



SUNNICA ENERGY FARM

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6.6 Offsetting Habitat Provision for Stone-Curlew Specification

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Planning Act 2008

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



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Procedure) Regulations 2009**

Sunnica Energy Farm

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Table of contents

Chapter	Pages
1 Introduction	1
1.1 Overview	1
1.2 The Scheme	1
2 Legislative Context	3
3 Baseline	3
4 Mitigation	8
5 References	12

Table of Tables

Table 3-1: Stone-curlew Survey Information.....	5
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1 Introduction

1.1 Overview

1.1.1 This specification document provides details of the offsetting measures for Stone-curlew.

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 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 need for the Scheme to include the offsetting habitat provision for Stone-curlews is secured in a requirement of the draft DCO, which provides that certain works that form part of the Scheme may not commence until the offsetting habitat provision has been provided, in accordance with the specification set out in this document. The requirement also states that the Applicant must maintain the offsetting habitat provision for Stone-curlews in accordance with this document throughout the construction and operation of the Scheme. In addition, this document will be certified by the Secretary of State.

2 Legislative Context

2.1.1 As part of the assessment of a development, it is necessary to consider whether the Scheme is likely to have a significant effect on areas that have been internationally designated for nature conservation purposes (i.e. European Sites). European sites are protected under the Conservation of Habitats and Species Regulations 2017 (as amended; relevant to England and Wales) (Ref 1). The UK left the EU on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 (“the Withdrawal Act”). However, the most recent amendments to the Habitats Regulations – the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref 2) – make it clear that the need for Habitats Regulations Assessment (HRA) continues to apply. Whilst those 2019 Regulations make changes to the Habitats regime and terminology; much of the impact of those changes does not yet have a practical effect, particularly the introduction of the term ‘national site network’, given the short passage of time since the end of the transition period. As such, this document continues to use the term ‘European sites’ to refer to all Natura 2000 sites potentially affected by the Scheme.

3 Baseline

3.1.1 Information pertaining to Stone-curlew usage of the Order limits and a 500m buffer from the Order limits (collectively referred to as the ‘Study Area’) are detailed the **Appendix 8H** of the Environmental Statement [EN010106/APP/6.2]. This is summarised below and in **Table 3-1**. Field references are provided to aid interpretation and follow those shown on the Parameter Plans (see **Figure 3-1: Sunnica East Site A and B Parameter Plan** and **Figure 3-2: Sunnica West A and B Parameter Plan** of the Environmental Statement [EN010106/APP/6.3]).

3.1.2 [REDACTED]

[REDACTED]

3.1.3 [REDACTED]

3.1.4 No other Stone-curlew territories were recorded within 500m of the Order limits in 2019.

3.1.5 [REDACTED]

a. [REDACTED]

b. [REDACTED]

3.1.6 No other Stone-curlew territories were recorded within 500m of the Order limits in 2020.

3.1.7 [REDACTED]:



- 3.1.8 A further two pairs (Pairs J and K) were recorded within 500m of the Order limits in 2021.
- 3.1.9 It was concluded that in 2019 the breeding population of Stone-curlew present within the Order limits was between 2-3 pairs, with a further pair breeding within 500m of the Order limits. In 2020, the breeding population of Stone-curlew was between 1-4 pairs, with a further pair either non-breeding or breeding away from the Order limits, as described in Table 3-1 below. In 2021, the breeding population of Stone-curlew was 2-3 pairs, with a further two pairs within 500m of the Order limits.

Table 3-1: Stone-curlew Survey Information

Survey Year	Pair Reference	Location within the Order limits	Breeding Status	Nesting Site and/or breeding territory characteristics
[Redacted content]				

Survey Year	Pair Reference	Location within the Order limits	Breeding Status	Nesting Site and/or breeding territory characteristics
[Redacted content]				

Survey Year	Pair Reference	Location within the Order limits	Breeding Status	Nesting Site and/or breeding territory characteristics
[Redacted content]				

- 3.1.10 Stone-curlew is a ground nesting bird which breeds on downland, heathland and arable farmland in the south and east of England. Within the Brecks area, the birds prefer areas of short, sparse vegetation on light, stony soils, ideally associated with dry, sandy, semi-natural 'breck' heaths, but this may also include fallow land or spring-sown crops on arable farmland. Within and around the Breckland SPA this has been achieved by the establishment of Stone-curlew plots, which are generally 2ha areas of cultivated land within arable crops, or in some cases within pastures, which are kept free of crops and other vegetation before the arrival of the Stone-curlew in March.
- 3.1.11 The population occurring in and around the Order limits use a combination of fallow, spring-sown crops, such as beet and onions, bare ground associated with poultry farming and fields margins. Where possible, the RSPB works with a number of landowners in and round the Order limits to create Stone-curlew plots. From AECOM's observations and discussions with the RSPB, this is usually a maximum of one plot annually. Stone-curlew is, therefore, reliant on the cropping regime in any given year and the availability of suitable areas of fallow and spring-sown crops to be able to nest. This is reflected in the observations of Stone-curlew occurrence and distribution noted in surveys undertaken by the Applicant in 2019, 2020 and 2021 and detailed in the **Table 3-1**.
- 3.1.12 In their response to the HRA screening opinion, Natural England stated that land to be used for offsetting impacts on Stone Curlew should not be:
- a. within 1.5km from any residential settlements, infrastructure or major roads;
 - b. within 500m of any buildings or smaller roads, *i.e.* access roads; and
 - c. within 400m of any Public Right of Way (PRoW), other permissive path or area used for recreation.
- 3.1.13 With reference to **Table 3-1** and RSPB data, it is clear that Stone-curlew within the Order limits and surrounding area do not conform to the general guidance for territory occupancy and nesting sites. The areas embedded within the Scheme design for offsetting impacts on Stone-curlew utilise the species' current and historical distribution across the Order limits, irrespective of whether these meet the above criteria. Since this replicates the conditions the birds are already utilising (see **Table 3-1**), it is considered a suitably robust approach informed by empirical information on the nesting behaviour of the specific Stone-curlew pairs in question in this landscape.

4 Mitigation

- 4.1.1 Discussions with Natural England and RSPB have identified that the mitigation objective should be to ensure no net loss of breeding pairs in Breckland SPA by embedding sufficient areas within the Scheme design to offset the loss of potentially suitable arable farmland through erection of solar arrays. Since the arable farmland used by nesting Stone-curlew to be lost is outside the SPA boundary itself, the provision of replacement habitat does not class as 'compensation' in the sense of the Habitats Directive. In other words, the replacement Stone-curlew habitat does not constitute 'compensation' for adverse effects on the Stone-curlew population of Breckland SPA but is intended to avoid an adverse effect on the SPA population by ensuring that there is no decline in

nesting and foraging opportunities for the overall Brecks population, which might otherwise result in increased competition for resources with the SPA birds. There is precedent for this approach in the case of the A303 (Amesbury to Berwick Down) DCO¹ in which replacement Stone-curlew plots were not deemed compensation for adverse effects on the integrity of Salisbury Plain SPA because they were to accommodate the linked broader Wessex population rather than to the SPA itself. The Scheme design has embedded sufficient land to offset any potential reduction in arable farmland, that may, in any given year, be used by Stone-curlew.

4.1.2 As the provision of offsetting habitat is based on the species' fluid distribution within a farming landscape, the figure of a minimum of 16ha per pair has been applied. This acknowledges the requirement for not only suitable nesting sites, but also the requirement for foraging habitat.

4.1.3 The offsetting provision embedded within the Scheme design consists of the following:

Nesting Plots

4.1.4 A maximum of ten 2ha plots will be created across Sunnica East Sites A and B, in fields where Stone-curlew have been recorded during surveys. To maximise the potential for take up two plots have been allocated per pair. Plots unoccupied for nesting will contribute an important resource for foraging pairs. Three are proposed in ECO1, three in ECO2, and four across ECO3. Details of plot creation and management in the Brecks are provided by the RSPB information Note 'Managing nest plots for stone-curlews' (Ref 19), with further requirements set out in the Countryside Stewardship Higher Tier 'AB4: Nesting plots for Stone-curlew' guidance note (Ref 20) and the work undertaken by Hawkes *et al.* (2021) (Ref 21). Plots will be a minimum of 100m apart. Various cultivation techniques will be used to create a rough tilth and/or areas of bare ground, depending on ground conditions and other environmental factors or constraints. The new plots will be provided in advance of the loss of any existing habitat. This will mean that the new plots will be to be available in the breeding season prior to construction commencing.

Foraging habitat

4.1.5 Recent research has shown that the creation of bare ground provides an important foraging resource for breeding Stone-curlew, particularly if this is located near to the nesting site; most foraging by Stone-curlew occurs within 1km of the nest (Ref 22). As well as providing suitable nesting opportunities, the plots, delivered in advance of the loss of any existing habitat and located within areas shown by surveys to be used by Stone-curlew, will also deliver important foraging areas in close proximity to the nest site (approximately 100m).

4.1.6 As well as the bare ground plots, approximately 108ha of predominantly arable farmland have been embedded within the Scheme for reversion to grassland, specifically managed to create a close-cropped sward, suitable for Stone-curlew. Small areas of existing acid grassland have also been retained within the Scheme

¹ <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-001685-Highways%20England%20-%208.63%20Applicant%E2%80%99s%20Response%20to%20Rule%2017%20Letter.pdf>

design in Sunnica East Site B and these will form the basis of reverting adjacent areas in Sunnica East Site B to semi-natural grassland, characteristic of the Breckland heaths. In time this will provide a high quality habitat, offering both nesting and foraging opportunities for Stone-curlew. The disturbed plots will be retained within these established grassland areas for the lifespan of the project and remain undeveloped. The areas containing these plots are shown on the Parameter Plans (see **Figure 3-1: Sunnica East Site A and B Parameter Plan** and **Figure 3-2: Sunnica West A and B Parameter Plan** of the Environmental Statement [EN010106/APP/6.3]).

- 4.1.7 Within Sunnica East Site A the offsetting area will be sown with a chalk grassland mix and managed specifically for Stone-curlew, *i.e.* maintaining a close-cropped sward. The plots will be retained within these established grassland areas for the lifespan of the project.
- 4.1.8 There is a high degree of confidence that the Stone-curlew plots and foraging habitat will be utilised as it is to be provided in suitable areas regularly used by Stone-curlew, and the habitat, including nesting plots, is being designed and delivered following what has been successful with the other similar habitat and nesting plots around the Breckland area (Ref 19, Ref 21). The provision of this habitat will ensure no net loss of breeding territories within the Order limits. Therefore, it is considered that the Scheme will result in no adverse effect on the integrity of the SPA through this pathway.

Establishment and Management of Plots in ECO1 and ECO3

- 4.1.9 Within ECO 1 and ECO 3 the creation of plots will follow the details of plot creation and management provided by the RSPB information Note 'Managing nest plots for stone-curlews', with further requirements set out in the Countryside Stewardship Higher Tier 'AB4: Nesting plots for Stone-curlew' guidance note.
- 4.1.10 Various cultivation techniques can be used to create a rough tilth. The best results for Stone-curlew are achieved by using a spring tine cultivator, discs, cultivator with a press (not a pack roller or flexi-coil) or a plough with press. Where plot locations are already bare, cultivation may not be necessary, but weeds should be controlled with herbicide so that the plot remains bare until April.
- 4.1.11 The following cultivation programme would be required:
- By 15th March (prior to construction), prepare the whole 2ha plot by discing/light cultivation, ideally in February. This creates a rough bare fallow that provides suitable conditions for the first Stone-curlew nesting attempt.
 - During May, spray the whole plot using a non-selective herbicide ideally when the vegetation is no more than a few centimetres tall. This will create bare ground rather than a mat of dead vegetation. Spraying reduces the risk associated with intrusive management (such as through mowing) to a level that will not impact the population of Stone-curlew. The only danger from spraying, to Stone-curlew nests/chicks, is from tractor wheels. If the nest location is known it may be possible to reduce this risk by avoiding the area around the nest and/or by spraying only half of the plot.
 - Retain the fallow through the autumn/winter (at least until 30th September). Stone-curlew can nest late into the year so the fallow must be left until the end

of September. If left through winter, it will provide a vital source of seeds for farmland birds.

Establishment and Management of Plots and Grassland in Archaeological Areas (ECO2)

- 4.1.12 Within ECO 2 the Scheme would replicate ploughed field conditions within the plots to constitute 'bare-earth'. This would be managed through visual inspection and manual removal of aggressive weeds, to keep the plots bare on an annual basis.
- 4.1.13 To create the grassland outside the plots, the surface would be raked followed by hydroseeding across the existing surface.
- 4.1.14 The short-term management (0-5 years) would involve the following:
- a. Visual inspections during the growing season.
 - b. Looking for establishment rates and whether certain species are at risk of out-competing the grassland.
 - c. Grassland mown between two and four times at even intervals throughout the growing season to control the more competitive species and allow the newly sown less competitive species to establish.
 - d. Grassland cut in autumn (once grassland has set seed) with cut grass left in situ for 24hrs.
 - e. Cut vegetation will be removed from the grassland area (in combination with a litter pick).
 - f. Targeted weeding (including no residual herbicide) if invasive species.
- 4.1.15 The long-term management (5+ years) will involve low intensity conservation grazing once the grassland has established. Water troughs for animals will be provided in locations away from sensitive archaeological remains.

5 References

- Ref 1 Anon. 2018. Conservation of Habitats and Species Regulations 2017 (as amended). HMSO, London.
- Ref 2 HMSO (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. HMSO, London
- Ref 3 National Planning Policy Framework. Department for Communities and Local Government.
- Ref 4 European Commission (2001): Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and 6(4) of the Habitats Directive.
- Ref 5 Ministry of Housing, Communities & Local Government (2019).
- Ref 6 The Planning Inspectorate (2017). Habitats Regulations Assessment.
- Ref 7 Holohan ruling (C-461/17)
- Ref 8 People Over Wind and Sweetman v Coillte Teoranta (C-323/17)
- Ref 9 European Court of Justice in the 'Cooperatie Mobilisation for the Environment and Vereniging Leefmilieu (Dutch Nitrogen)' ruling.
- Ref 10 Environment Agency (2016). Air emissions risk assessment for your environmental permit.
- Ref 11 Department for Business, Energy and Industrial Strategy (2021) Guidelines on the assessment of transboundary impacts of energy developments on Natura 2000 sites outside the UK
- Ref 12 Environment Agency Ecology Data Explorer
- Ref 13 Wolseley, P. A.; James, P. W.; Theobald, M. R.; Sutton, M. A. (2006). Detecting changes in epiphytic lichen communities at sites affected by atmospheric ammonia from agricultural sources. *Lichenologist* 38: 161-176
- Ref 14 Dijk, N. (2011) Dry deposition of ammonia gas drives species change faster than wet deposition of ammonium ions: evidence from a long-term field manipulation. *Global Change Biology* 17: 3589-3607
- Ref 15 UK Centre for Ecology and Hydrology (CEH) (2016c). Sulphur Dioxide.
- Ref 16 IAQM (2014). Guidance on the assessment of dust from demolition and construction. Institute of Air Quality Management.
- Ref 17 Department for Transport (DfT) (2016). Standards for Highways online resources.
- Ref 18 Guderian, R. (1986). Terrestrial ecosystems: particulate deposition. In: *Air Pollutants and Their Effects on the Terrestrial Ecosystem* (Legge AH, Krupa SV,

eds). *Advances in Environmental Science and Technology*, Vol. 18. 339-363, Wiley, New York, USA.

- Ref 19 RSPB information Note. 'Managing nest plots for stone-curlews', Version 2 – Eastern England
- Ref 20 Natural England (2018) Countryside Stewardship grants Higher Tier 'AB4: Nesting plots for Stone-curlew' guidance note.
- Ref 21 Hawkes, R.W., Smart, J., Brown, A., Green, R.E., Jones, H. & Dolman, P.M. (2021) Effects of experimental land management on habitat use by Eurasian Stone-curlews. *Animal Conservation* – open access article.
- Ref 22 Taylor, E.C., Green, R.E., Perrins, J., 2007. Stone-curlews *Burhinus oedicnemus* and recreational disturbance: developing a management tool for access. *RSPB. Ibis* (2007), 149 (Suppl. 1), 37–44.