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Applying Biodiversity Net Gain to solar parks in the UK

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Biodiversity Net Gain (BNG) is defined in the UK as '*development that leaves biodiversity in a better state than before*' and involves an approach where land developers work with local governments, wildlife groups, landowners and other stakeholders in order to support local priorities for nature conservation. The Environment Act 2021 will set out a minimum 10% biodiversity net gain to be mandatory for most land developments and the gain will need to be calculated using the Natural England Biodiversity Metric. The terrestrial habitats listed within the Biodiversity Metric are based on the UK Habitat Classification system (UK Hab).

Solar park developments usually achieve high gains in biodiversity as they commonly lead to intensive arable land or improved grassland being restored to permanent grassland; further enhancements may include sowing of wildflower seed and application of conservation grazing/cutting. However, debate remains regarding classification of proposed habitat within solar parks, in particular, the shaded habitat beneath the panels. We argue that rather than this area being regarded as "lost" habitat, our data show that a variety of plant species can thrive. However, this varies from site to site and is dependent on the vegetation management regime implemented within the site. Site management varies from conservation grazed to intensively grazed, to completely unmanaged, to cut throughout every month to once every three years or with occasional shade / access strips. This extends to treatment of injurious weeds with some non-chemical treatments to other sites which are blanket sprayed with a glyphosate herbicide.

A data set of 30 operational solar parks which were monitored in 2020 were selected and a total of 523 botanical quadrats analysed in order to characterise the vegetation within solar parks (including beneath the panels) in terms of species composition and other UK Habitat Classification criteria such as habitat condition.

These results will be used to provide formal guidance for calculating BNG on solar farms for the solar industry and planning authorities. The proposed approach is being developed with input from Natural England, UK Hab and Solar Energy UK.