

File Note



Site name	Solar Farm on Land West of Berrington, Shrewsbury
Location	Berrington
OS grid ref.	SJ 52741 07125
Project Code / ADAS Reference:	1120051

Revision	Date	Issue
01	21.02.2023	First Issue

Background

ADAS was commissioned by Ecoenergy Ltd to undertake an Ecological Impact Assessment (EclA) of the land south of Berrington, Shrewsbury, which is to be used to inform the design of a 30MW solar PV Array. The proposed development will involve the removal of the arable, improved grassland and the semi-improved habitats on site.

Following comments from the Shropshire County Planning Ecologist (received in October 2022, Ref: 22/04355/FUL) in response to the EclA report submitted to the Local Authority (Shropshire Council) in July 2022 (ADAS 2022a), changes were made to the design plan to address these comments and incorporate new mitigation in the form of four Skylark Protection Zones. Subsequently, a response to the updated report with additional comments from the County Planning Ecologist was received on 20 February 2023.

This File Note details responses by ADAS ornithological expert Daniel Watson BSc (Hons) to the recent comments received from the County Planning Ecologist in relation to Skylark Protection Zones.



Comment: “The File Note ([ADAS, 2022b]) states that ‘it is anticipated that these territories will be absorbed into the surrounding landscape given its similar land use.’ If the surrounding habitats are suitable for nesting then won’t they already be at capacity and unable to support additional pairs?”

Response: Without surveys/baseline data on the populations in the neighbouring area this is unknown. Given the decline of Skylark (15% decline 1990-2020) combined with the potential population density per ha (arable: D= 4.6 -6 pr/km²), with various studies confirming that larger field sizes are actually detrimental to the density (e.g. Toepfer & Stubbe, 2001; Eraud & Boutin, 2002) the proposals seem proportionate to the population size on site at the time of survey, allowing for integration within the wider landscape. A maximum density of 50pr/km² has been suggested (Natura 2000 – management plan for Skylark (*Alauda arvensis*) 2007 –2009) suggesting that integration to higher densities is likely.

Comment: “Skylarks need open vistas with no structures near their nests The only way to retain the 11 territories on site is to provide wide buffers from any structures.”

Response: Not necessarily true, they actually require a matrix of crop diversity with provisioning of invertebrates between May – June (specifically spiders). Structural composition is secondary, and likely reflective of the homogenous nature of our arable landscapes.

Not all 11 territories are anticipated to be retained – some may move to adjacent areas, and new territories may be established where the species is more tolerant of the solar arrays. A sympathetic management plan will result in increased productivity – vegetation management can be undertaken following the breeding season to ensure nests are safeguarded.

There is very little published research on the effect of solar farms on nesting birds, but it is known that Skylark usually nest in short crops, such as spring crops, in open areas where predators can be observed. However, despite the apparently logical assumption that solar farms will have negative effects on Skylark, there is also some suggestion that this may not be the case. In addition, unpublished data from a study on the impacts of solar farms and farmland bird in collaboration with RSPB Centre for Conservation Science and Anesco (Stotton, 2018) reported that Skylark were within the 10 most common bird species using solar farms, with regular observation of Skylark singing whilst perched on solar panels. Skylark were present on eight out of nine study sites and were observed parachuting down between solar panels.

Therefore, the conclusion by the Biodiversity Team that “the proposed solar park will likely result in the permanent displacement of Skylark habitat within the site” is an understandable assumption, but

may be over emphasised because they may continue to nest around the panels or on the edge of the site.

Comment: *“How wide are the proposed buffers between the Zones and any hedgerows, trees, arrays, fencing and other structures?”*

Response: There are no proposed buffers to the Skylark Protection Zones. At their closest, the panels/arrays are between 1 and 2 m from the Skylark Protection Zones marked on the layout plan. All Skylark Protection Zones are adjacent to either retained/proposed hedgerows or retained off-site woodland

Comment: *“Have the buffer areas been excluded from the 3.16ha calculation?”*

Response: There are no ‘buffers’ shown on the plan and therefore there are no buffer areas within the 3.16 ha area calculation.

Comment: *“The Montag, Parker & Clarkson study states that ‘ground-nesting birds ... require unbroken sightlines’ and ‘where [hedgerow and tree] features are present, a larger open area may be required to encourage ground nesting.’”*

Response: This study in fact found that there was no overall statistical difference of Skylark territories on solar farm sites and control plots. During the study Skylark were found nesting between the solar panels and the boundary fence. The authors observed that Skylark are unlikely to nest underneath solar panels but that they certainly use solar farms for foraging and territorial displaying. The notion that “ground nesting birds (note – they haven’t specified Skylark) require unbroken sightlines” is a point of contention and should not be stated as fact; There has been little to no peer reviewed study of the requirements of various ground nesting birds, with much data being anecdotal – this is noted within the same paper (Montag, Parker & Clarkson, 2016). This suggestion is largely as a result of the likelihood of increased predation, with predators using the cover of such features to target the species. The site at Berrington contains a Pheasant release pen, and it is therefore likely that predator control is in place on site.

Comment: *“The Countryside Stewardship AB4 skylark plots option requires that plots are placed ‘away from tramlines (choosing a middle spot between two sets of tramlines works best)’ and ‘at least 50m from field boundaries and margins’ in order to ‘[m]inimise attacks on nests from predators’ (<https://www.gov.uk/countryside-stewardship-grants/skylark-plots-ab4#-to-use-this-option>).”*

Response: See above. Guidance from the RSPB suggests that the figure quoted above is very conservative, and recommends measures are undertaken at least 10 m from field boundaries.

Comment: *“Farm Wildlife states that ‘Skylark plots should not be connected to tramlines and should be sited away from field boundaries and telegraph poles to reduce the risk of predation. Ideally plots should be more than 80m from field edges to improve breeding performance’ (<https://farmwildlife.info/how-to-do-it/farmed-area/skylark-plots/>).”*

Response: See above.

Comment: *“What management is being proposed within the Skylark Protection Zones?”*

Response: This has yet to be agreed, and we have not yet been commissioned to undertake a species action plan as the application is still pending. An action plan with management recommendations for the species can be written, and will use the latest available research and existing guidance to inform measures (such as vegetation height, plant species mix, timing of cutting/other management).

Comment: *“Are any skylark plots being created?”*

Response: This can be added as a recommendation within the action plan.

References

ADAS (2022a) Berrington Solar Farm. *Ecological Impact Assessment*.

ADAS (2022b) Berrington Solar Farm. *File Note: Berrington Solar Farm Local Authority Response ADAS*.

Eraud, C. & Boutin, J. (2002) Density and productivity of breeding Skylarks *Alauda arvensis* in relation to crop type on agricultural lands in western France. *Bird Study*.

Montag, H., Parker, G. & Clarkson, T. (2016) The effects of solar farms on local biodiversity: a comparative study. *Environmental Science*.

Stotten, H. (2018) *Unpublished*.

Toepfer, S. & Stubbe, M. (2001) Territory density of the Skylark (*Alauda arvensis*) in relation to field vegetation in central Germany. *Journal fur Ornithologie*. 142(2), 184-194.

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