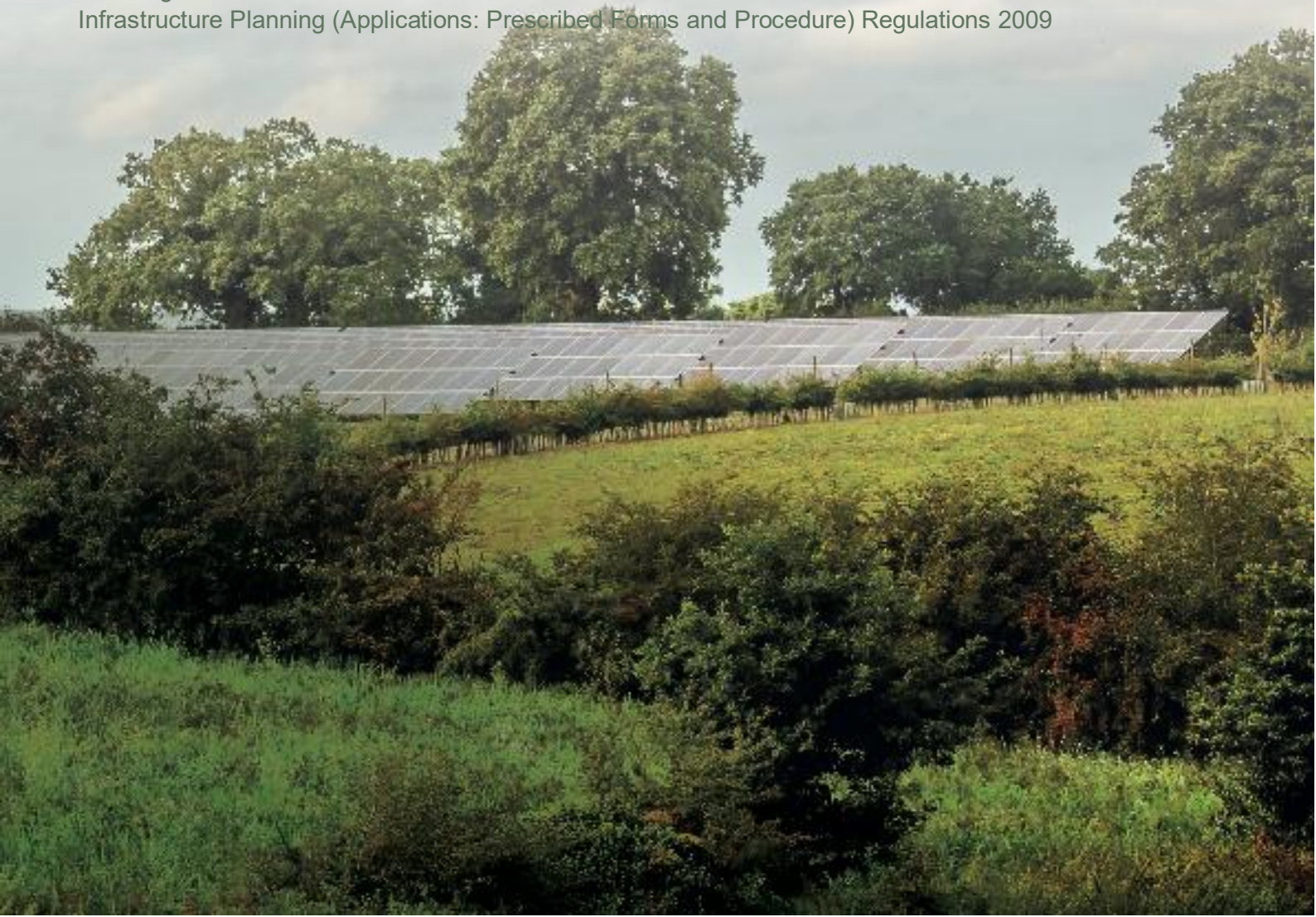
THE DROVES
SOLAR FARM

The Droves Solar Farm

Appendix 7.3: Proposed Mitigation Strategy for Ground Nesting Birds Requiring Open Habitats

Prepared by: Aspect Ecology
Date: November 2025
PINS reference: EN0110013
Document reference: APP/6.4 (Original)
APFP Regulation Reg 5(2)(a)
Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



Technical Note 03

Project: The Droves, Swaffham, Solar DCO
Ref: 1006806
Date: 06/11/2025

Proposed Mitigation Strategy for Ground Nesting Birds Requiring Open Habitats

1 Introduction

1.1 Aspect Ecology is acting on behalf of Island Green Power Ltd in respect of ecological matters relating to an application for a Development Consent Order (DCO) for The Droves Solar Farm (hereafter referred to as the 'Scheme') at The Droves, Swaffham, Norfolk.

1.2 The Scheme comprises the construction, operation and maintenance, and decommissioning of a solar photovoltaic (PV) electricity generating station and associated development, including a Battery Energy Storage System (BESS), a Customer Substation, and Grid Connection Infrastructure, including a new National Grid Substation.

1.3 In order to inform the proposals and DCO application process, a range of ecological survey work has been undertaken, including in particular in respect of the current considerations, breeding bird surveys undertaken across the proposed Solar PV Site during April to July 2024.

1.4 The breeding bird survey work undertaken identified the use of the Solar PV Site by ground nesting bird species requiring open habitats, which are also Priority Species (Skylark *Alauda arvensis*, Lapwing *Vanellus vanellus* and Curlew *Numenius arquata*), for which mitigation and compensation measures are therefore required.

1.5 As such, this note provides information in regard to the proposed mitigation/compensation strategy in respect of these species based on the current information.

2 Policy and Legislation

Legislation

2.1 All wild birds and their nests receive protection under Section 1 of the Wildlife and Countryside Act 1981 (as amended) in respect of killing and injury, and their nests, whilst being built or in use, cannot be taken, damaged or destroyed. Species included on Schedule 1 of the Act receive greater protection and are subject to special penalties.

Policy

2.2 National Planning policy in the form of NPPF (2024) sets out that plans should promote the protection and recovery of priority species, whilst further National Policy Statements EN-1 and EN-3 include specific considerations in regard to the protection and enhancement of habitats and species in relation to major energy infrastructure and major renewable energy infrastructure.

Conservation Status

2.3 The conservation importance of British bird species is categorised based on a number of criteria including the level of threat to a species' population status[1]. Species are listed as Green, Amber or Red. Red Listed species are considered to be of the highest conservation concern being either globally threatened and or experiencing a high/rapid level of population decline (>50% over the past 25 years). A number of birds are also S41 Priority Species. Red and Amber listed species and priority species should be assessed as important ecological features.

2.4 These species therefore represent a material consideration in the context of planning decisions.

3 Existing Use of the Site

3.1 As set out above, specific breeding bird survey work was undertaken at the Solar PV Site during the appropriate season in 2024, the result of which are set out elsewhere.

3.2 During the survey work undertaken, a total of 121 Skylark breeding territories were recorded across the surveyed area (of which 4 were recorded within field 32, located outside of the proposed Order Limits, along with 2 recorded within field 35 and a further 2 within the north of field 33, located north of the Solar PV Site, which are located within the area proposed for ground nesting bird habitats – see below), along with breeding activity by a single pair of Lapwing and 2 pairs of Curlew (including a single bird from the East of England Curlew Headstarting project).

3.3 All three species are Red listed (reflecting their status as being of highest conservation concern and in particular substantial recent population declines) and are listed as Species of Principal Importance for the purpose of conserving biodiversity in England within the lists prepared under Section 41 of the NERC Act 2006.

3.4 Nonetheless, Skylark in particular remains common and widespread across the UK, with an estimated 1.6 million breeding territories across the UK (BTO, 2016). Indeed, the latest UK population trend data shows an increase in Skylark population abundance over the past 10 years[2]. No recent estimates of Skylark populations in Norfolk are available, however information set out within The Norfolk Bird Atlas (2011) suggests that Skylark was found breeding in 98% of surveyed tetrads at an average of 13.2 pairs per occupied square. Given Norfolk covers an area of approximately 5,371km^2, this would suggest a county population in excess of 17,300 pairs. Accordingly, the 121 pairs of Skylark recorded within the site clearly represents <0.01% of UK populations and <1% county populations.

4 Likely Effects of the Proposals

4.1 Recent research suggests that when managed suitably, the incorporation of solar farms within arable dominated landscapes can result in greater abundance and diversity of bird species (Copping et al, 2024). However, whilst (subject to suitable management) the proposals are likely to benefit bird species across the site overall, these species typically nest in open fields, away from taller vegetation or boundary habitats and require long un-broken sight lines. Accordingly, it is likely that the majority of such breeding activity would be displaced from areas

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

[2] Heywood, J.J.N., Massimino, D., Balmer, D.E.,Kelly, L., Marion, S., Noble, D.G., Pearce-Higgins, J.W., White, D.M., Woodcock, P., Wotton, S. Gillings, S. (2025) The Breeding Bird Survey 2024. BTO Research Report 765. British Trust for Ornithology, Thetford.

proposed for solar panels, which would obstruct sightlines and as such, mitigation measures and compensation will be required in regard to these species in order to address this change.

4.2 Nonetheless, as set out above, numbers of Skylark within the site represent <1% of county populations and accordingly, are unlikely to be considered significant in the national or county context.

4.3 Further, it is important to take into account that the proposals will include other changes to habitats present, including the change from intensively managed arable to grassland habitats, which if managed appropriately will likely result in increased foraging value for bird species (including Skylark) that will likely interact with reduced breeding opportunities and should be taken into account as part of any wider mitigation strategy.

5 Proposed Mitigation Approach

5.1 The proposed mitigation and compensation strategy will incorporate a package of measures in order to provide continuous opportunities for the relevant species in combination with a range of other bird and wildlife species across the site. Measures will include the following:

- Provision of new managed open grassland areas providing specific opportunities for ground nesting species;
- Favourable management of grassland margins and associated habitats which will provide increased foraging value and therefore raised carrying capacity across the site as a whole for these species
- Incorporation of Skylark plots within arable land located outside of the solar development areas.

5.2 Further consideration in regard to the individual measures proposed is set out below:

Managed Open Grassland Area

5.3 In order to provide suitable mitigation and long-term enhanced breeding opportunities within the site in regard to Curlew and Lapwing (for which 1-2 pairs were recorded during the survey work undertaken), along with partial mitigation for Skylark, it is proposed to incorporate a continuous area of open grassland measuring approximately 8ha (see Plan 6806/GNBS1. This area will be managed specifically for ground nesting bird species, thereby providing replacement/enhanced opportunities for the very small numbers of Curlew and Lapwing recorded, whilst also providing opportunities for a number of Skylarks as part of the wider mitigation and compensation package in relation to this species (noting that an initial total of 2 pairs of Skylark were recorded within this area during the breeding bird survey work further evidencing the suitability of this location for ground nesting birds).

Favourable Management of Grassland Margin habitats

5.4 Favourable management of grassland and other habitats across the site will provide enhanced foraging habitats for bird species including Skylark, which would potentially increase breeding productivity within nearby breeding territories.

Skylark Plots

5.5 To further mitigate the loss of Skylark breeding opportunities within the Solar PV Site as a result of the proposals, it is proposed to provide Skylark plots within existing arable areas located

outside of the proposed solar development areas, in order to further increase the carrying capacity of these areas for Skylark.

5.6 Following initial requests from Island Green Power, in order to provide a guide as to the likely levels of Skylark plot provision to provide appropriate levels of compensation in regard to displaced territories, the proposals have been assessed following the methodology proposed by Fox (2022)[3] in order to provide a guide in regard to the appropriate levels for Skylark plot provision. The proposed methodology does not represent adopted policy or guidance, albeit provides the only currently published method available for assessing quantifiable levels of compensation in regard to Skylark populations.

5.7 The methodology requires a number of inputs and assumptions to be made in order to provide an estimate of optimal offsite compensation in terms of the amount of land required to accommodate appropriate numbers of Skylark territories.

5.8 In regard to the individual inputs and assumptions at this stage, these are summarised at table 5.1., below.

Table 5.1. Summary of key inputs and assumptions used within the model.

Variable (Ref. from Fox, 2022)	***Parameter for input***	***Assumptions made***	***Input figure***
A (1)	Number of Skylark territories within the development footprint.	121 breeding pairs/territories within the surveyed area (based on 2024 surveys), 4 of which within field 32 (excluded from development), along with a further 2 pairs in each of field 35 (unaffected with the exception of potential future Skylark enhancement – see below) and the north of field 33 (proposed for Curlew mitigation), therefore 113 pairs identified within affected areas (Solar PV Site).	117 pairs
B (2)	Survey Area		770ha
C (3a)	Proportion of territories to be compensated	No guidance is available in order to establish a reasonable proportion of territories to be compensated. However, given the increase in foraging value to Skylark, along with wider benefits to overall bird populations (and noting the overall abundance of Skylark) a figure of 50% is proposed as a reasonable proportion. (This is commensurate with other similar Solar DCO schemes, e.g. Cottam Solar Project (PINS Ref: EN010133), for which the Development Consent Order was made by the Secretary of State in September 2024 and as set out within the submitted Environmental Statement (dated January 2023) *"…mitigation of 45% of the total number of Skylark territories…* [232]" was provided through proposed mitigation habitat.	50%
D (3b)	Number of territories within 75m of development edge and therefore likely absorbed within adjacent suitable habitats due to increase in foraging availability.	Based on 2024 survey information, 21 territories were recorded within 75m of the proposed development edge and accordingly could likely be absorbed within adjacent land and do not require compensation.	21 pairs

[3] Fox, H. (2022) *Blithe Spirit: Are Skylarks Being Overlooked in Impact Assessment?* In Practice (CIEEM) Issue 117

E (3c)	Allowance for additional carrying capacity	As set out, an area of 8ha open grassland, clear of solar arrays and specifically managed for ground nesting birds will be incorporated into the proposed scheme as part of the detailed layout design. Accordingly, this will provide increased capacity for additional Skylarks within the scheme not accounted for elsewhere (noting that 2 pairs of Skylark were previously recorded within this area demonstrating suitability for ground nesting birds). Given management will be directed specifically for ground nesting birds, along with likely densities a total figure of 6 pairs is assumed.	6 pairs
F (4)	Baseline territory density within wider land proposed for Skylark plots	In the absence of detailed survey information (and noting the surrounding land is commensurate with, and managed under the same ownership as) the site, it is assumed that territory densities would be the same as existing Skylark densities within the proposed development areas.	0.15 pairs/ha
G (5a)	Potential density for proposed land use type within compensation areas	Data varies in terms of expected densities within standard habitat types. However, background information (Fox, 2022; Donald, 2004 etc) suggests typical densities vary between 0.1 and 0.4 territories per hectare, up to 0.8 per hectare where Skylark plots are used (therefore representing a doubling). As such, given the proposed inclusion of Skylark plots within arable farmland is proposed, a density commensurate with double the standard figure for arable farmland (0.28/ha) is proposed (0.56/ha). This figure is also commensurate with the density (0.56/ha) set out within the permitted Cottam Solar Project (PINS Ref: EN010133)	0.56 pairs/ha

5.9 Following the methodology set out by Fox (2022), the appropriate compensation area is calculated as follows:

Appropriate compensation area (ha) = ((A x C) - (D + E)) / (G - F)

5.10 Based on the assumptions set out using the above methodology a compensation area of ***77.2ha*** arable land is identified.

5.11 Accordingly, it is proposed to provide additional compensation through the inclusion of Skylark plots (at a frequency of 2 plots per hectare in line with standard guidance) across an area of 77ha arable farmland for the life of the proposed Solar development (following decommissioning, the habitats would necessarily be reverted to farmland in line with the current position, such that further compensation would be unwarranted).

5.12 In order to reflect cropping rotations whilst ensuring Skylark plots are provided within the most suitable areas, the precise locations of plots would necessarily vary from year to year, such that a larger area within the landholding has been identified, within which the proposed 77ha arable land will be managed to include Skylark plots on a rotational basis (see plan 6806/GNBS2).

5.13 Nonetheless, in order to provide further confidence in the ability to ensure the compensation is provided throughout the life of the Scheme, a commensurate area of land has been included within the north of the proposed Order Limits (identified solely for Skylark Mitigation), within which the Skylark mitigation could be secured should unforeseen circumstances (such as future cropping requirements) result in the inability to provide the required Skylark plots within suitable offsite habitats in the wider landholding. This area would therefore only be required

where provision of the above Skylark plots within the wider landholding is not possible in any particular year during the life of the Scheme.

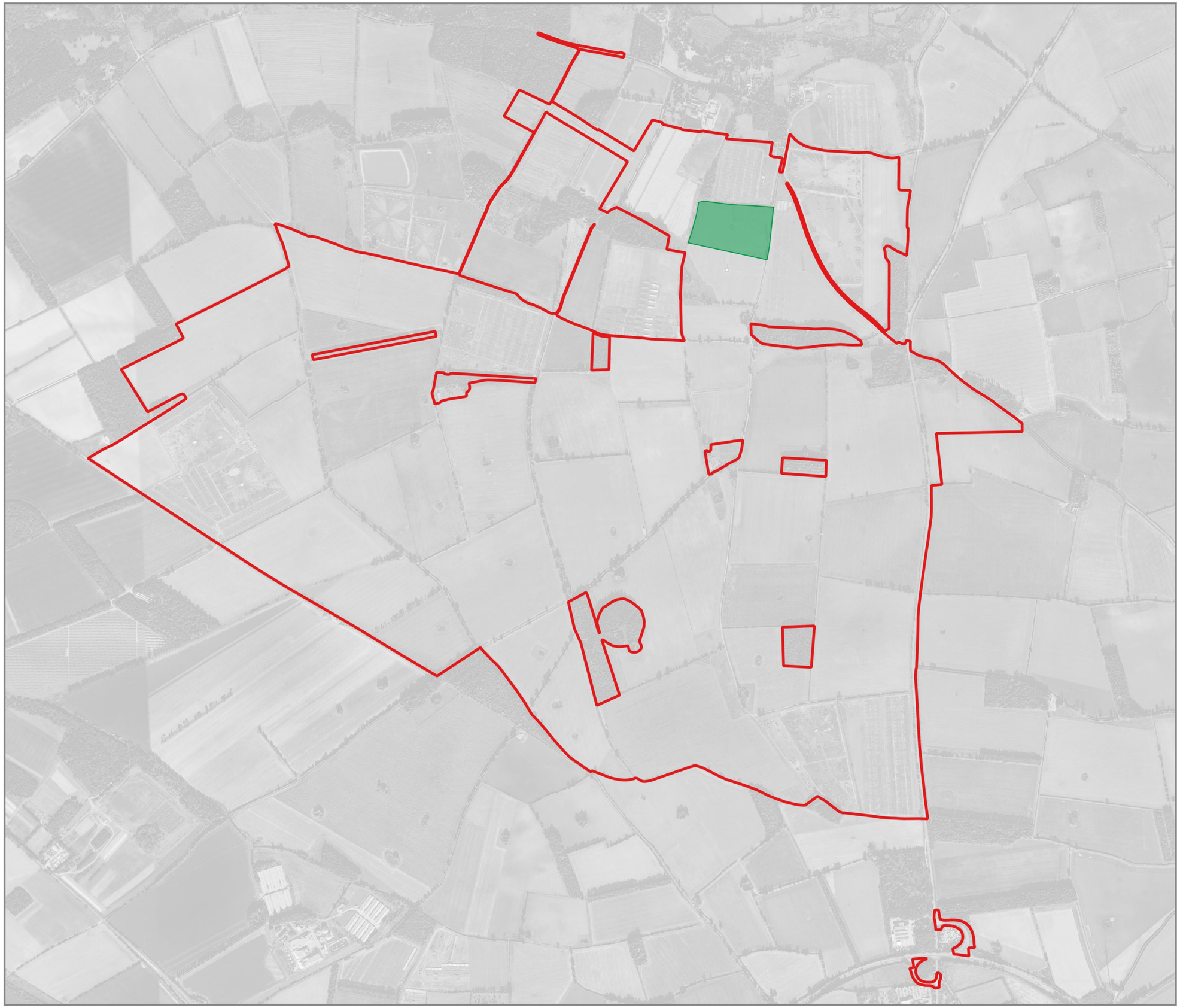
5.14 On the basis of the above considerations, it is considered that the combination of mitigation and compensation measures set out would be appropriate as part of the wider proposals in line with the best available information and methodologies.

6 Conclusions

6.1 The above information sets out the currently proposed mitigation approach in regard to ground nesting birds requiring open habitats as part of the proposed development, in order to address the loss of breeding opportunities used by these species as a result of the proposed solar arrays.

6.2 The measures proposed would necessarily be incorporated for the life of the development, whilst following decommissioning and return of the site to agricultural use it would be anticipated that the current levels of suitability for ground nesting species would be restored such that no further measures would be required.

6.3 A number of mitigation and compensation measures are proposed, including the provision of Skylark plots within wider farmland outside of the proposed Order Limits in order to increase carrying capacity for Skylark within these areas and accommodate displaced territories. Following consideration using the published methodology (based on the assumptions set out) an area of 77 ha arable land incorporating Skylark plots is proposed, which would be managed on within the wider landholding in order to reflect appropriate cropping rotations (a commensurate area having been identified within the Order Limits in order to accommodate dedicated future Skylark habitats and provide further confidence in the ability to ensure such provision through the life of the Scheme should offsite provision prove not possible in future due to unforeseen circumstances). Given the information and considerations set out above, the proposed mitigation and compensation package in relation to ground nesting bird species is appropriate and proportionate in regard to legislative and planning policy requirements relating to the proposed Solar scheme.



Key:

Site Boundary

Area for Curlew mitigation

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The Droves, Swaffham Solar DCO	PROJECT
Ground Nesting Bird Strategy	TITLE
6806/GNBS1	DRAWING NO.
A/DO	REV
September 2025	DATE
LP/DO	QC

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Key:

Area for Skylark mitigation

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The Droves, Swaffham Solar DCO	PROJECT
Ground Nesting Bird Strategy	TITLE
6806/GNBS2	DRAWING NO.
A/DO	REV
September 2025	DATE
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