

Rosefield Solar Farm

Position Paper on Arable Field Margins and BNG
Assessment



EN010158/APP/8.37
Deadline 5
July 2026
Rosefield Energyfarm Limited

Planning Act 2008
Infrastructure Planning
(Applications: Prescribed Forms
and Procedure) Regulations 2009

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1. Introduction

1.1. Purpose

- 1.1.1. This report has been prepared in response to concerns raised by the Claydon Solar Action Group (CSAG) with the Applicant's baseline mapping of arable field margins, specifically CSAG's assertion that the Applicant has failed to correctly map all arable field margins, and therefore has falsely reduced the area habitat biodiversity unit baseline. As a result of this, CSAG also raised concerns that the Applicant will not be able to achieve its biodiversity net gain commitment to deliver 40% in habitat area biodiversity units. This report demonstrates that the criticisms are without merit and that the Proposed Development will achieve its BNG commitments.

1.2. Mapping of Hedgerows, Arable Field Margins and BNG: Applicant's approach to date

- 1.2.2. Table 1 provided on page 12 of the Statutory Biodiversity Metric User Guide¹ provides an explanation of the terms used within this guidance. For habitat types, users are instructed to see the 'habitat definitions' tab in the Statutory Metric condition assessment sheets² for definitive source classifications for each habitat. Source material includes:
- UK Habitat Classification;
 - European Nature Information System habitat type hierarchical view;
 - Water Framework Directive Lake typologies; and
 - Natura 2000 (Annex I habitats).
- 1.2.3. UK Habitat (UKHab)³ is a standardised system used to map and describe different habitat types within the UK and is the definitive source for habitat classification of hedgerows used by the Statutory Biodiversity Metric⁴. It is also standard practice for UKHab surveys to use a minimal mapping unit (MMU)⁵. The standard unit for this is 25 m² for area habitats or 5 linear metres

¹https://assets.publishing.service.gov.uk/media/6a1d98e9c7335e2ca6daadd5/The_Statutory_Biodiversity_Metric_-_User_Guide_-_June_2026.pdf

²https://assets.publishing.service.gov.uk/media/689c5f19d2a1b0d5d1bb1254/Statutory_Biodiversity_Metric_Condition_Assessments_-_July_2025.xlsx

³ UKHab Ltd (2023). *UK Habitat Classification Version 2.0* (at <https://www.ukhab.org>)

⁴https://assets.publishing.service.gov.uk/media/6867e61881dd8f70f5de3b63/The_Statutory_Metric_Macro_Enabled_1.0.4.xlsm

⁵ Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification User Manual Version 1.1 at [REDACTED]

for linear habitats (see page 6 of the user manual). This is the approach adopted by the Applicant in the DCO Application to date.

- 1.2.4. The UKHab definition of hedgerows (see page 91 of the UKHab user guide³) states: "included in the classification of hedgerows (h2) are '*any bank, wall, ditch, tree or herbaceous vegetation that is <2m from the hedgerow centre*'. Therefore, margins up to 2m from the hedgerow centre had been accounted for within the hedge mapping and the condition assessment for hedgerow habitat (further detail provided below).
- 1.2.5. The UK Biodiversity Action Plan (BAP) priority habitat definitions⁶ (which lists the habitats and species of principal importance in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006⁷), states for arable field margins "*Arable field margins are usually sited on the outer 2-12m margin of the arable field, although when planted as blocks they occasionally extend further into the field centre ... Where there is a living field boundary (hedgerow or line of trees), any herbaceous vegetation within 2 m from the centre of the living boundary is considered to be part of the living boundary habitat*".
- 1.2.6. The UKHab definition of arable field margins (see page 142 of the UKHab user guide³) states "*Arable field margins are usually sited on the outer 2-12 m margin of the arable field*". Therefore, the Applicant had recorded arable field margins as area polygons within the baseline where arable margins are over 2m wide.
- 1.2.7. The Statutory Biodiversity Metric⁴ calculates different types of Biodiversity Units to determine Biodiversity Net Gain. There are three types of Biodiversity Units, which are calculated in three separate 'modules' of the Metric. These are:
- area habitat units (e.g. woodland, grasslands, wetlands);
 - hedgerow units (e.g. hedgerows and lines of trees); and
 - watercourse units (e.g. culverts, canals, wet ditches, rivers and streams).
- 1.2.8. Consequently, a site can have three biodiversity unit values, which are all assessed using the Statutory Biodiversity Metric, but which cannot be summed together or traded between.
- 1.2.9. In Biodiversity Net Gain, hedgerows, and other vegetated linear features, are recorded separately from area habitats and are measured in linear units (kilometers or meters).
- 1.2.10. The Statutory Metric User guide, page 26¹ states:

⁶ [UK Biodiversity Action Plan: Priority Habitat Descriptions \(Updated December 2011\)](#)

⁷ <https://www.legislation.gov.uk/ukpga/2006/16>

“When accounting for the area adjacent to hedgerows you should:

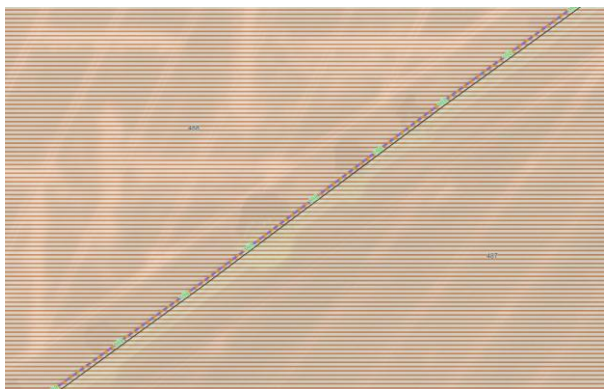
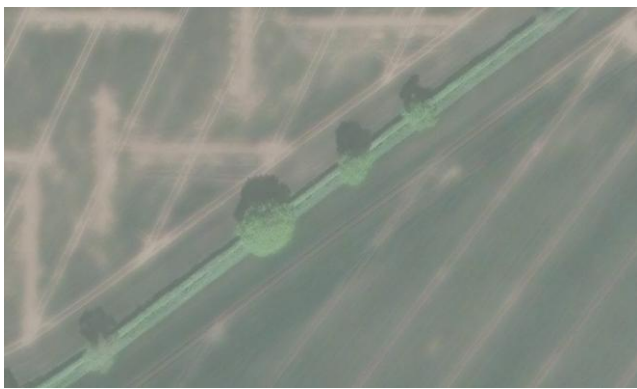
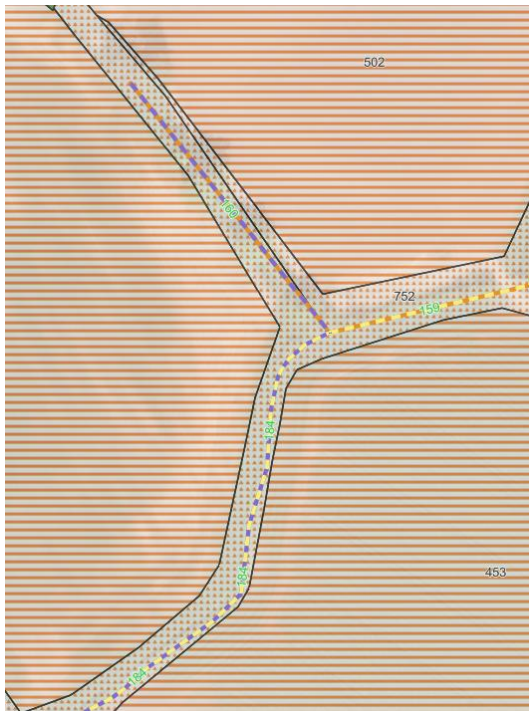
- map the area of habitat to the centre line of the hedgerow.*
- not subtract hedgerow footprint or canopy cover from any area habitat*
- not record the loss of area habitat where hedgerows are planted”*

1.2.11. Therefore, despite hedgerows physically taking up an ‘area’ of space on the ground, for mapping and BNG purposes hedgerows are shown as a linear polyline feature⁸, regardless of the actual physical width of the hedgerow, and the area habitat that is recorded adjacent to the hedgerows is recorded up to the line of the hedgerow mapping.

1.2.12. In preparing the DCO Application, the Applicant recorded arable field margins as area polygons within the baseline, where arable margins are over 2m wide, to the centreline of the hedgerow. Arable margins which fall within 2m of the centreline of the hedgerow were included within the hedgerow line as described above. In BNG mapping terms, margins within 2m of the hedgerow centre would not be displayed on a map, being incorporated within the hedgerow line, and would not be mapped as a separate polygon (see Table 1 for examples).

⁸ A polyline is an ordered collection of paths. Each path is a collection of contiguous line segments. A line segment is defined by a pair of consecutive points

Table 1. Examples of arable margin mapping that are above and below the MMU.

	
Example of an arable field margin that falls below the MMU that had not been mapped as a separate polygon (Fields D17 and D18).	
	
Example of an arable field margin that are above the MMU that had been mapped as a separate polygon (Fields B9, B17 and B18).	

- 1.2.13. When undertaking the hedgerow condition assessment, several criteria are assessed to determine condition. The following is stated in criterion C1²:

Table 2. Extract from Statutory Metric condition assessment sheets for hedgerows

C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.
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1.2.14. This criterion specifically considers the importance of undisturbed ground with perennial herbaceous vegetation as part of the hedgerow habitat, therefore accounting for the arable field margins that are less than 2m within the condition assessment criteria for hedgerows, as per the requirements stated within the Statutory Metric condition assessment sheets.

1.2.15. The Applicant therefore accounted for:

- Arable margins >2m by mapping them as polygons and undertaking a specific condition assessment for these areas; and
- Arable margins <2m within 2m of the hedgerow centre by capturing them within the hedgerow line. As they form part of the hedgerow feature, their presence directly impacts the condition of the hedgerow through the C1 condition criteria.

1.2.16. The Applicant has found limited evidence that other solar NSIPS have deviated from this approach. The Applicant has noted that West Burton, Peartree and Springwell specifically only mapped margins greater than 2m wide as area polygons, those up to 2m wide being incorporated within the hedgerow mapping, taking same approach as the Proposed Development.

1.3. Applicant's Updated Approach in Response to CSAG Comments

1.3.1. It is the Applicant's view that the approach set out above is correct and appropriate. However, notwithstanding this evidence, and to address the CSAG request, the Applicant has updated the BNG assessment at Deadline 5 to map arable field margins within the baseline to all arable fields, even those within 2m of a hedgerow centre (see **ES Volume 4, Appendix 7.17: BNG Assessment [EN010158/APP/6.4.4]**). In doing so, the baseline value for area

habitat units has resulted in an increase from 2089.39 area habitat units at Deadline 4 to 2098.33 area habitat units at Deadline 5.

- 1.3.2. For the post development scenario, the Applicant has taken the same approach to arable fields margins as set out in **Applicant's Response to Deadline 3 Submissions [EN010158/APP/8.22] [REP4-081]**(see Ref 3.1.7). While the arable field margins will be physically retained and enhanced, they will no longer be margins adjacent to arable fields due to the arable context being lost from the conversion of arable fields to grassland. As a precautionary approach, the Applicant has entered these arable margins as 'lost' habitat and 'recreated' as other neutral grassland in moderate condition.
- 1.3.3. In doing so, the post-development value for area habitat units has resulted in a decrease from 3123.83 area habitat units at Deadline 4 to 3076.73 area habitat units at Deadline 5. This equates to an overall net gain of 46.63% area habitat units at Deadline 5 (a 2.88% difference from the BNG assessment submitted at Deadline 4, where a 49.51% net change in area habitat units was reported).
- 1.3.4. This review has demonstrated that the Applicant is still able to fulfil their commitment to delivering a minimum 40% area habitat units as part of the Proposed Development, regardless of whether the Applicant's original approach or that advocated by CSAG is adopted.



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