaks for a species recorded, irrespective of the survey date, at each component of the Order limits. This represents the minimum number of individual species using the survey area during the survey period.
- 4.2.10 For species which are widespread throughout the survey area (e.g. Woodpigeon), common within Cambridgeshire, Suffolk and the UK and not of conservation concern (i.e. not listed on one or more of the lists of conservation concern as detailed in this report), the number of these species have not been calculated and these are referred to in **Table 4-4** as being present (P).

³ Available online.



Table 4-4: Peak count data and conservation status of birds recorded within the Order limits, during the winter period of 2020/2021

Species (English name) and	Conservation Status		nnica Site A	Sunnica East Site	Sunnica West	Sunnica West	Grid Connection	Grid Connection		Grid Connection	Burwell National	Summed peak
scientific name (where first mentioned in this report)		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Grid Substation Extension	
Egyptian Goose Alopochen aegyptiaca	-	0	2	2	0	0	0	0	2	0	0	6
Canada Goose Branta canadensis	-	0	0	0	2	0	0	0	0	0	0	2
Mute Swan	BoCC Amber	2	3	0	0	0	0	0	0	0	0	5
Shelduck	BoCC Amber	0	1	5	0	0	0	0	0	0	0	6
Tufted Duck Aythya fuligula	-	0	0	27	0	0	0	0	0	0	0	27
Pochard Aythya ferina	BoCC Red	0	0	17	0	0	0	0	0	0	0	17
Mallard	BoCC Amber	0	4	24	0	2	0	0	0	0	5	35
Gadwall Mareca strepera	BoCC Amber	0	0	2	0	0	0	0	0	0	0	2
Little Grebe Tachybaptus ruficollis	-	0	0	3	0	0	0	0	0	0	0	3
Red-legged Partridge	-	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р
Pheasant	-	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р
Grey Heron	-	0	1	0	0	4	0	0	0	0	0	5
Little Egret	Annex 1	1	0	0	0	6	0	0	0	0	5	12
Sparrowhawk	-	0	0	1	0	0	0	0	0	0	1	2



Species (English name) and	Conservation Status		nnica Site A	Sunnica East Site	Sunnica West	West	Connection				Burwell National	Summed peak
scientific name (where first mentioned in this report)		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Grid Substation Extension	
Hen Harrier Circus cyaneus	Annex 1, Priority Species, BoCC Red	0	0	0	0	1	0	0	0	0	0	1
Red Kite	Annex 1	0	0	1	0	0	0	0	0	0	0	1
Buzzard	-	0	3	4	3	1	0	0	2	0	1	14
Coot Fulica atra	-	0	6	15	0	0	0	0	0	0	0	21
Moorhen	-	0	1	0	0	0	0	0	0	2	1	4
Lapwing	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	84	254	41	35	0	0	0	0	0	414
Golden Plover	Annex 1	4	34	0	43	0	0	0	0	0	0	81
Snipe <i>Gallinago</i> gallinago	BoCC Amber	0	0	0	0	5	0	0	0	0	0	5
Jack Snipe Lymnocryptes minimus	-	1	0	0	0	0	0	0	0	0	0	1
Green Sandpiper Tringa ochropus	BoCC Amber	0	0	1	0	0	0	0	0	0	0	1
Black-headed Gull	BoCC Amber	0	24	432	322	6	0	0	23	1	0	808
Common Gull	BoCC Amber	0	21	653	41	3	0	0	0	0	0	718
Herring Gull	Priority Species, BoCC Red,	0	27	18	8	4	0	0	0	0	0	57



Species (English name) and	Conservation Status		nnica Site A	Sunnica East Site	Sunnica West	Sunnica West	Grid Connection		Grid Connection		Burwell National	Summed peak
scientific name (where first mentioned in this report)		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Grid Substation Extension	
	Cambs BAP, Suffolk BAP											
Lesser Black-backed Gull	BoCC Amber	0	41	194	3	20	0	0	1	0	0	259
Stock Dove	BoCC Amber	5	9	8	4	0	0	0	0	0	0	26
Woodpigeon	-	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р
Collared Dove	-	0	0	2	0	0	0	0	0	2	1	5
Great Spotted Woodpecker	-	0	0	1	1	0	0	0	0	0	0	2
Green Woodpecker	-	0	0	2	1	0	0	1	0	0	1	5
Peregrine	Annex 1	1	0	0	0	0	0	0	0	0	0	1
Kestrel	BoCC Amber	1	1	2	6	1	0	1	0	0	0	12
Jay	-	0	2	5	3	0	0	1	1	1	0	13
Magpie	-	0	1	4	6	6	0	0	0	0	1	18
Jackdaw	-	0	40	156	382	151	0	1	0	0	0	730
Rook	-	6	42	130	224	200	0	0	1	0	0	603
Carrion Crow	-	4	15	16	249	2	1	0	1	6	0	294
Coal Tit	-	0	0	7	2	0	0	0	0	0	0	9
Marsh Tit	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	0	1	1	0	0	0	0	0	0	2
Blue Tit	-	2	2	28	33	4	1	2	2	4	6	84
Great Tit	-	0	3	15	18	6	1	0	3	4	4	54



Species (English name) and scientific name (where first mentioned in this report)	Conservation Status		nnica Site A A2	Sunnica East Site B	Sunnica West Site A	Sunnica West Site B	Grid Connection Route A1	Grid Connection Route A2	Grid Connection Route B1	Grid Connection Route B2	Burwell National Grid Substation Extension	Summed peak
Skylark	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	16	32	461	40	14	0	1	0	3	0	567
Long-tailed Tit	-	0	4	23	37	2	0	0	0	11	7	72
Goldcrest	-	0	0	13	6	0	0	0	1	1	1	22
Wren	-	2	2	16	11	4	1	0	3	3	2	44
Treecreeper	-	0	0	1	1	0	0	0	0	0	0	2
Starling	Priority Species, BoCC Red, Suffolk BAP	42	500	1,400	135	6	0	0	0	20	0	2,103
Blackbird	-	6	3	25	31	8	2	0	4	8	3	90
Fieldfare	BoCC Red	15	65	57	17	129	0	0	13	10	0	306
Redwing	BoCC Red	7	7	51	10	75	0	0	2	18	20	190
Song Thrush	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	2	1	7	3	3	0	0	1	0	1	18
Mistle Thrush	BoCC Red	0	0	2	0	1	0	1	0	0	0	4
Robin	-	3	6	19	14	4	1	1	1	4	2	55
Stonechat	-	0	0	1	2	0	0	0	0	0	0	3
House Sparrow Passer domesticus	Priority Species, BoCC Red,	0	0	0	4	0	0	0	0	0	0	4



Species (English name) and	Conservation Status		nnica Site A	Sunnica East Site		West		Grid Connection	Grid Connection			Summed peak
scientific name (where first mentioned in this report)		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Grid Substation Extension	
	Cambs BAP, Suffolk BAP											
Dunnock	Priority Species, BoCC Amber, Suffolk BAP	3	4	12	20	1	1	0	2	2	1	46
Grey Wagtail	BoCC Red	0	1	1	0	0	0	0	0	1	0	3
Pied Wagtail	-	4	15	52	30	5	0	0	0	5	0	111
Meadow Pipit	BoCC Amber	12	28	28	42	32	0	3	2	2	0	149
Crossbill Loxia curvirostra	-	0	0	7	0	0	0	0	0	0	0	7
Chaffinch	-	12	26	38	17	1	0	0	1	12	3	110
Bullfinch	Priority Species, BoCC Amber, Cambs BAP, Suffolk BAP	0	0	0	2	1	0	0	0	0	1	4
Greenfinch	-	0	1	3	1	1	0	0	0	2	0	8
Linnet	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	85	56	142	270	2	0	1	0	0	0	479
Lesser Redpoll	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	0	2	4	0	0	0	0	0	0	6



Species (English name) and	Conservation Status		nnica Site A	Sunnica East Site	West	Sunnica West	Grid Connection					Summed peak
scientific name (where first mentioned in this report)		A1	A2	В	Site A	Site B	Route A1	Route A2	Route B1	Route B2	Grid Substation Extension	
Goldfinch	-	7	15	40	26	11	0	0	12	5	1	117
Yellowhammer	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	3	27	15	13	0	0	1	1	0	60
Reed Bunting	Priority Species, BoCC Amber, Cambs BAP, Suffolk BAP	0	6	4	2	4	0	0	0	3	1	20
Corn Bunting	Priority Species, BoCC Red, Cambs BAP, Suffolk BAP	0	0	1	0	0	0	0	0	0	0	1
TOTAL NUMBER OF	SPECIES	27	45	60	48	41	10	13	24	28	25	72



5 Evaluation

5.1 Desk study

- 5.1.1 Records of 108 protected and, or, notable species were returned from the CPERC and SBIS desk study. Of these 108 species:
 - a. 32 are listed on Annex 1 of the EU Birds Directive;
 - b. 34 are listed as Priority Species;
 - c. 37 species are included on the BoCC Red List;
 - d. 56 species are included on the BoCC Amber List;
 - e. 24 species are included on the Cambridgeshire and Peterborough Priority Species and three species listed on the Cambridgeshire and Peterborough Additional Species of Interest; and
 - f. 15 species are listed as Suffolk Biodiversity Action Plan species.

5.2 Field survey

- 5.2.1 Seventy bird species were recorded during wintering bird surveys for the Scheme between November 2018 to March 2019; and October 2019 to March 2020, whilst 72 bird species were recorded during wintering bird surveys for the Scheme between November 2020 and March 2021. In total, 81 bird species were recorded during wintering bird surveys for the Scheme.
- 5.2.2 Of these 81 bird species, 41 species (see **Table 4-1** and **Table 4-3**) meet at least one of a range of criteria relating to conservation importance, as listed in section 2 of this report.
- 5.2.3 Five species (Little Egret, Red Kite, Hen Harrier, Peregrine and Golden Plover), listed on Annex I of the EC Birds Directive (Ref 2) were recorded within the Order limits.
- 5.2.4 A total of 15 priority species (Ref 5) were recorded within the Order limits. These were: Lapwing, Curlew, Herring Gull, Marsh Tit, Skylark, Starling, Song Thrush, House Sparrow, Dunnock, Bullfinch, Linnet, Lesser Redpoll, Yellowhammer, Reed Bunting and Corn Bunting.
- 5.2.5 Nineteen species, included on the BoCC Red List (Ref 10) and 19 species, included on the BoCC Amber list (Ref 10), were recorded within the Order limits. The remaining species are all included on the Green list and are of least conservation concern.
- 5.2.6 Thirteen species, listed as action plan species or additional species of interest in Cambridgeshire, were recorded within the Order limits.
- 5.2.7 Fifteen species, listed as Suffolk Biodiversity Action Plan species, were recorded within the Order limits.



Species abundance

- 5.2.8 In addition to evaluating a site based on its populations of wintering birds in relation to legal status, rarity and conservation value, consideration has to be given to the value of the site for the population of individual species that it supports. This can be done by comparing the population present on site with the national and county wintering population for certain species.
- 5.2.9 No peak counts of any species form a significant proportion (i.e. 1% or more) of the national wintering population estimates as detailed in Woodward et al. (2020) (Ref 13).
- 5.2.10 A single Hen Harrier was recorded in the Sunnica West Site B, on a single occasion on 14 December 2020. The wintering population of Hen Harrier in Cambridgeshire is estimated to be 10-20 individuals. This bird was considered to be the same nomadic 'ringtail' (female / juvenile) bird that toured many well-watched sites in Cambridgeshire during the winter of 2020/2021. Whilst a single bird would represent 10% of the minimum number of individuals wintering in the county, a single bird sighted on a single occasion and in consideration of similar habitats in the surrounding arable landscape, the Sunnica West Site B is unlikely to represent anything more than of local importance to wintering Hen Harrier.
- 5.2.11 Pink-footed Goose was recorded in numbers exceeding 1% of the county level, when compared to the wintering population estimates for the county as detailed in Cambridgeshire Bird Atlas 2007-2011 (Ref 15). The species is an uncommon winter visit and passage migrant in Cambridgeshire with a wintering population estimate/number of annual records in the county of 5 to 50 individuals. Eleven Pink-footed Geese were recorded flying high (at a height of greater than 100 m) in a north-westerly direction over the Sunnica West Site B on 5 February 2019 and were not recorded using the habitat within the Order limits.
- 5.2.12 Small numbers (fewer than 20) of Golden Plover were observed flying over Sunnica East Site A (four birds on 23 November 2020), Sunnica East Site B (two birds on 3 December 2018) and Sunnica West Site A (counts of 18 and one in November and December 2018, respectively). Larger (more than 20) counts of 59 Golden Plover were recorded flying over Sunnica West Site A in October 2019, with a further 20 birds recorded settled in a ploughed field to the east of the Sunnica West Site A (outside the Order limits). During 2020/201, 34 birds were recorded flying over Sunnica East Site A2 and 43 birds settled in a stubble field during cold weather in February 2021. Similarly, Lapwing were recorded in the Sunnica East Sites A and B (peaking at 37 birds settled in Sunnica East Site B in February 2019); and in smaller numbers in the Sunnica West Sites A and B. Cold weather movements of birds in January 2021, saw peaks of 84 and 254 birds flying over (but not settled in) the Sunnica East Sites A and B, respectively. Numbers of Golden Plover and Lapwing within the Order limits did not form a significant proportion of the county population in Cambridgeshire, which often exceeds 10,000 birds (for both species) during winter (Ref 15) and with counts of over 500 birds at many sites, such as the Ouse Washes and Nene Washes (Cambridgeshire Bird Club, Cambridgeshire Bird Reports 2015-18). Given the nomadic status of Golden Plover and Lapwing flocks, in response to annual variations in crop rotations, and the limited observations of both species utilising the fields within the Order limits, the habitat within the Order limits is considered



- to be of local importance only to Golden Plover and Lapwing, particularly in consideration of similar habitats in the surrounding arable landscape.
- 5.2.13 A summed peak of 198 Skylark was recorded across the survey area between 2018/2019; and 2019/2020, whilst a summed peak of 491 birds was recorded between November 2020 and March 2021. The majority of Skylark were recorded within the arable fields of Sunnica East Site A and Sunnica West Site A. A peak of 461 Skylark was recorded in Sunnica East Site A on 23 November 2020, although the peak count on this site thereafter did not exceed 100 birds. Therefore, the count of 461 birds is attributed to seasonal movements and influxes and not attributable to the regular core wintering population. The wintering population of Skylark in Cambridgeshire is estimated to be 25,000-40,000 individuals (Ref 15) Therefore, across the Order limits, whilst the peak recorded on Sunnica East Site A in 2020/21 is considered as being of district importance, the populations present throughout the survey periods and across the individual sites are of local importance only.
- 5.2.14 The summed peak of Staring within the Order limits was 1,389 birds, with 1,000 birds recorded in the Sunnica East Site A in December 2018 and February 2019. However, the surveys on these dates coincided with overhead passage of migrating Starling, when every winter hundreds of thousands of Starling head westwards from Eastern Europe into the UK in search of food. Therefore, these Starlings were not using the habitat within the Order limits and the peak count of Starling, when factoring in usage of the habitat within the Order limits by Starlings observed on the ground within the Scheme areas is not considered to represent a significant proportion of the county populations. Peak numbers of Starling between November 2020 were also recorded in similar circumstances to 2018/2019.
- 5.2.15 Fieldfare was present in a number approaching 1% of the county level in Cambridgeshire, when compared to the wintering population estimates for the county as detailed in the Cambridgeshire Bird Atlas 2011-2017 (Ref 8I-15). The peak count recorded in Sunnica West Site A was 216, with a wintering population estimate in Cambridgeshire of between 5,000 and 30,000 individuals. Fieldfare is a transient species of thrush which reacts to cold weather conditions and availability of food resources, e.g. berries. Whilst a count of 216 represents a good count at county level, it is likely that the surrounding landscape also provides sufficient foraging opportunities for this species and that the habitat within the Sunnica West Site A is of local importance only to wintering Fieldfare.
- 5.2.16 A summed peak of 248 Linnet was recorded across the survey area between 2018/2019 and 2019/2020, predominantly within areas of set-aside or game cover crops within the Sunnica West Site A (peaking at 166 birds in November 2018). Peak counts between November 2020 and March 2021 were higher (a summed peak of 479 birds, peaking at 270 in Sunnica West Site A). The wintering population of Linnet in Cambridgeshire is estimated to be 10,000-25,000 individuals (Ref 15), so whilst summed peaks of 248 and 479 birds (respectively) represents a good count at county level, it is likely that the surrounding landscape also provides sufficient foraging opportunities for this species and that the habitat on Site is of district importance only to wintering Linnet.
- 5.2.17 No other species recorded in the survey area were recorded in a figure approaching 1% of the county wintering population estimates in Cambridgeshire



or Suffolk. The numbers of individuals of the majority of each species recorded were all relatively low and did not represent significant proportions (*i.e.* 1 % or more) of the county populations in Cambridgeshire or Suffolk. Therefore, the majority of species populations, with the exception of those mentioned above, across the Scheme are considered to be of no more than local importance.

Species diversity

- 5.2.18 Professional judgement was used to evaluate the number of species recorded within the survey area and in each discrete habitat type (as described in section 3.3.5 of this report) to assess species diversity.
- 5.2.19 The total number of species recorded across the Order limits was 81 and would place the importance of the species diversity occurring within the entirety of the Order limits as being of regional importance. However, when evaluating the number of species recorded within each Scheme Area (Sunnica West Site A and Site B, Sunnica East Site A and Site B, the cable corridors and the Burwell National Grid Substation Extension) and in consideration of the Scheme being split over two counties, the number of species occurring within each Scheme area is lower and of no more than county importance.
- 5.2.20 Evaluation was also made of the species assemblage and numbers recorded during surveys of the Scheme that are located in Cambridgeshire, with respect to criteria for selection of County Wildlife Sites (as detailed in section 3.3.7of this report). None of the criterion for inclusion of any individual site within the Scheme is met.
- 5.2.21 In Suffolk, there is no specific criteria for birds, with regards to CWS selection. Whilst the number of species occurring on the Sunnica East Site B (60) is high, in consideration of the size of the Sunnica East Site B and the inclusion of many different habitats within this area (woodland, arable farmland, hedgerows, small waterbodies etc.), none of the criteria is likely to be met when individually evaluating each discrete habitat by the species it supports.

Species distribution

5.2.22 The location of Annex 1 species, priority species and, or BoCC Red and Amberlisted bird species, (see **Table 4-1** and **Table 4-3**), irrespective of the year in which they were recorded, are shown in **Figure 3**. In general, concentrations of species were found within the most suitable habitats to support each individual species' needs (i.e. species reliant on waterbodies were found on Site close to water, species that require woodland habitat, were found within woodland habitat on Site, etc.).

Evaluation of key habitat types for wintering birds

5.2.23 A summary of the broad habitat types present in the survey area and their key ornithological features, are presented in **Table 5-1**.



Table 5-1: Key Ornithological Features of habitat within the survey area

Broad Habitat Type	Key Ornithological Features	
Small waterbodies / ponds	Supports species associated with wetland features, such as Mallard (and other waterfowl) and gulls. Also support species associated with wetland margins, including Lapwing.	
Arable farmland	The predominant habitat type occurring within the Order limits and wider landscape beyond the survey area. Supports wintering flocks of Golden Plover and Lapwing in large, open compartments. Seed eating passerines, including Skylark, Yellowhammer and Linnet, found throughout. Individual species of conservation interest, but limited species abundance and diversity.	
Scrub / hedgerows	Frequently occurring habitat within the Order limits of varying quality. Supports species such as Yellowhammer, Dunnock, Song Thrush and Bullfinch. Where fruiting species of tree / scrub were found, Fieldfare and Redwing were present. Individual species of conservation interest, but limited species abundance and diversity.	
Mature trees / woodland	Parcels of woodland and individual trees scattered within the Order limits. Supports species such as Woodcock and Green Woodpecker, as well as species often found in scrub / hedgerows. Individual species of conservation interest, but limited species abundance and diversity.	
Game cover crops	Occasional habitat feature occurring within the Order limits, particularly in Sunnica East Area B, Sunnica East Area A and Sunnica East Area B. Supports flocks of farmland seed-eating passerines, such as Linnet, Yellowhammer, Reed Bunting and Dunnock. Individual species of conservation interest, but limited species abundance and diversity.	



6 Conclusions

- 6.1.1 A total of 81 bird species were recorded during wintering bird surveys for the Scheme. Of these 81 bird species, 41 species meet at least one of a range of criteria relating to conservation importance (see Table 4-2 and Table 4-4), as detailed in section 2 of this report.
- 6.1.2 Species diversity for the whole Scheme is of county importance. However, individually, the component sites of Order limits are only of Local value.
- 6.1.3 The wintering population of Skylark and Linnet within the Order limits is of district importance.



7 References

- Ref 1. AECOM, 2020. Sunnica Energy Farm Preliminary Ecological Appraisal.
- Ref 2. EC (2009) Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version). EC, Brussels.
- Ref 3. HMSO (2018). Conservation of Habitats and Species Regulations 2017 (as amended). HMSO, London.
- Ref 4. Anon. (1981). The Wildlife & Countryside Act. HMSO, London.
- Ref 5. Anon. (2006). The Natural Environment and Rural Communities Act. HMSO, London.
- Ref 6. Anon. (2008). UK Biodiversity Action Plan.
- Ref 7. JNCC, UK Post-2010 Biodiversity Framework, 2012, available online
- Ref 8. Cambridgeshire and Peterborough Biodiversity Group (2008). Priority Species and Habitats. Available online.
- Ref 9. SBIS (2015). Priority species and habitats. Available online.
- Ref 10. Eaton, M., Aebischer, N., Brown, A., Hearn, R., Lock, L., Musgrove A., Noble D., Stroud, D. and Gregory, R. (2015). Birds of Conservation Concern 4. The population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108: 708-746
- Ref 11. Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S.H. (2000). Bird Census Techniques: 2nd edition. Academic Press, London.
- Ref 12. Gilbert G., Gibbons D.W., and Evans J. (1998) Bird Monitoring Methods: A manual of techniques for key UK species. RSPB, Bedfordshire
- Ref 13. Woodward, I., Aebischer, N., Burnell, D., Eaton, M., Frost, T., Hall, C., Stroud, D.A. & Noble, D. (2020). Population estimates of birds in Great Britain and the United Kingdom. British Birds 113: 69–104.
- Ref 14. Balmer, D., Gillings, G., Caffrey, B., Swann, B., Downie, I. and Fuller, R., 2013. Bird Atlas 2007-11: The Breeding and Wintering Birds of Britain and Ireland. BTO.
- Ref 15. Bacon, L., Cooper, A. and Venables, H., 2013. Cambridgeshire Bird Atlas 2007 2011. Cambridgeshire Bird Club.
- Ref 16. Regnault, M., 2014. Suffolk Bird Atlas 2007 2011. Suffolk.
- Ref 17. Cambridgeshire and Peterborough County Wildlife Sites Panel., 2014. Cambridgeshire and Peterborough County Wildlife Sites Selection Guidelines. The Wildlife Trust.
- Ref 18. CIEEM, 2018. Guidelines for Ecological Impact Assessment in the United Kingdom: Terrestrial, Freshwater, Coastal and Marine.



Annex A Figures



Figure 1 Order limits boundary

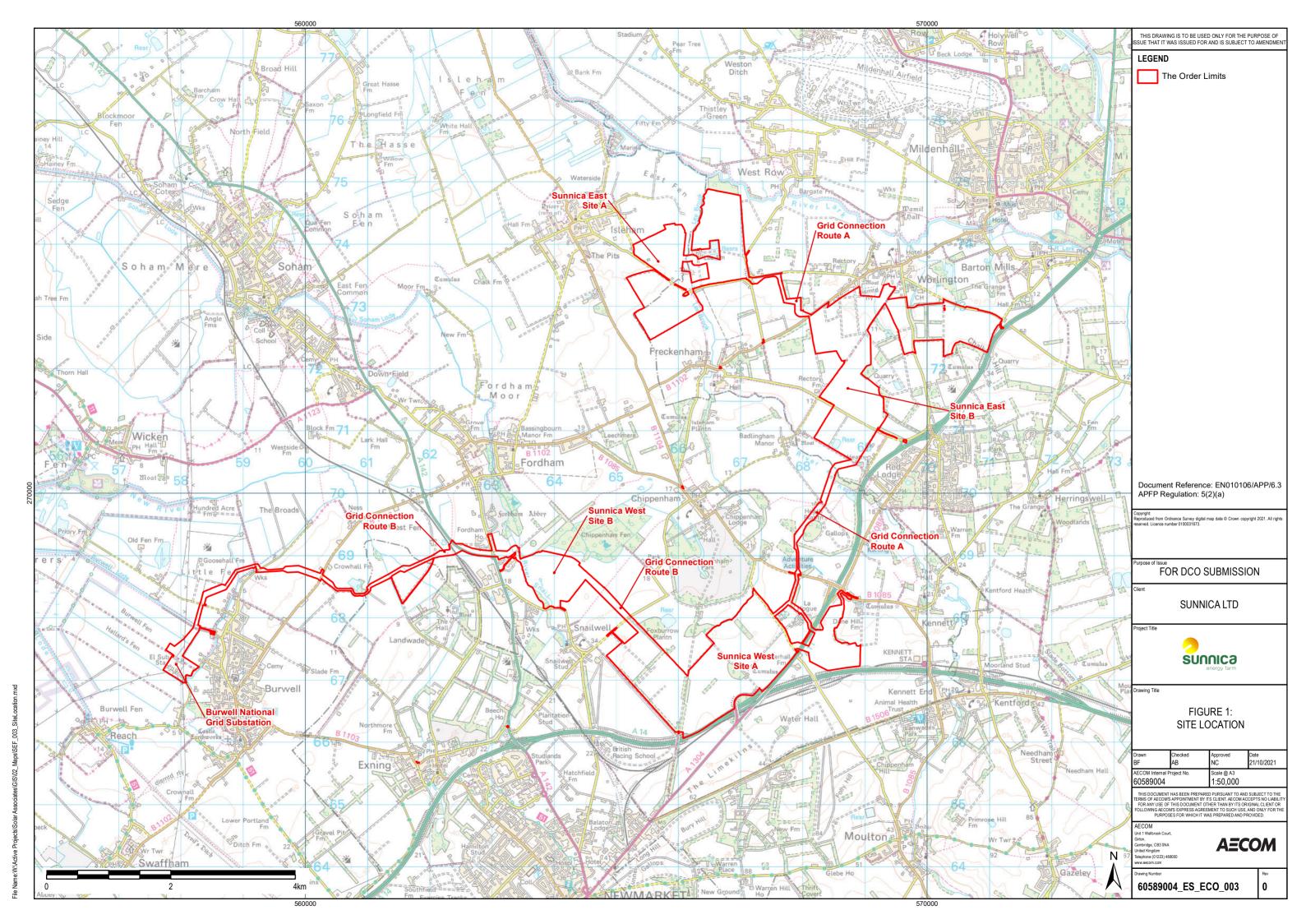




Figure 2 Survey area used for wintering birds and locations of viewing points

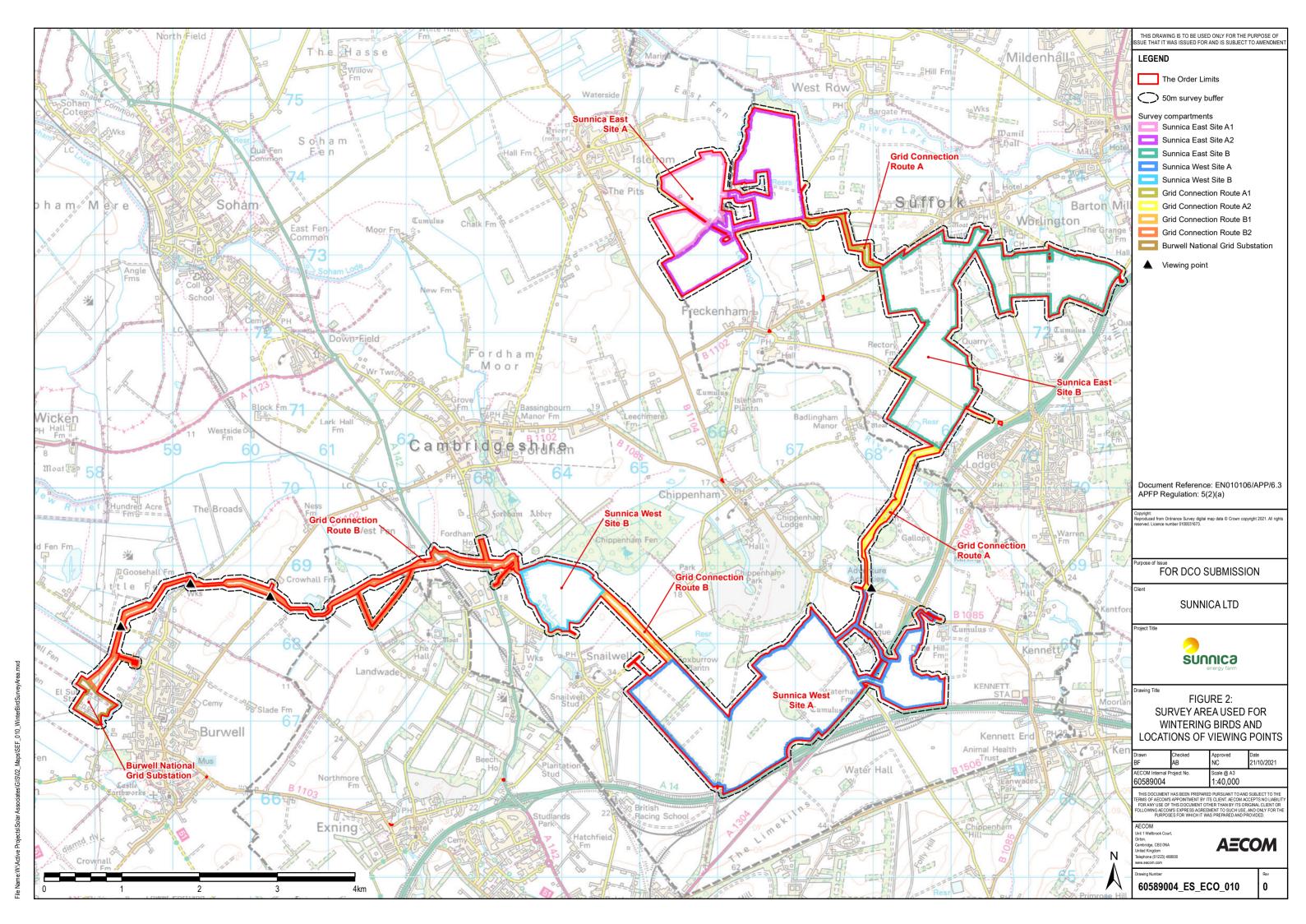
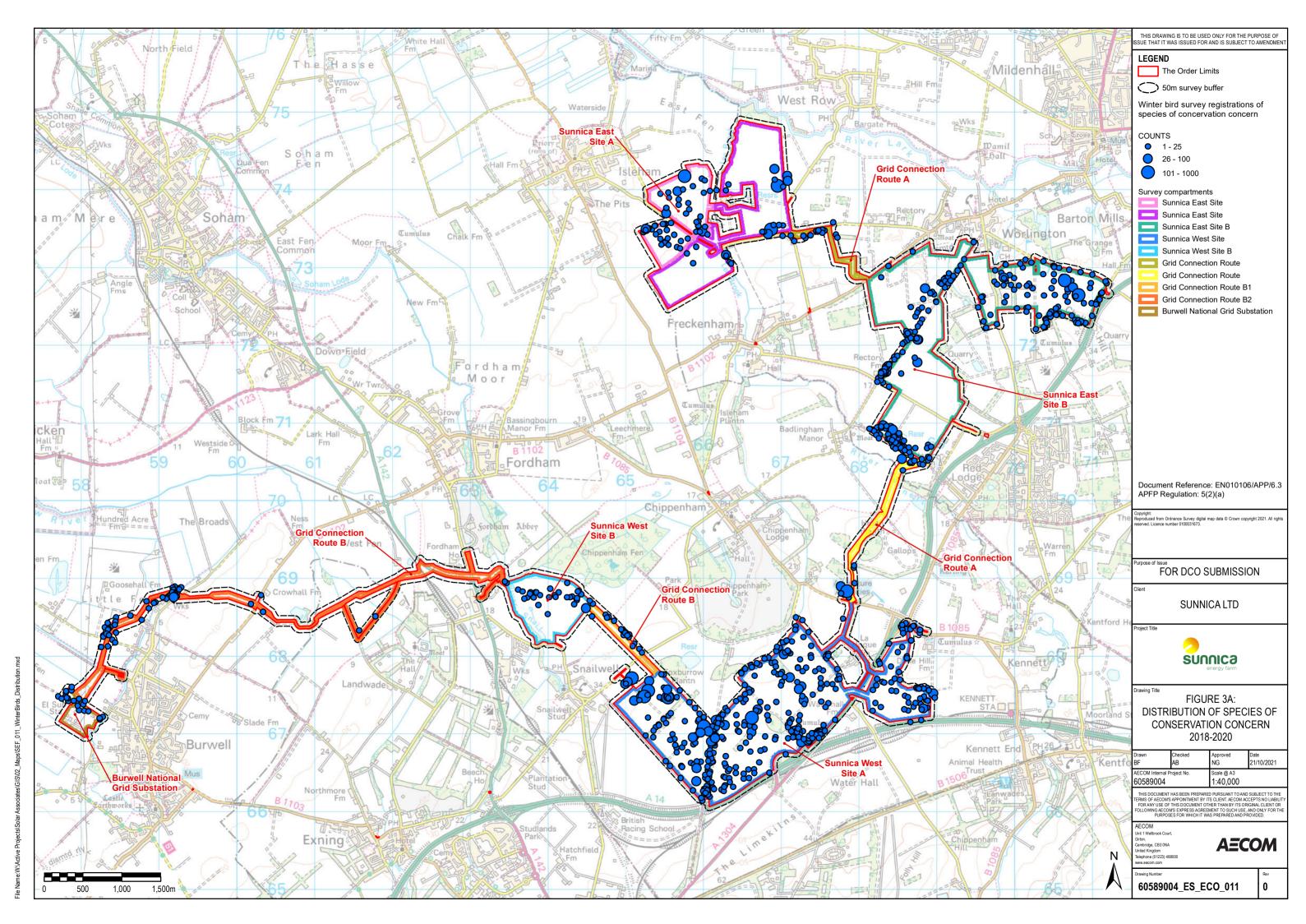
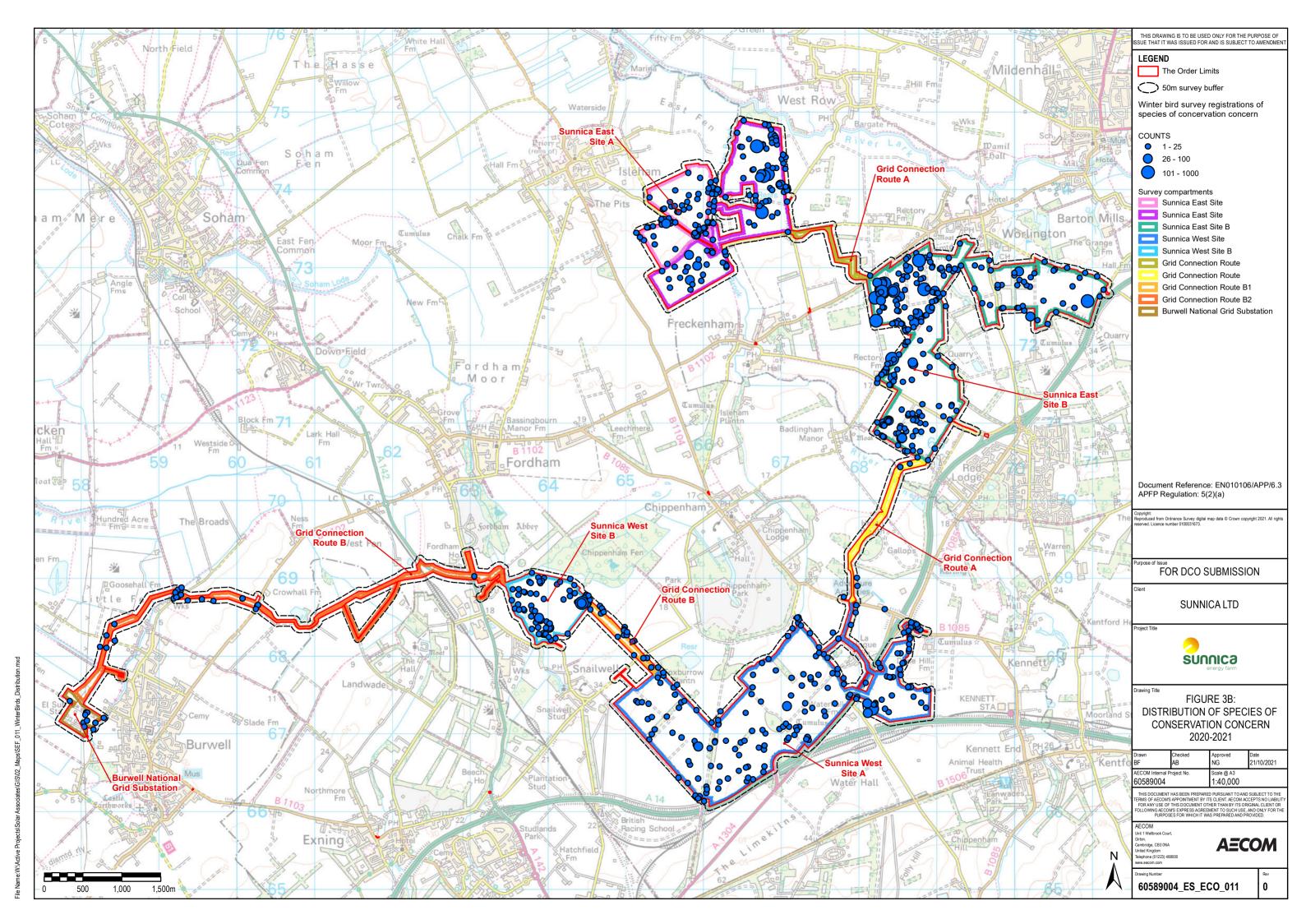




Figure 3 Distribution of species of conservation concern







Annex B Survey Details

Table B-1: Survey dates and weather conditions for each wintering bird survey

Visit	Survey period	Scheme area	Date (s)	Weather Conditions
1	2018/2019	Sunnica East Site B	5 November 2018	Dry, Cloud 1/8, Wind F1, Temp 1°C
		Sunnica West Site A	6 November 2018	Dry, Cloud 1/8, Wind F1, Temp - 1°C
		Sunnica West Site B	14 November 2018	Dry, Cloud 3/8, Wind F1, Temp 4°C
		Grid Connection Routes and Burwell National Grid Substation Extension	15 November 2018	Dry, Cloud 3/8, Wind F1, Temp 4°C
		Sunnica East Site A2	15 November 2018	Dry, Cloud 3/8, Wind F1, Temp 4°C
	2019/2020	Sunnica West Site A and B	30 October 2019	Dry, Cloud 3/8, Wind F1, Temp 8 °C
		Sunnica East Site A1	30 October 2019	Dry, Cloud 3/8, Wind F1, Temp 8 °C
	2020/2021	Sunnica East Site A1, A2 and B	23 November 2020	Dry, Cloud 4/8, Wind F2, Temp 9 °C
		Sunnica East Site B and Grid Connection Routes A1 and A2	24 November 2020	Dry, Cloud 5/8, Wind F3, Temp 10°C
		Sunnica West Sites A and B, Grid Connection Route A2 and B1	25 November 2020	Dry, Cloud 7/8, Wind F2, Temp 9°C
		Grid Connection Route B2 and Burwell National Grid Substation Extension	27 November 2020	Dry, Cloud 3/8, Wind F1, Temp 3°C
2	2018/2019	Sunnica West Site A	26 November 2018	Dry, Cloud 7/8, Wind F1, Temp 5 °C
		Sunnica West Site B	26 November 2018	Dry, Cloud 7/8, Wind F1, Temp 5C
		Sunnica East Site B	27 November 2018	Dry, Misty, No wind, Temp 4 °C
		Sunnica East Site A2	27 November 2018	Dry, Misty, No wind, Temp 4C



Visit	Survey period	Scheme area	Date (s)	Weather Conditions
		Grid Connection Routes and Burwell National Grid Substation Extension	30 November 2018	Dry, Cloud 3/8, Wind F2, Temp 7 °C
	2019/2020	Sunnica East Site A1	19 November 2019	Dry, Cloud 5/8, Wind F2, Temp 7 °C
		Sunnica West Site A and B	19 November 2019	Dry, Cloud 5/8, Wind F2, Temp 7 °C
	2020/2021	Sunnica West Site A and B, Grid Connection Route B1	7 December 2020	Dry, Cloud 6/8, No wind, 2 °C
		Sunnica East Site A and B	8 December 2020	Dry, Cloud 8/8, No wind, 2 °C
		Sunnica West Site B, Grid Connection Route B2 and Burwell National Grid Substation Extension	14 December 2020	Dry, Cloud 7/8, No wind, 2°C
3	2018/2019	Sunnica East Site B	12 December 2018	Dry, Cloud 6/8, Wind F1, Temp 4 °C
		Sunnica East Site A2	12 December 2018	Dry, Cloud 6/8, Wind F1, Temp 4 °C
		Sunnica West Site A	13 December 2018	Dry, Cloud 7/8, Wind F2-3, Temp 4 °C
		Sunnica West Site B	13 December 2018	Dry, Cloud 7/8, Wind F2-3, Temp 4 °C
		Grid Connection Routes and Burwell National Grid Substation Extension	14 December 2018	Dry, Cloud 7/8, No wind, Temp 2 °C
	2019/2020	Sunnica West Site A and B	16 December 2019	Dry, Cloud 3/8, Wind F3, Temp 5°C
		Sunnica East Site A1	16 December 2019	Dry, Cloud 3/8, Wind F3, Temp 5°C
	2020/2021	Sunnica East Area A, Grid Connection Route A1, Sunnica East B	4 January 2020	Dry, Cloud 6/8, Wind F1, Temp 3°C
		Sunnica West Site A, Sunnica East B	5 January 2020	Dry, Cloud 6/8, Wind F1, Temp 3°C
		Sunnica West Site A and B, Grid Connection Routes and Burwell National Grid Substation Extension	6 January 2020	Dry, Cloud 5/8, Wind F1, Temp 3°C



Visit	Survey period	Scheme area	Date (s)	Weather Conditions
4	2018/2019	Sunnica East Site B	15 January 2019	Dry, Cloud 3/8, Wind F3, Temp 9 °C
		Sunnica East Site A2	15 January 2019	Dry, Cloud 3/8, Wind F3, Temp 9 °C
		Sunnica West Site A	16 January 2019	Raining, Overcast, Wind F2, Temp 10 °C
		Sunnica West Site B	16 January 2019	Raining, Overcast, Wind F2, Temp 10C
		Grid Connection Routes and Burwell National Grid Substation Extension	17 January 2019	Dry, Cloud 0/8, Wind F4-5, Temp 2 °C
	2019/2020	Sunnica West Site A and B	13 January 2020	Dry, Cloud 2/8, Wind F2, Temp 4 °C
		Sunnica East Site A1	13 January 2020	Dry, Cloud 2/8, Wind F2, Temp 4 °C
	2020/2021	Sunnica East Site A and B, Sunnica West Site A	10 February 2021	Dry, Cloud 7/8, Wind F2, Temp -1 °C. Light snow
		Sunnica East Site B, Grid Connection Route A and B; and Burwell National Grid Substation Extension	11 February 2021	Dry, Cloud 5/8, Wind F1, Temp - 1°C
5	2018/2019	Sunnica East Site B	11 February 2019	Dry, Cloud 2/8, Wind F1, Temp 3 °C
		Sunnica East Site A2	11 February 2019	Dry, Cloud 2/8, Wind F1, Temp 3 °C
		Sunnica West Site A	12 February 2019	Dry, Cloud 2/8, Wind F1, Temp 2 °C
		Sunnica West Site B	11 February 2019	Dry, Cloud 2/8, Wind F1, Temp 3 °C
		Grid Connection Routes and Burwell National Grid Substation Extension	13 February 2019	Dry, Overcast, Wind F2, Temp 7 °C
	2019/2020	Sunnica West Site A and B	7 February 2020	Dry, Cloud 2/8, Wind F0-1, Temp 6
		Sunnica East Site A1	7 February 2020	Dry, Cloud 2/8, Wind F0-1, Temp 6 °C



Visit	Survey period	Scheme area	Date (s)	Weather Conditions
	2020/2021	Sunnica East Site A and B	3 March 2021	Dry, Cloud 5/8, Wind F2, Temp 5 °C
		Sunnica West Site A and B, Grid Connection Route A and B; and Burwell National Grid Substation Extension	4 March 2021	Dry, Cloud 5/8, Wind F1-2, Temp 5 °C
6 2018/2019	Sunnica East Site B	4 th March 2019	Dry, Misty, Wind F2, Temp 3 °C	
		Sunnica East Site A2	4 th March 2019	Dry, Misty, Wind F2, Temp 3 °C
		Sunnica West Site A	5 th March 2019	Dry, Cloud 4/8, Wind F2, Temp 7 °C
		Sunnica West Site B	5 th March 2019	Dry, Cloud 4/8, Wind F2, Temp 7 °C
2019/202		Grid Connection Routes and Burwell National Grid Substation Extension	6 th March 2019	Dry, Cloud 7/8, Wind F2, Temp 6 °C
	2019/2020	Sunnica West Site A and B	6 th March 2020	Dry, Cloud 2/8, Wind F0-1, Temp 2 °C
		Sunnica East Site A1	6 th March 2020	Dry, Cloud 2/8, Wind F0-1, Temp 2 °C



Annex C Records of Protected or Notable Species

Table C-1: Records of protected or notable species returned from the desk study

Common Name	Scientific Name	Designation
Arctic Tern	Sterna paradisaea	BD1, BAmb
Avocet	Recurvirostra avosetta	BD1, WCA1i, BAmb
Barn Owl	Tyto alba	CPASI, SBAP, WCA1i
Barnacle Goose	Branta leucopsis	BD1, BAmb
Barred Warbler	Sylvia nisoria	BD1
Bewick's Swan	Cygnus columbianus	BD1, UKBAP, CPPS, WCA1i, BAmb
Bittern	Botaurus stellaris	BD1, Sect.41, UKBAP, SBAP, CPPS, WCA1i, BAmb
Black Redstart	Phoenicurus ochruros	Bern2, BRed, WCA1i
Black Stork	Ciconia nigra	BD1
Black-headed Gull	Chroicocephalus ridibundus	BAmb
Black-necked Grebe	Podiceps nigricollis	WCA1i, BAmb
Black-tailed Godwit	Limosa limosa	WCA1i, CPPS, BRed
Black-winged Stilt	Himantopus himantopus	BD1, WCA1i
Brent Goose	Branta bernicla	Sect.41, UKBAP, BAmb
Bullfinch	Pyrrhula pyrrhula	Sect.41, UKBAP, SBAP, CPPS, BAmb
Caspian Gull	Larus cachinnans	BAmb
Common Gull	Larus canus	BAmb
Common (Mealy) Redpoll	Acanthis flammea	BAmb
Common Sandpiper	Actitis hypoleucos	BAmb
Common Scoter	Melanitta nigra	Sect.41, UKBAP, WCA1i, Bred
Common Tern	Sterna hirundo	BD1, BAmb
Corn Bunting	Emberiza calandra	Sect.41, UKBAP, SBAP, CPPS, BRed
Crane	Grus grus	BD1, CPASI, BAmb
Cuckoo	Cuculus canorus	Sect.41, UKBAP, BRed
Curlew	Numenius arquata	Sect.41, UKBAP, CPPS, BRed
Dunnock	Prunella modularis	Sect.41, UKBAP, BAmb
Fieldfare	Turdus pilaris	WCA1i, Bred
Firecrest	Regulus ignicapilla	BD1
Gadwall	Anas strepera	BAmb
Garganey	Anas querquedula	WCA1i, BAmb
Golden Plover	Pluvialis apricaria	BD1
Grasshopper Warbler	Locustella naevia	Sect.41, UKBAP, CPPS, BRed
Great Black-backed Gull	Larus marinus	BAmb
Green Sandpiper	Tringa ochropus	WCA1i, BAmb



Common Name	Scientific Name	Designation	
Greenshank	Tringa nebularia	WCA1i, BAmb	
Grey Partridge	Perdix perdix	Sect.41, UKBAP, SBAP, CPPS	
Grey Plover	Pluvialis squatarola	BAmb	
Grey Wagtail	Motacilla cinerea	Bred	
Greylag Goose	Anser anser	BAmb	
Hen Harrier	Circus cyaneus	BD1, Sect.41, WCA1i	
Herring Gull	Larus argentatus	CPPS, BRed	
Honey-buzzard	Pernis apivorus	BD1, WCA1i, BAmb	
House Martin	Delichon urbicum	BAmb	
House Sparrow	Passer domesticus	Sect.41, UKBAP, CPPS, BRed	
Kestrel	Falco tinnunculus	BAmb	
Kingfisher	Alcedo atthis	BD1, WCA1i	
Lapwing	Vanellus vanellus	Sect.41, UKBAP, CPPS, BRed	
Lesser Black-backed Gull	Larus fuscus	BAmb	
Lesser Redpoll	Acanthis cabaret	Sect.41, UKBAP, CPPS, BRed	
Lesser Spotted Woodpecker	Dendrocopos minor	Sect.41, UKBAP, CPPS, BRed	
Linnet	Linaria cannabina	Sect.41, UKBAP, SBAP, CPPS, BRed	
Little Egret	Egretta garzetta	BD1	
Mallard	Anas platyrhynchos	BAmb	
Marsh Harrier	Circus aeruginosus	BD1, WCA1i, BAmb	
Marsh Tit	Poecile palustris	Sect.41, UKBAP, CPPS, BRed	
Meadow Pipit	Anthus pratensis	BAmb	
Mediterranean Gull	Larus melanocephalus	BD1, WCA1i, BAmb	
Merlin	Falco columbarius	BD1, WCA1i, Bred	
Mistle Thrush	Turdus viscivorus	Bred	
Mute Swan	Cygnus olor	BAmb	
Nightingale	Luscinia megarhynchos	Bred	
Nightjar	Caprimulgus europaeus	BD1, Sect.41, UKBAP, SBAP, BAmb	
Osprey	Pandion haliaetus	BD1, WCA1i	
Oystercatcher	Haematopus ostralegus	BAmb	
Parrot Crossbill	Loxia pytyopsittacus	WCA1i, BAmb	
Peregrine	Falco peregrinus	BD1, WCA1i	
Pintail	Anas acuta	BAmb	
Quail	Coturnix coturnix	WCA1i, BAmb, BRCC	
Red Kite	Milvus milvus	BD1, WCA1i	
Redshank	Tringa totanus	BAmb	
Redwing	Turdus iliacus	WCA1i, Bred	
Reed Bunting	Emberiza schoeniclus	Sect.41, UKBAP, SBAP, CPPS, BAmb	
Ring Ouzel	Turdus torquatus	Sect.41, UKBAP, Bred	
Ringed Plover	Charadrius hiaticula	Bred	



Common Name	Scientific Name	Designation
Ruff	Calidris pugnax	BD1, WCA1i, Bred
Sandwich Tern	Sterna sandvicensis	BD1, BAmb
Shelduck	Tadorna tadorna	BAmb
Short-eared Owl	Asio flammeus	BD1, BAmb
Shoveler	Anas clypeata	BAmb
Skylark	Alauda arvensis	Sect.41, UKBAP, SBAP, CPPS, BRed
Snipe	Gallinago gallinago	BAmb
Song Thrush	Turdus philomelos	Sect.41, UKBAP, SBAP, CPPS, BRed
Spoonbill	Platalea leucorodia	BD1, WCA1i, BAmb
Spotted Crake	Porzana porzana	BD1, WCA1i, BAmb
Spotted Flycatcher	Muscicapa striata	Sect.41, UKBAP, SBAP, CPPS, BRed
Starling	Sturnus vulgaris	Sect.41, UKBAP, Bred
Stock Dove	Columba oenas	BAmb
Stone-curlew	Burhinus oedicnemus	BD1, Sect.41, UKBAP, SBAP, CPPS, WCA1i, BAmb
Swift	Apus apus	CPASI, BAmb
Tawny Owl	Strix aluco	BAmb
Teal	Anas crecca	BAmb
Tree Pipit	Anthus trivialis	Sect.41, UKBAP, BRed
Tree Sparrow	Passer montanus	Sect.41, UKBAP, SBAP, CPPS, BRed
Turtle Dove	Streptopelia turtur	Sect.41, UKBAP, SBAP, CPPS, BRed
Whimbrel	Numenius phaeopus	WCA1i, BRed
Whinchat	Saxicola rubetra	BRed
White-fronted Goose	Anser albifrons	Sect.41, UKBAP, BRed
Whooper Swan	Cygnus cygnus	BD1, WCA1i, BAmb
Wigeon	Anas penelope	BAmb
Willow Tit	Poecile montana	Sect.41, UKBAP, BRed
Willow Warbler	Phylloscopus trochilus	BAmb
Wood Sandpiper	Tringa glareola	BD1, WCA1i, BAmb
Woodcock	Scolopax rusticola	BRed
Woodlark	Lullula arborea	BD1, Sect.41, UKBAP, SBAP, WCA1i
Wryneck	Jynx torquilla	UKBAP, WCA1i
Yellow Wagtail	Motacilla flava	Sect.41, UKBAP, CPPS, BRed
Yellowhammer	Emberiza citrinella	Sect.41, UKBAP, CPPS, BRed
Yellow-legged Gull	Larus michahellis	BAmb