

**Client Name:** JBM Solar

**Site Name:** Cotmoor Solar Farm

**Project Ref:** JBMSO-592-1248

**Date:** 8<sup>th</sup> December 2021

## Biodiversity Net Gain Note

### Introduction

1. This Biodiversity Net-gain Note has been prepared by Avian Ecology Ltd. (AEL) on behalf of JBM Solar in relation to the Biodiversity Net Gain assessments undertaken for the proposed Cotmoor solar development.
2. Biodiversity net-gain in development is defined as “*development that leaves biodiversity in a better state than before*”. The National Planning Policy Framework (NPPF, 2021<sup>1</sup>) requires the demonstration of biodiversity net-gain with any planning applications. The accompanying National Planning Practice Guidance (NPPG2) states that using a metric is a pragmatic way to calculate the impact of a development and the net gain that can be achieved. It goes on to state that ‘tools such as the Defra biodiversity metric can be used to assess whether a biodiversity net-gain outcome is expected to be achieved’.
3. The Environment Act 2021<sup>3</sup> includes for a measurable Biodiversity Net Gain, but it is believed that the requirement of a 10% gain will not be introduced until Autumn/Winter 2023. Whilst a 10% gain is not yet mandatory, many Local Planning Authorities (LPAs) have begun to incorporate biodiversity net-gain policies into their Local Plans.

### Original Net Gain Assessment using Natural England’s Biodiversity Metric Version 2.0 (Beta)

4. A biodiversity net gain assessment was undertaken using the Natural England Biodiversity Metric Version 2.04 (Beta) to accompany the planning submission in 2020. The Metric provides a way of

---

1

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1005759/NPPF\\_July\\_2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf)

2 <https://www.gov.uk/guidance/natural-environment>

3 <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

4 <http://publications.naturalengland.org.uk/publication/5850908674228224>

measuring and accounting for changes in the biodiversity value of a Site by using Habitat Unit measurements as a proxy for overall biodiversity. The assessment identifies whether or not a proposed development can achieve net gain (a positive % change in Habitat Units).

5. It should be noted that the Version 2.0 Metric was published in 2019 as a Beta Test version, to enable wider user feedback
6. The Metric takes into account a range of factors when calculating the value of a habitat, including the habitat area (measured in hectares), distinctiveness (it's intrinsic value and rarity), condition (the quality of the habitat being assessed), and strategic significance (how ecologically valuable is the location).
7. Baseline pre-development habitats, their Condition and overall Habitat Unit scores are calculated and are then compared with the calculated post-development Habitat Unit scores. Some value elements such as the Distinctiveness of a habitat is pre-set within the Metric and cannot be changed; Habitat Condition however is calculated, based on the Version 2.0 Technical Supplement (Beta Edition 2019) Condition Assessment Sheets.
8. The post development site is scored taking into account land take and habitat lost, plus any new or enhanced features. The target Condition of these new or enhanced habitats was assigned during the net gain assessment based on the likely achievable condition of the proposed habitat type, taking into account local conditions (e.g., soil nutrient levels) and proposed management over the lifetime of the solar farm (or at least 30 years).

### ***Second Net Gain Assessment using Metric Version 3.0***

9. Following minor changes to the proposed development layout and associated Landscape Plan, an updated biodiversity net gain assessment was undertaken in December 2021, using the more recent Natural England Biodiversity Metric Version 3.05 (issued July 2021). This replaces the Version 2.0 Metric and Natural England notes that Biodiversity Metric 3.0 introduces a number of improvements and corrects some issues associated with Metric 2.0.
10. Version 3.0 provides more detailed Condition assessment sheets, with attendant improvements in assigning both pre and post-development habitat Condition scores. As an example, the Version 3.0

---

<sup>5</sup> <http://publications.naturalengland.org.uk/publication/6049804846366720>

Metric Technical Supplement<sup>6</sup> now provides two separate Condition Assessment Sheets for a range of Grassland habitat types, compared to a single Assessment Sheet in the previous Version 2.0 Metric.

11. The differences between the two Biodiversity Net Gain Assessments are relatively small, and relate to:
  - a) minor changes in habitat areas (some 5 hectares more of higher scoring neutral grassland for the second assessment); and,
  - b) assignment of Condition scores for post-development habitats (higher scores in the second assessment)
12. Together these result in the second assessment delivering a notably higher gain in Habitat Units for the proposed development. The Condition scores available to be selected are as follows:

Poor-Fairly Poor-Moderate-Fairly Good-Good.
13. For the original Net Gain assessment using Metric Version 2.0, post-development habitats (mainly grassland) were assigned Condition scores of Fairly Poor. The Version 2.0 Condition Assessment Sheet for Grassland (shown below) provides for some ambiguity in the scoring and on a precautionary basis an intermediate score between Poor and Moderate was selected (i.e. Fairly Poor).

---






<sup>6</sup> <http://publications.naturalengland.org.uk/publication/6049804846366720>

## Metric Version 2.0 Condition Assessment Sheet for Grassland:

Condition Table Grassland Habitat Types		
Habitat Description		
<ul style="list-style-type: none"> <li>Includes both agricultural, recreational, amenity, road verges and semi-natural grassland types including Priority Habitat Grasslands on all soil types.</li> <li>Will be dominated by grassland species with very little (if any) dwarf shrub, wetland or wooded species within the sward.</li> <li>Will exist above and below the level of enclosure at all altitudes.</li> </ul>		
Condition Assessment Criteria		
<ol style="list-style-type: none"> <li>The area is clearly and easily recognisable as a good example of this type of habitat and there is little difference between what is described in the relevant habitat classifications and what is visible on site.</li> <li>The appearance and composition of the vegetation on site should very closely match the characteristics for the specific Priority Habitat (i.e. as described by either the Phase 1 Habitat Classification or the UK Habitat Classification), with species typical of the habitat representing a significant majority of the vegetation.</li> <li>Wildflowers, sedges and indicator species for the specific Priority grassland habitat are very clearly and easily visible throughout the sward and occur at high densities in high frequency. See relevant Habitat Classification for details of indicator species for specific habitat.</li> <li>Undesirable species and physical damage is below 5% cover.</li> <li>Cover of bare ground greater than 10% (including localised areas, for example, rabbit warrens).</li> <li>Cover of bracken less than 20% and cover of scrub and bramble less than 5%.</li> </ol>		
Condition	Assessment Criteria	Score
Good	<ul style="list-style-type: none"> <li>Species-rich Grassland of all Priority Habitat Types. Of high to moderate quality.</li> <li>Wildflower and sedges above 30% excluding white clover <i>Trifolium repens</i>, creeping buttercup <i>Ranunculus repens</i> and injurious weeds.</li> <li>Meets all the condition criteria with only minor variation.</li> <li>None of the indicators of poor condition are present (4, 5 &amp; 6).</li> </ul>	3
Moderate	<ul style="list-style-type: none"> <li>Semi-improved grassland occurs on a wide range of soils and may be derived from higher quality Priority Habitat grassland habitats in poor condition. Often as they deteriorate following nutrient inputs. Typical grasses include: cock's-foot, common bent, creeping bent, crested dog's-tail, false oat-grass, meadow fescue, meadow foxtail, red fescue, sweet vernal grass, Timothy, tufted hair-grass and Yorkshire-fog.</li> <li>Total cover of wildflowers and sedges less than 30%, excluding white clover, creeping buttercup and injurious weeds.</li> <li>Rye-grass cover is less than 25% including amenity grasslands.</li> <li>OR clearly fails at least 1 of the condition criteria.</li> <li>OR The grassland type has some differences between what is described in the relevant habitat classifications and what is visible on site. It is a Lower Quality Priority Habitat, but clearly recognisable as such.</li> </ul>	2
	<ul style="list-style-type: none"> <li>Potentially restorable to grassland Priority Habitat with improved management.</li> <li>Cover of undesirable species at 5- 15%.</li> </ul>	
Poor	<ul style="list-style-type: none"> <li>Agricultural grasslands is characterised by vegetation dominated by a few fast-growing grasses on fertile, neutral soils. It is frequently characterised by an abundance of rye-grass <i>Lolium</i> spp. (above 25% cover) and white clover <i>Trifolium repens</i>. These grasslands are typically either managed as pasture or mown regularly for silage production or in non-agricultural contexts for recreation and amenity purposes; they are often periodically re-sown and are maintained by fertiliser treatment and weed control. They may also be temporary and sown as part of the rotation of arable crops but they are only included in this broad habitat type if they are more than one year old.</li> <li>Amenity and Road verge grasslands with similar species to description for agriculture grasslands.</li> <li>OR Most of the condition criteria are being failed.</li> <li>Cover of undesirable species above 15%, usually resulting in a dense scrub or tree cover, or high cover of exotic species.</li> </ul>	1
<b>Undesirable species:</b> <ul style="list-style-type: none"> <li>creeping thistle <i>Cirsium arvense</i>, spear thistle <i>Cirsium vulgare</i>, curled dock <i>Rumex crispus</i>, broad-leaved dock <i>Rumex obtusifolius</i>, common ragwort <i>Senecio jacobaea</i>, common nettle <i>Urtica dioica</i>, creeping buttercup <i>Ranunculus repens</i>, white clover <i>Trifolium repens</i>, cow parsley <i>Anthriscus sylvestris</i>, marsh thistle <i>Cirsium palustre</i> and marsh ragwort <i>Senecio aquaticus</i>.</li> </ul>		
<b>Notes</b> <ul style="list-style-type: none"> <li>Physical damage to the vegetation from: excessive poaching, damage from machinery use or storage, or any other damaging management activities.</li> </ul>		

14. For the updated Net Gain assessment, when the post-development habitats were assessed using the Condition Assessment Sheets for Metric Version 3.0, it could be seen that higher habitat Condition scores of Moderate could reasonably be achieved for the proposed new habitats. An example is provided below showing how the grassland to be sown under and around the solar panels (i.e. the main habitat area to be created across the Site) has been assessed to confirm likely post-development habitat Condition. Green ticks show criteria achieving 'Pass'. The scoring is precautionary, and if a criterion could not be confidently assigned a Pass it was assumed to Fail. This created grassland habitat therefore achieves a Moderate Condition score, compared to Fairly Poor using Metric Version 2.0.
15. This difference in Condition scoring using Version 3.0, along with minor changes to habitat areas, results in a higher positive change in Habitat Units associated with the Proposed Development and increased net gain.

#### Metric Version 3.0 Condition Assessment Sheet for Grassland (low distinctiveness)

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)	
UKHab Habitat Type(s)	
Grassland - Modified grassland	
Habitat Description	
<a href="#">See UKHab</a>	
Condition Assessment Criteria	
1	There must be 6-8 species per m <sup>2</sup> . Note - if a grassland has 9 or more species per m <sup>2</sup> it should be classified as a moderate distinctiveness grassland habitat type. <b>NB - this criterion is non-negotiable for achieving good condition.</b> 
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed. 
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type. 
4	Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities.
5	Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens.
6	Cover of bracken less than 20%. 
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species <sup>1</sup> make up less than 5% of ground cover. 
Condition Assessment Result	
Passes 6 or 7 of 7 criteria including non-negotiable criterion 7	
Good (3)	
Passes 4 or 5 of 7 criteria; OR	
Passes 6 of 7 criteria excluding non-negotiable criterion 7	
Moderate (2)	
Passes 0, 1, 2 or 3 of 7 criteria	
Poor (1)	

### ***Summary***

1. Two Net Gain Assessments have been run for the Proposed Development based on two versions of Natural England's Metric.
2. Both demonstrate that clear net gain will be achieved, whichever Metric Versions is used; well above the 10% identified in the Environment Act 2021.
3. The original Metric Version 2.0 calculations resulted in +36.78% net gain in Habitat Units, and the second iteration, using Metric Version 3.0, calculates a 91.74% net gain.
4. The difference results from minor changes to habitat areas created post-development, and assignment of higher habitat Condition scores in line with the most recent guidance published alongside the new Metric Version 3.0.

Prepared by: Una Maginn MCIEEM, Technical Director, Avian Ecology Limited