

Outline Bird Mitigation Area Management Plan

Revision Number: 1

June 2026

Future Energy Llanwern Limited

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1.0 Introduction

1.1 Background and Purpose of the Document

- 1.1.1 This Outline Bird Mitigation Area Management Plan (oBMAMP) has been produced on behalf of Future Energy Llanwern Ltd (the applicant) in relation to the proposed Future Energy Llanwern solar project, located on land between Goldcliff and Magor.
- 1.1.2 This document accompanies a re-consultation on the addition of land to the existing Development Consent Order (DCO) boundary for a Nationally Significant Infrastructure Project (NSIP) comprising the construction, operation, maintenance and decommissioning of Future Energy Llanwern (the Proposed Development), a ground mounted solar farm with a generating capacity of more than 350 MW for a temporary period of 40 years.
- 1.1.3 The oBMAMP will be finalised during the DCO process and is to be used to guide management of the proposed additional bird mitigation areas (**Figure 1-1**), covering the lifetime of the Proposed Development (40 years).
- 1.1.4 The purpose of the oBMAMP is to outline how the measures proposed will provide mitigation for the anticipated displacement of ground nesting and non-breeding birds as a result of the Proposed Development.
- 1.1.5 This is in line with protection measures and / or other mitigation measures already proposed as part of the Proposed Development as detailed within the outline Landscape and Ecological Management Plan (oLEMP) submitted as part of the Preliminary Environmental Information Report (PEIR). The LEMP is currently being updated in line with the final scheme design and consultation response with a final version to be submitted as part of the DCO application.
- 1.1.6 The area covered by this plan is referred to as the Bird Mitigation Area (BMA), as indicated in **Figure 1-1**.

1.2 Outline Aims of oBMAMP

1.2.1 The aims of the oBMAMP are to:

- Set out the principles for mitigating displacement of ground nesting and non-breeding bird species and loss of land used by breeding (ground nesting) bird species;
- Provide a clear framework for the delivery, management and long-term maintenance of bird mitigation measures;
- Guide the provision of functionally effective (higher quality), reliable and available mitigation at the appropriate time relative to construction and operation; and
- Establish an effective adaptive management and monitoring approach for the lifetime of the Proposed Development.



Key:

-  DCO Boundary
-  Existing Bird Mitigation Land
-  Additional Bird Mitigation Land



Map data ©2015 Google

Figure 1-1
Bird Mitigation Areas

Project:
Future Energy Llanwern

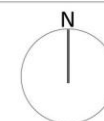
Client:
Future Energy Llanwern Limited

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2.0 Management Mechanism and Funding

2.1 oBMAMP Manager

- 2.1.1 It is likely that the applicant will take on responsibility for overall delivery of the oBMAMP.
- 2.1.2 The oBMAMP Manager will be responsible for commissioning a contractor/s to undertake the works in accordance with the oBMAMP. This Approved Contractor will be a suitably qualified and experienced contractor, capable of delivering the ongoing management works in line with the oBMAMP for the operational lifetime of the Proposed Development (40 years).

2.2 Funding

- 2.2.1 The applicant is committed to fund the costs of compliance with the oBMAMP in full. This will occur for the lifetime of the project (40 years).

2.3 Management Constraints

Timing

- 2.3.1 The final BMAMP will set out timing constraints for activities that could impact ecological features. For example, the Site supports dormouse, non-breeding and nesting birds, therefore hedgerow, tree and shrub management should be undertaken between November and February inclusive.
- 2.3.2 Any tree work should be preceded by a check by an Ecological Clerk of Works for roosting bats and barn owl by a suitably licensed ecologist.
- 2.3.3 Ground-nesting birds and sensitive populations of non-breeding birds will be safeguarded through careful management of livestock grazing and the avoidance of grass cutting during key periods (see **section 4.4**).
- 2.3.4 Rotational management techniques will be employed to reduce impacts to habitats and species over a large area.

3.0 Summary of Proposed Development Breeding Bird Baseline

3.1 BMA Baseline

- 3.1.1 The BMA is located in two separate areas in close proximity to the east (Eastern Area) and west (Western Area) of the DCO application boundary (**Figure 1-1**) and the sea wall to the south, and provides approximately 45ha of land.
- 3.1.2 The two areas are currently owned and managed by two separate landowners/ tenants, however both areas are rotationally managed by intensive sheep/ cattle grazing. It is understood that the Eastern Area, which is understood to be ancient pasture, would be ploughed, levelled to remove existing natural drainage channels and re-seeded as a grass ley should it not be brought into the DCO boundary.
- 3.1.3 Habitats present primarily include improved and semi-improved grassland fields, some with wetter areas, bordered by wet ditches and defunct and intact species poor hedgerows, some with trees. Hedgerows are between 1.5m to 2m in height and up to 3m width.
- 3.1.4 Previous breeding bird surveys were undertaken in 2019 and 2020 in the Eastern Area. This found evidence of low numbers of single skylark males singing and probable but no confirmed nesting was recorded, with possible/ probable breeding by other bird species including mallard in ditch riparian zones. Update breeding bird surveys are currently being undertaken in 2026 for both Eastern and Western Areas, in order to appropriately design the BMA using an evidence led approach.

3.2 Bird Survey Summary

- 3.2.1 This oBMAMP does not provide full comprehensive field surveys and desk-study information. All information available to date for the wider DCO boundary is detailed in Technical Appendix 9A and 9B (GE Consulting, 2025a and b). These documents are currently being updated, with a final version to be submitted with the DCO application. However, an overall, broad summary as per the PEIR assessment is provided below.

3.3 Breeding Bird Surveys

- 3.3.1 Breeding bird survey data amounted to 3,531 records of which 23% were of birds within the fields, 36% were of birds in the hedges or field boundaries, 9% were of birds associated with a waterbody, 30% were of birds in flight and 2% of records did not note an associated habitat.
- 3.3.2 A total of 98 bird species (breeding and non-breeding) were recorded on Site during the breeding bird surveys.
- 3.3.3 Of these, 68 are notable species; 24 were confirmed as breeding on Site, 12 species were 'probable' breeders on Site and a further 4 species were recorded as 'possible' breeders.
- 3.3.4 Notable ground nesting species that are at least 'possible' breeding on site include skylark, lapwing, oystercatcher and meadow pipit.

3.4 Winter Bird Surveys

- 3.4.1 Across the winter surveys, a total of 83 notable species were recorded on and adjacent to the site. Of these, five species are specifically named in the Severn Estuary Special Protection Area (SPA)/ Ramsar designation (European white-fronted goose, dunlin, shelduck, gadwall and redshank).
- 3.4.2 The peak count of all waterfowl species recorded within the application boundary over the three winter survey periods amounts to 258 birds. This equals 0.31% of the Severn Estuary SPA Assemblage as per the Natura 2000 figures. Taking into account the latest five-year moving average of 78,096 (19/20 – 23/24), the peak count would equate to 0.33% across all survey years.
- 3.4.3 Peak counts of three species exceed 1% of the national 5 year moving average population: shelduck (Amber Bird of Conservation Concern (BoCC) 5 & Red BoCC4 Wales), snipe (Amber BoCC5 & BoCC4 Wales) and curlew (Red BoCC5 & BoCC4 Wales).
- 3.4.4 Migratory species such as redwing (Schedule 1), fieldfare (Schedule 1, Red BoCC5,

Amber BoCC4 Wales) and starling (Red BoCC5 and BoCC4 Wales) and a Section 7 species were regularly recorded in flocks feeding in fields and hedgerows and moving across the PEIR Assessment Boundary as well as the surrounding countryside.

- 3.4.5 Four owl species were recorded: barn owl (Wildlife and Countryside Act (WCA) Schedule 1), little owl, tawny owl (Amber-listed BoCC5) and short-eared owl (Amber-listed BoCC5 & Amber BoCC4 (Wales)). Barn owl were recorded semi-regularly (43 sightings) within the western and northern parts of the site, south of Redwick and in a small number (generally singly) of fields east of Summerleaze.

4.0 Outline Bird Mitigation Area Strategy

4.1 Overview

4.1.1 The strategy is based on provision of dedicated mitigation areas managed specifically to provide enhanced resources (foraging and nesting) for bird species currently using the DCO application area.

4.1.2 The mitigation has been designed to provide:

- Habitat of improved functional value and carrying capacity compared to the existing baseline conditions;
- Reliable availability and management during the breeding period;
- Low-disturbance conditions suitable for ground nesting birds i.e. cessation of intensive farming activities.

4.1.3 For the purposes of this oBMAMP, 'reliable availability' refers to the capacity of the Site to consistently provide suitable nesting and foraging habitat during the breeding period throughout the Proposed Development lifetime, taking into account factors such as habitat condition, management regimes, and potential sources of disturbance.

4.1.4 It is intended that the BMA will be delivered prior to construction being started.

4.1.5 It is anticipated that the provision of dedicated bird areas as well as the panelled fields themselves, will be of wider benefit as there is evidence that birds, in particular skylark, use solar site margins as nurseries (Solar Energy UK, 2026). Therefore, the overall ornithological function of the DCO and surrounding land will be maintained.

4.2 Aims and Objectives of the Bird Mitigation Area

4.2.1 The overarching aim of the BMA is to provide higher-quality habitat compared to the existing baseline for ground nesting and non-breeding birds to mitigate the displacement of birds and loss of habitat as a result of the Proposed Development.

4.2.2 The outline management objectives are:

1. Create a varied open, sward and grassland habitat mosaic with nesting and foraging features to be of benefit for ground nesting and non-breeding birds;
2. Manage as extensively grazed pasture with low stocking rates (conservation grazing) with removal/ reduction in grazing during the key periods;
3. Enhance existing wet features and create new features where appropriate; and
4. Remove / reduce the suitability of potential predator opportunities by removing/ reducing hedgerows in height, as well as creating large open vistas for greater surveillance.

4.2.3 Detailed management prescriptions and design measures will be detailed in the final BMAMP secured through the DCO application, including a management schedule detailing a five-year management programme of maintenance activities and actions to meet the proposed objectives. This will be reviewed and updated annually for the first five years, then every five years. Outline details are provided below.

4.3 Habitat Types to be Delivered

- 4.3.1 The BMA will be managed exclusively for the benefit of ground nesting and non-breeding birds and will deliver indirect benefits for other breeding bird species through increase of invertebrate populations.
- 4.3.2 The BMA will comprise grassland habitats known to be used by the ground nesting and non-breeding bird species, broadly:
 - Open botanically diverse grassland with open vistas.
 - Enhanced existing wet features including shallow wet pools e.g. depressions formed by grips with some bare patches for foraging.
 - Removal/ reduction in height or extent of hedgerows (excluding outer boundary hedgerows) to reduce potential predator perches and create greater open sightlines.

4.4 Grassland

4.4.1 The main principles of grassland creation and management are likely to be as follows (with full details to be set out in the detailed BMAMP), aiming to create and maintain a habitat mosaic that is of high-quality for ground nesting and non-breeding bird species:

- Grassland within the BMA will, where practicable, be managed through conservation grazing once fully established, with grazing used as the primary mechanism to achieve the desired sward structure;
- A short sward will be maintained in spring, with average sward heights of approximately 3 cm or less in April, while retaining scattered areas of taller tussocks (approximately 10–15 cm) throughout to provide shelter and structural diversity;
- Bare ground scraping will be undertaken on an annual rotational basis to create sparsely vegetated habitat;
- Removal/reduction of grazing between mid-March and mid-June (light grazing to continue onwards) to avoid trampling and damage. An indicative starting stocking density of approximately one beast (cow/heifer/steer/bull) per hectare (ha) or five sheep /ha will be employed, to be dynamically assessed. Mixed grazing is acceptable;
- Livestock grazing will be the primary management tool for achieving the desired sward structure, with mechanical management employed where necessary to supplement grazing;
- If applicable, rotational grazing using small mobs will be adopted to minimise the risk of poaching, particularly during wetter periods;
- Grazing during late summer and autumn (typically August to November) will be used to achieve and maintain an optimal sward height of approximately 5–10 cm from October to March to be of benefit to non-breeding birds;

- Any raised livestock water points (e.g. troughs) will be positioned along the edges of the BMA to minimise the risk of poaching and will be relocated periodically to prevent localised impacts;
- Supplementary feeding and routine livestock treatments within the BMA will be avoided unless required for animal welfare, veterinary, or biosecurity purposes.
- Organic matter, such as farmyard manure, can be added to all or parts of the mitigation area to improve soil health and therefore increase invertebrate biomass. The precise extent, timing and location of any such measures will be at the discretion of the appointed managing person(s)/bodies and will be detailed in the final version.
- Periodic mowing or cutting of taller ruderal vegetation may be undertaken to maintain open conditions and the desired sward structure in combination with grazing if required. This should be in line with the sensitive timings outlined above, outside the main breeding season.
- Rushes will be topped close to the ground using a tractor-based mower, retaining 10% uncut, outside the breeding season. Grazing with cattle immediately after cutting.

4.5 Wet Features

- 4.5.1 Grips (artificial drainage features) (Western Area) and existing natural channels (these are existing channels that are understood to be an original feature of the saltmarsh that would have been present prior to agricultural use), (Eastern Area) will be maintained to aid the natural accumulation of water during wet weather in depressions while maintaining the historic features already present, with both bare areas and taller tussocks maintained to provide foraging and cover.
- 4.5.2 Grips/ natural channels will be monitored in winter, spring and summer to assess vegetation establishment, macrophyte levels and water depth, with levels adjusted (under SSSI/ Land Drainage Consent) to ensure these remain damp or seasonally wet subject to local climatic conditions.

- 4.5.3 Areas around grips/ channels will be periodically managed through light ground disturbance to maintain open areas and sparsely vegetated margins, including in early March before the breeding season, with these areas re-positioned annually.
- 4.5.4 Grip maintenance will be detailed in any future SSSI/ Land Drainage Consent but will focus on the maintenance of linear depressions in historic locations based on LIDAR survey images, with clearance and re-cutting undertaken as required.

4.6 Hedgerows

- 4.6.1 Hedgerows will be managed in order to open up what are currently small, enclosed fields, particularly in the Western Parcel, which are currently sub-optimal for ground-nesting and non-breeding birds.
- 4.6.2 For the Eastern Area there are concerns over cattle welfare should all internal hedgerows be removed as it is understood that during recent heatwaves cattle were lost due to lack of shelter in the wider landholding. For this reason, in this area only, hedgerows will be initially reduced in height only. If, through monitoring, this appears to be limiting the functionality of the land for breeding birds, partial removal will be undertaken, followed by full removal as a final option as part of an adaptive management plan.
- 4.6.3 In the eastern area, hedgerows will be reduced to 1m in height and where appropriate and through agreement with the relevant stakeholders, trees will be pollarded to maintain open areas and limit predator perches. In the western area, internal hedgerows will be removed and trees will be pollarded.

4.7 Other measures

- 4.7.1 Pesticide application will cease. This will encourage invertebrates as food source for rearing chicks.
- 4.7.2 A wire stock fence will be maintained around the BMA to restrict animal movement into it.
- 4.7.3 Management will require regular site visits and a responsive, adaptive approach to

reflect prevailing site conditions. As such, management will be an ongoing process, involving routine inspections and, where necessary, intervention throughout the year.

- 4.7.4 Management activities may include, but will not be limited to livestock grazing and/or cutting regimes, management of other habitat features, and the general upkeep of the BMA. These measures will be implemented and adjusted as required to ensure that the objectives of the BMA are achieved and that the site continues to provide suitable habitat for ground nesting and non-breeding birds.

5.0 Monitoring and Plan Review

5.1 Review

- 5.1.1 An adaptive management approach will be adopted whereby the results of monitoring feed back into the appropriate management of the Site and the management plan updated accordingly. The oBMAMP Manager will be responsible for implementing any remedial actions recommended by a suitably experienced ecologist and relevant stakeholders.
- 5.1.2 Management will be undertaken for the lifetime of the project following each revised management plan.

5.2 Monitoring

- 5.2.1 Monitoring will be undertaken by the appointed suitably experienced ecologist to confirm compliance with the BMAMP and assess effectiveness of mitigation proposed.
- 5.2.2 The process and structure for reporting of monitoring will be agreed with Natural Resources Wales, the Local Planning Authority and other relevant bodies, if appropriate.

5.1 Bird Surveys

- 5.1.1 Bird surveys would be undertaken in post-construction years 1 to 5 annually and then every five years. A summary monitoring report will be produced the following winter.
- 5.1.2 This will include a review of the hedgerow retention in the eastern parcel as per paragraph 4.6.2.

5.2 Setting Measurable Targets

- 5.2.1 In order to determine the success of the BMA and to review on-going management requirements, measurable targets will be needed. These will be agreed through consultation with NRW, but it is proposed that they will consist of:

- Key grassland attributes including sward height, cover (%) and presence and extent of mosaic features;
- The extent of water retention in grips/ natural channels, including depth at critical times of the year;
- Annual breeding bird surveys to determine presence and utilisation of habitats of these species.

6.0 Conclusion

- 6.1.1 Through the implementation of the oBMAMP described above, the Proposed Development is expected to deliver an overall enhancement to the favourable conservation status of ground nesting and non-breeding birds within the Order Limits and the surrounding area.
- 6.1.2 It is recognised that ground-nesting species associated with open habitats (e.g. skylark and lapwing) are likely to be the species most affected by the project, owing to the potential loss of, or displacement from, suitable nesting habitat. However, the provision and long-term management of high-quality grassland habitat designed to support ground-nesting birds, together with the creation and maintenance of suitable foraging habitat, is expected to ensure that the favourable conservation status of these species is maintained and, where possible, enhanced.
- 6.1.3 This document establishes an adaptive outline management and monitoring framework to ensure that the proposed mitigation measures remain effective over time. The framework sets out the overarching approach to management, monitoring, review, and adaptive intervention, with detailed responsibilities, performance indicators, review mechanisms, and remedial actions to be defined and secured through the final BMAMP. The detailed BMAMP will be prepared post-consent and approved in accordance with the relevant Requirement of the DCO.
- 6.1.4 On this basis, and subject to the implementation of the measures set out within this oBMAMP and their subsequent refinement through the detailed BMAMP, the project can be delivered while maintaining and enhancing the favourable conservation status of the relevant farmland bird populations.

7.0 References

GE Consulting (2025a) Appendix 9A: Wintering Birds Surveys

GE Consulting (2025b) Appendix 9B: Breeding Birds Surveys

Solar Energy UK (2026) Solar Farms & Skylarks June 2026. Available at:

<https://solarenergyuk.org/wp-content/uploads/2026/06/Solar-Farms-Skylarks-Draft-2026-1.pdf>. Accessed 30.06.26