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Southlands Solar Farm (23/00532/FUL) – Outline Skylark Mitigation Strategy

Background

The application for Southlands Solar Farm made to Chelmsford City Council (CCC) (Application Ref: 23/00532/FUL) has been the subject of consultation, including with Place Services who provide ecological advice to CCC. The consultation response provided by Place Services raises the topic of providing mitigation for the loss of skylark breeding territories that would result from the consent for the solar farm. The key text from the Place Services response is:

"…further information is required regarding the compensation for the permanent loss or displacement of onsite ground nesting bird territories, including those of Skylark. This information is required prior to determination. Details relating to the locations of off-site farmland bird compensation sites could be secured by a legal agreement should the LPA be minded to grant permission."

In response, this Outline Skylark Mitigation Strategy has been prepared to demonstrate the feasibility of delivering mitigation for skylark at Southlands Solar Farm. A draft planning condition is proposed to secure a detailed wintering and farmland breeding bird mitigation and monitoring strategy, that will include skylarks and develop this this outline strategy further.

The draft wording of the proposed condition is:

"Prior to first exportation to the National Grid, a wintering and farmland breeding bird mitigation and monitoring strategy, that includes reference to skylarks, shall be submitted to and approved in writing by the Local Planning Authority prior to the completion of the development. Thereafter, the works shall only proceed in accordance with the approved mitigation and monitoring strategy, subject to any minor variation that may be agreed in writing with the Local Planning Authority. The strategy shall include details of the following:

(a) Purpose and conservation objectives for the proposed measures;

(b) Detailed methodology for measures to be delivered;

(c) Location of the proposed measures; and

(d) the Mechanism for implementation and monitoring of delivery.

The farmland bird mitigation strategy shall be implemented in the first nesting season following completion of the development and in accordance with the approved details or any such variation that has been previously agreed in writing by the Local Planning Authority and shall be delivered for the lifetime of the development."

Skylark territory numbers at the site of the proposed Southlands Solar Farm

Surveys conducted at the Site by Avian Ecology across 2022/23 identified four skylark territories within

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the red line boundary of the proposed development.

Potential impact of the proposed development on skylark territory numbers

The erection of the solar arrays has the potential to displace four skylark territories.

Objective for the Skylark Mitigation Strategy

To provide suitable habitat features to support four skylark territories each year.

Method for the provision of suitable habitat features

The habitat features to be provided are 'skylark plots'. These are provided at the rate of two plots per territory lost, therefore eight skylark plots are required; this is based on the widely used and accepted mitigation strategy for developments that could result in the loss of skylark territories. Recommended skylark plot density is two plots per hectare, therefore an area of at least four hectares is required.

Each skylark plot will be located at least 50m from a field boundary with a hedge or tree (open farm tracks acting as boundaries are discounted as there will be no deterrent effect) and at least 50 m from any adjacent woodland. Each plot will be 4m x 4m (16 square metres) and created by turning off the drill during sowing. This treatment is the same as that included within Government promoted agri-environment schemes e.g. prescription 'AB4 skylark plots' in the current Countryside Stewardship Mid Tier Scheme[1].

The field selected for the placement of the skylark plots is identified on Figure 1, with indicative locations of skylark plots identified. To give flexibility to the landowner to manage crop pests and persistent weeds, a total area greater than four hectares has been identified within which the skylark plots will be located. These fields were previously designated for solar panels and are within the applicants control.

The plots will be maintained on an annual basis for the duration of the operational life of the proposed development.

Supporting evidence base for the Strategy

There is strong, peer reviewed, published evidence that skylark plots are a practical, sustainable and cost-effective means to increase the territory holding capacity of cereal fields and to increase the breeding productivity of those territory holding skylark. Initial proof of this technique came from research initiated by the RSPB in 1999 at their Hope Farm[2] site in Cambridgeshire and the testing of the technique has extended to the multi-farm level and also internationally.

A summary of the evidence for the effectiveness of skylark plots is provided in Appendix 1.

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/999500/Countryside_Stewardship_Mid_Tier_2020_CS64_v1.0.pdf
[2] https://www.rspb.org.uk/our-work/conservation/projects/hope-farm/

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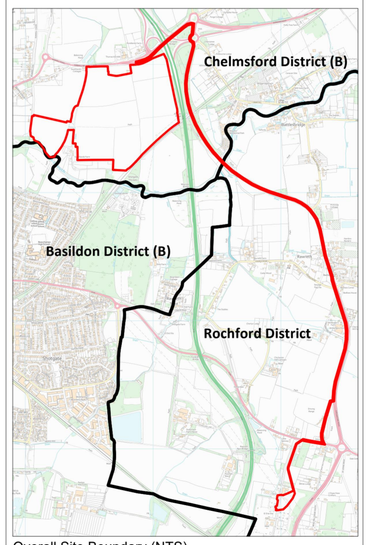
Figure 1: Proposed skylark plots field

KEY

- Site Boundary
- Field
- 50m Offset
- Proposed 4x4m Nest Site



Overall Site Boundary (NTS)

N

Revisions:
First Issue- 24/08/2023 JS

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Project Title:

Southlands Solar Farm

Drawing Title:

Proposed Skylark Plots Field

DRWG No:	Rev:	Sht no:
RC3-02-P18	-	-
Drawn by : JS	Checked by: RM	
Scale: 1:2500 @ A2	Date: 24/08/2023	

0 250m

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Appendix 1: Summary of published literature on the effectiveness of skylark plots

Author(s)	Summary of reports key findings
Morris A.J., Holland J.M., Smith B. & Jones N.E. (2004) Sustainable Arable Farming For an Improved Environment (SAFFIE): managing winter wheat sward structure for Skylarks Alauda arvensis. *Ibis*, 146, s155-162.	A replicated, controlled study from April-August in 2002 to 2003 in 15 sites in northern, eastern and southern England found that Eurasian skylark *Alauda arvensis* breeding density, duration and success were higher in winter wheat fields with undrilled patches (4 x 4 m) than in fields with widely-spaced (25 cm apart) rows or under conventional management (0.3 nests/ha in fields with undrilled plots vs 0.2 for the other treatments). Fields with undrilled patches also lost fewer territorial and nesting birds over the breeding season and by the end of the breeding season nests in these fields produced an average of one more chick than control nests. Body condition of nestlings decreased in control nests over the breeding season but increased in experimental fields. The proportion of within-treatment foraging flights remained constant in fields with undrilled patches but decreased over time in other treatments. Three treatments were surveyed: winter wheat sown in wide-spaced rows, undrilled patches with a density of 2 patches/ha, and conventional control winter wheat fields.
Key findings	Skylark plots can help to increase breeding densities in crop.
Donald P.F. & Morris T.J. (2005) Saving the sky lark: new solutions for a declining farmland bird. *British Birds*, 98, 570-578.	A before-and-after study from 2000 to 2005 in Cambridgeshire, England, found that the population of Eurasian skylarks *Alauda arvensis* on an arable farm increased from 10 territorial males in 2000 to 34 in 2005, following the introduction of skylark plots in 2001 (in addition to 6 m margins around fields and set-aside). Nests were also aggregated in fields with skylark plots. The study also reports that fields on 15 experimental farms with skylark plots had 30% more skylarks than control fields. In addition, nests in fields with skylark plots produced 0.5 more chicks/breeding attempt. Skylark plots 4 x 4 m were established at a density of 2 plots/ha. This study was part of the SAFFIE – Sustainable Arable Farming For an Improved Environment research project [summarised above].
Key findings	Skylark plots can have a positive and significant impact on skylark nesting densities.
Ogilvy S.E., Clarke J.H., Wiltshire J.J.J., Harris D., Morris A. & Jones N. (2006) SAFFIE - research into practice and policy. Proceedings of the HGCA Conference, Arable crop protection in the balance: Profit and the environment, 14.1-14.12.	A replicated, controlled study in 2002 to 2003 on ten farms in England of skylark plots placed in winter wheat fields. At the start of the breeding season there was little difference in success between treatments, but by June fields with plots compared to controls had a greater density of nests - 1 nest/ha compared to 0.4 nest/ha - and more chicks per nest - 1.75 chicks/nest compared to 0.9 chicks/nest. Over the whole season nests in fields with skylark plots raised 0.5 more chicks per breeding attempt and considering just the later part of the breeding season, raised 1.5 more chicks per breeding attempt. This study was part of the SAFFIE – Sustainable Arable Farming For an Improved Environment research project [summarised above].
Key findings	Skylark plots deliver their benefit in winter cereal crops mostly later in the growing season.

Author(s)	Summary of reports key findings
Stoate C. & Moorcroft D. (2007) Research-based conservation at the farm scale: development and assessment of agri-environment scheme options. *Aspects of Applied Biology*, 81, 161-168.	A 2007 study and literature review that found that Eurasian skylarks *Alauda arvensis* were able to raise 49% more young in fields with skylark plots, compared to fields without plots, by prolonging the length of the breeding season.
Key findings	Skylark plots can increase the ability of skylark to raise greater numbers of young.
Fischer J., Jenny M. & Jenni L. (2009) Suitability of patches and in-field strips for sky larks Alauda arvensis in a small-parcelled mixed farming area. *Bird Study*, 56, 34-42.	A replicated, controlled study from March-July 2006 in mixed farmland near Berne, Switzerland found that Eurasian skylarks *Alauda arvensis* with territories that included undrilled patches were significantly less likely to abandon their territory than birds without patches, and more likely to use the undrilled patches as nesting and foraging sites. Use of winter wheat fields by skylarks changed through the breeding season; from June to July, the percentage of control fields (without undrilled plots) in skylark territories decreased from 60% to 38%, whilst the percentage of undrilled patches in skylark territories remained approximately 55% from May to July.
Key findings	Skylark plots may lead to a reduced risk of nest abandonment and an increase in breeding success.
Defra (2021). Enhancing Arable Biodiversity. Six practical solutions for farmers.	In the first two years of testing skylark plots, average number of skylark chicks reared increased by up to 50%. Improvement resulted mainly from increased foraging access for adult birds. The plots provided a landing space and improved access to nesting and feeding areas. Wider testing confirmed this benefit, but there was increased nest predation in fields with margins. Therefore, where practical, plots should be placed at least 50 m from the field margin.
Key findings	Skylark plots can help to increase the number of chicks reared at each nest.