

7000 Acres

Response to Cottam ExQ1, Question 1.6.14, regarding Biodiversity Net Gain

For Deadline 2 Submission – 21st November 2023

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Please explain why you consider BNG is unproven in the UK at this scale and your concern in this regard [RR-041].

Within 7000Acres RR [RR-41], it was highlighted that “Solar farm biodiversity net gain claims are unproven in the UK at this scale”, prompting the question from the ExA.

This is a clear statement of fact because:

- Biodiversity Net Gain is a very new addition to planning requirements in the UK, having been due to apply in November 2023, it is now due to come into force from January 2024, and apply to Nationally Significant Infrastructure Projects in 2025.
- There is very little experience or track record of its use as a methodology, and while a number of case studies have been published, e.g. by Natural England, these are hypothetical illustrations of the methodology, and cover relatively small areas of development (<10ha.) in comparison to large scale solar development (e.g. Cottam at over 1200Ha.)
- Natural England Report NEER012 reviews the impact of solar farms on wildlife and ecology. It concludes that “The lack of evidence available relating to the ecological impact of solar farms is concerning” and that “more needs to be done to understand the interaction between these new [renewable energy] technologies and the ecology that they are ultimately designed to protect”.
- There is no experience of the life cycle of large-scale solar development in the UK. The largest solar park operating in the country at present is Shotwick Solar Park at 70MW, which was commissioned in 2016, i.e. well prior to BNG requirements. Shotwick Solar Park covers only around 10% of the land area of the proposed Cottam Solar Project.
- Criticisms have been levelled at the BNG methodology (e.g. Guardian article “New biodiversity algorithm ‘will blight range of natural habitats in England’”, 21/07/2021), that it does not always properly value specific landscapes in the algorithm, for instance scrub, which may be a feature of rewilding projects, as well as sand quarries and field margins. It is also considered that the BNG fails to consider connectivity of habitats – which is a particularly relevant consideration given the distributed nature of parcels of solar development in the West Lindsey area, including CSP.
- For the CSP biodiversity assessment much of the baseline is farmland, which has a relatively low “points” value under the BNG methodology. The assessment takes this low baseline and assumes there is no improvement in farming practices and contribution to BNG over the lifetime of the project, despite clear pressure on farming to improve practices in multiple dimensions, e.g. to reduce pesticide use, reduce carbon intensity and improve biodiversity.
- For the CSP, the BNG assessment has been carried out before the updated version of the BNG Metric methodology (4.0), issued from March 2023. While it is acknowledged that the updated methodology is unlikely to have a significant impact on outputs, the Biodiversity Metric 4.0 is considered to be a “substantial update”, and so the BNG assessment should be reviewed to improve the accuracy of the result.
- A review of BNG information has been collated from “early adopter” councils, in a report by the Leverhulme Centre for Nature Recovery (linked to Oxford University). They describe a poor track record of policies to address ecological harms arising from infrastructure expansion, describing a history of “weak compliance”. For the UK’s BNG policy, they highlight “governance gaps that risk undermining the policy’s ecological outcomes”.

- The same report also finds that “21% of applications contained a simple recurring error in their BNG calculations, half of which have already been accepted by councils, hinting at under-resourcing in councils assessing developments”. Therefore, as the Applicant has only shown the output of their BNG study, rather than shown the details of their “workings out”, it is suggested that this information is made available and thoroughly audited.
- BNG relies upon the delivery of improvements, as planned. The action of construction of CSP at its extensive scale cannot fail to adversely impact habitat in the short term, e.g. removal of hedgerows, disturbance of ground to install foundations, additional traffic movements. The long-term net improvement is vulnerable to weaknesses in the both the underlying assumptions in the BNG improvement plan and the effectiveness of its deployment, this is in addition to the underlying governance risk, highlighted above.
- One of the key concerns of 7000Acres is the lack of a holistic view of decarbonisation and sustainability, e.g. considering energy, or biodiversity without considering land use. The Geospatial Commission report “Finding Common Ground: Integrating data, science and innovation for better use of land” references a recent Royal Society report, stating that analysis “indicates the extent to which the UK’s land is “overpromised”. The Royal Society estimates that approximately 1.4 million hectares of additional land (equivalent to the area of Northern Ireland) would be needed by 2030 to meet current policy targets for net zero and biodiversity (if current agricultural production, diets and food waste remain static). This rises to 4.4 million hectares by 2050 (over twice the land area of Wales and 18% of total UK land area).”
- Withing the Natural England report (TIN101) “Solar Parks: Maximising Environmental Benefits”, solar parks are defined as being “installations of multiple solar photovoltaic (PV) modules, usually mounted 1.5- 2.5 metres above either greenfield or brownfield land occupying between 2 and 15 hectares.” In terms of landscape the report states that “it is recognised that solar parks can change the character and visual experience of a given area or landscape”. Although this report is now over 10 years old, it is clear that the scale of the CSP, the absence of it making use of any brownfield sites, as well as the choice of 4.5m panel height all create significant potential for maximising environmental harms.

Further reference is made to BNG concerns in Section 10 of 7000Acres WR on Landscape (REP-116).

On the basis of the above, 7000Acres believe that it is, in effect, a huge experiment to rely on the BNG methodology to deliver actual improvements across such a vast and unprecedented area of development as the CSP, particularly when considered alongside other super-large-scale ground mounted solar farms in the region. There is also a low base of confidence in such schemes having historically delivered ecological improvements to mitigate harms from infrastructure development.

7000Acres therefore would therefore propose that little weight is afforded to claims for the CSP to improve BNG, without significantly more evidence and research into the effects of such large-scale solar installations on land in the UK.

References	Link
Natural England, The Biodiversity Metric 4.0 (JP039), including case study examples Case Study 2 (Port Development) and Case Study 4 (Cabling for Offshore Wind Development), 04 July 2023	The Biodiversity Metric 4.0 - JP039 (naturalengland.org.uk)
Geospatial Commission, FINDING COMMON GROUND Integrating data, science and innovation for better use of land, 23 May 2023	Finding common ground: Integrating data, science and innovation for better use of land - GOV.UK (www.gov.uk)
Gov.UK Press release “Biodiversity Net Gain moves step closer with timetable set out”, (From: Department for Environment, Food & Rural Affairs, Department for Levelling Up, Housing and Communities and Trudy Harrison MP), 27 September 2023	Biodiversity Net Gain moves step closer with timetable set out - GOV.UK (www.gov.uk)
“Achieving biodiversity net gain by addressing governance gaps underpinning ecological compensation policies” (The Leverhulme Centre for Nature Recovery), 7 November 2023	Leverhulme Centre for Nature Recovery Fixing the gaps in England’s ‘biodiversity net-gain’ policy (ox.ac.uk) Achieving biodiversity net gain by addressing governance gaps underpinning ecological compensation policies (wiley.com)
Natural England Evidence Review, “Evidence review of the impact of solar farms on birds, bats and general ecology” (NEER012), 9 March 2017	Evidence review of the impact of solar farms on birds, bats and general ecology 2016 - NEER012 (naturalengland.org.uk)
The Royal Society, report “Multifunctional landscapes Informing a long-term vision for managing the UK’s land”, January 2023	DES7483 Multifunctional-landscapes_policy-report-WEB.pdf (royalsociety.org)
Guardian news article, “New biodiversity algorithm ‘will blight range of natural habitats in England’ “, 21 st July 2021	New biodiversity algorithm ‘will blight range of natural habitats in England’ Biodiversity The Guardian
Natural England Technical Information Note TIN101, “Solar parks: maximising environmental benefits”, September 2011	Solar parks: maximising environmental benefits - TIN101 (naturalengland.org.uk)