

7000Acres

7000Acres

7000Acres Response to the Gate Burton Energy Park Ltd Application

Deadline 2 Submission – 8 August 2023

Executive Summary

The Application is being examined under the Planning Act 2008 Section 105. Therefore, there are no National Policy Statements (NPS) applicable to this scheme. The Applicant references NPS to support its case but they should have no relevance.

7000Acres is concerned that the Applicant has not provided sufficient explanation for their conclusions and that some of their supporting evidence is flawed.

Cumulative impact. The Applicant has failed to take due account of the cumulative impact of the four NSIPs in the region. In particular, the zones of influence selected by the Applicant are too short.

Alternative locations. The Applicant has made this application based on where it can obtain a large area of land that meets its business case. It has then reverse engineered its EIA to fit the available land.

Carbon assessment. The Applicant has not provided a detailed breakdown of their calculations. Furthermore, some of the descriptions do not explain how they arrived at their conclusions, why some assumptions were applied and how references support their case.

Battery Energy Storage System (BESS). The Applicant has provided no evidence why a BESS of this size is required, why its capacity should be uncapped and why it needs to trade energy with the National Grid. 7000Acres believes that the BESS is an *“additional revenue for the applicant, in order to cross-subsidise the cost of the principal development”*.

Biodiversity. There is no clear evidence that utility scale solar farms increase biodiversity. The Applicant has not clearly demonstrated they meet the requirements of the Environment Act 2021.

Use of a Rochdale Envelope. The Applicant’s application of a Rochdale Envelope has resulted in insufficient information being made available to interested parties in a timely manner.

Timescale. The 60+ year period of the scheme is not *“temporary use”* of the valuable farmland.

Contents

| | | |
|-----|---|----|
| 1. | Introduction | 4 |
| 2. | National Policy Statements | 4 |
| 3. | Cumulative Assessment | 5 |
| 3.1 | Regulations | 5 |
| 3.2 | Scope of Assessment | 5 |
| 3.3 | Summary | 6 |
| 4. | Alternative Locations | 7 |
| 4.1 | Regulation | 7 |
| 4.2 | Summary | 8 |
| 5. | Carbon Assessment..... | 8 |
| 5.1 | Regulations..... | 8 |
| 5.2 | Applicant’s Response | 8 |
| 5.3 | Summary | 10 |
| 6. | 500 MWh (uncapped) Battery Energy Storage System (BESS) | 10 |
| 6.1 | Summary | 11 |
| 7. | Ethical Supply Chain..... | 11 |
| 8. | Bio Diversity | 12 |
| 8.1 | Regulations..... | 12 |
| 8.2 | Applicant’s Response | 12 |
| 8.3 | Conflicting Evidence..... | 13 |
| 8.4 | Summary | 13 |
| 9. | Rochdale Envelope..... | 13 |
| 10. | Temporary Use of Farmland | 14 |
| 11. | Bibliography | 15 |

1. Introduction

7000Acres represents a large number of local residents concerned about the impact of the Gate Burton NSIP and three other solar NSIPs in the locality. This document identifies relevant issues with the Planning Act 2008 (PA2008) and how the Applicant has failed to provide evidence to support their Application.

2. National Policy Statements

This Application is for an energy generating station. The Rule 6 Letter states that:

“The Applicant has submitted that no designated National Policy Statements apply to this Examination and to decision-making relating to this application.”

Therefore, is being examined under section 105 of the PA2008 as solar currently falls outside the scope of the present National Policy Statements. The only reference to solar generation in EN-1 and EN-3 is a statement in EN-1 section 3.3.11 that states:

“However, some renewable sources (such as wind, solar and tidal) are intermittent and cannot be adjusted to meet demand.”

National Policy Statements draft EN-1 and EN-3 do not have effect but do now cover solar power generation. However, there is still no reference to battery storage in National Policy Statements. The PA2008 Section 105 states:

“105 Decisions in cases where no national policy statement has effect

(1)This section applies in relation to an application for an order granting development consent if section 104 does not apply in relation to the application.

(2)In deciding the application the Secretary of State must have regard to—

(a)any local impact report (within the meaning given by section 60(3)) submitted to the Secretary of State before the deadline specified in a notice under section 60(2),

(b)any matters prescribed in relation to development of the description to which the application relates, and

(c)any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision.”

As a general comment, throughout their Application and associated documentation, the Applicant references EN-1 and EN-3 as support for their case. As shown in the Rule 6 Letter, there are no relevant National Policy Statements applicable to this project, therefore references to EN-1 and EN-3 are irrelevant and so should be disregarded by the ExA.

3. Cumulative Assessment

3.1 Regulations

The Applicant is required to take into account the cumulative impact of their application and any other relevant schemes. Although this Application is being conducted under PA2008.105, if the ExA does decide to note any general principles shown in EN-1, then the following might be helpful. EN-1 Paragraph 4.1.4 states:

“In this context, the Secretary of State should take into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels.”

Paragraph 4.2.6 goes on to state:

“the Secretary of State should consider how the “accumulation of, and interrelationship between effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.”

Advice Notice Seventeen provides additional guidance on a Cumulative Effects Assessment (CEA). The Applicant’s Environmental Statement (ES) Chapters 6 to 15 outline their assessment of the cumulative impact.

3.2 Scope of Assessment

The Applicant has chosen not to take full account of the other three solar NSIPs located nearby, despite sharing some facilities, such as the cable corridor. Instead, the Applicant has designated zones of influence that are convenient for their case; for example, only 2km as being sufficient for assessing the cumulative impact on ecology and nature conservation, despite Red List birds being displaced by all the sites. Other criteria, such as noise, air quality, glint and glare are allocated even smaller zones of influence.

The Applicant has allocated an 8 km zone of influence for Landscape and Visual Amenity. ES Chapter 10. Landscape and Visual Amenity identifies “*No significant cumulative effects*” despite the four solar NSIPs replacing approximately 10,000 acres of productive farmland with an industrial landscape. It is noted that the 8km zone of influence applied by the Applicant conveniently ends short of the elevated Cliff villages and roads, from where the view over the Trent Plain will be severely impacted.

At their closest points, the Cottam solar and West Burton solar schemes are approximately 1,000 m to the east and 1,000m to the south respectively. There is no clear rationale provided by the Applicant why these multiple large schemes, that are effectively co-located, have “*no significant cumulative effects*”.

Throughout, the Gate Burton ES mitigation is based almost exclusively on screening by vegetation. Due to the size and height of the scheme, vegetation will take many years to grow to the required height for screening, and when in place will alter the open landscape which is a feature of the region. The landscape and visual review report commissioned by Lincolnshire County Council (AAH Consultants , 2023) paragraph 6.4 states:

“The cumulative change to the landscape will be considerable, and the combination of two or more sites has the potential to change the local landscape character at a scale that would be “of more than local significance” or would be “in breach of recognised acceptability, legislation, policy or standards”. The cumulative impact of the four adjacent NSIP scale solar schemes has the potential to affect the landscape at a regional scale through predominantly a change in land use: from arable to solar, creating what may be perceived as an ‘energy landscape’ as opposed to rural/agricultural one at present.”

3.3 Summary

7000Acres agrees with The AAH Consultants assessment. The impact of Gate Burton and the three other NSIPs would have a regional impact. It is clear that the Applicant has not followed the clear intent of EN-1 Paragraph 4 and Advice Notice Seventeen but has chosen to reverse engineer zones of influence convenient for its case.

4. Alternative Locations

4.1 Regulation

In ES Volume 1 Chapter 3 [EN10131/APP/3.1], the Applicant references EN-1 paragraph 4.4.1 to make the case that they do not need to consider alternative locations. As EN-1 does not refer to solar energy, and the application is being examined under Section 105 of the PA2008, their point is irrelevant. Paragraph 2 of Schedule 4 of the Environmental Impact Assessment (EIA) Regulations requires:

“A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”.

The Applicant has failed to follow paragraph 2 of Schedule 4 of the EIA Regulations. Although not applicable, draft EN-3 paragraph 2.48.15 provides some useful guidance:

“It is recognised that at this scale, it is likely that applicants’ developments may use some agricultural land, however applicants should explain their choice of site, noting the preference for development to be on brownfield and non-agricultural land.”

Again, the Applicant has failed to explain their selection of the land around Gate Burton. For example, the Applicant has not explained why certain elements of their scheme, such as the BESS, could not be co-located with their grid connection at Cottam Power Station. Cottam Power Station is being sold by EDF and the brownfield site is available for certain types of redevelopment. 7000Acres has an email from a representative of EDF stating that the Applicant has not even requested details of the available land at the Power Station; this email can be produced on request. The location chosen by the Applicant is not part of a national plan, it was selected without Local Planning Authority involvement, without community involvement and has no regard to valued landscape. The Applicant [EN10131/APP/3.1 paragraph 3.3.8] states that 8km is the maximum viable distance for the proposed solar farm from Cottam Power Station but without providing any technical rationale. The nearby Tillbridge solar NSIP has a cable length of 16km between its scheme and the grid connection at Cottam Power Station.

4.2 Summary

The Applicant has made this application based on where it can obtain a large area of land that meets its business case. It has then reverse engineered its EIA to fit the available land.

5. Carbon Assessment

5.1 Regulations

If the ExA chooses to take account of the general principles in Draft EN-1, then note could be taken of Draft EN-1 Paragraph 5.3.4. That Paragraph requires the Applicant to produce a carbon assessment.

5.2 Applicant's Response

The Applicant addresses the scheme impact on climate change in Volume 1, Chapter 6: Climate Change Document Reference: EN010131/APP/3.1. Paragraph 6.10 summarises the estimated emissions. However, no meaningful detail is provided on how the figures were estimated. It would be helpful for the Applicant to provide their detailed calculations so that they can be verified independently. For example, a spreadsheet showing their assumptions and calculations would be helpful to all interested parties.

The Applicant references (6-19) Rajput, S. K. and Singh, O. (2017). Reduction in CO₂ Emission through Photovoltaic System: A Case Study. The paper is based on *“energy based analysis of photovoltaic (PV) system is analysed for the climate of Varanasi, Uttar Pradesh, India and carbon credit is earned and calculated for the same.”* It is not clearly explained how this research is applied to solar panels in a different climate (Northern Europe as opposed to India) , and whether the same type of PV panel has been used and any other relevant differences. The Applicant then applied a second step:

“The embodied energy was then converted from kilowatt hours (kWh) to kilograms of CO₂ equivalent (kgCO₂e) using the energy intensity of the countries in which they are produced (Ref 6-20;Ref 6-21), assuming that the energy used in the factories is predominantly electricity.”

Applicant Reference 6-21 is titled: European Environment Agency (2021). Overview of Electricity Production and Use in Europe. It is not clear how European electricity production is relevant to solar

panel production in China where greater use is made of coal fired power stations, so the energy CO2 equivalent used by the Applicant is unlikely to be valid.

There are also some questionable assumptions applied:

- 6.4.15 *“It has been assumed that HGVs are on average 50% laden as they will be empty travelling one way (e.g. to the Scheme for waste collections), and 100% laden for other leg of the journey.”*
HGVs are unlikely to be always 100% laden when carrying equipment or waste, therefore this will underestimate the impact of HGVs.
- 6.4.30 *“Sulphur hexafluoride (SF6) is an extremely powerful GHG with a global warming potential of 23,900. Fugitive emissions of SF6 from certain electrical items such as gas insulated switchgear have historically been a significant source of emissions. Manufacturers of such equipment are now increasingly able to offer SF6-free components, and those that do continue to use SF6 are sealed-for-life with extremely low leakage rates. For this reason, it is assumed that emissions of SF6 from this Scheme will be minimal and not material to this GHG assessment.”*
There is no commitment to use components free from SF6. If no commitment is forthcoming then the assessment should include SF6 emissions.
- 6.4.31 *“Emissions from the decommissioning process at the end of the design life are very difficult to estimate due to the substantial uncertainty surrounding decommissioning methodologies and approaches so far into the future. It has been assumed that the resources and effort required for decommissioning will be equivalent to those required for construction. Once again, this is considered to be a worst-case scenario.”* Decommissioning and returning the land to its original state is likely to require greater resources than construction as the land will require considerable work to return it to productive farming land, especially after 60 years. Again, the Applicant is likely to have underestimated the emissions.
- Table 6-20. It is well documented that solar panels produced in China are frequently produced using electricity generated by coal powered power stations.

Finally, the Applicant chooses not to take account of the increased emissions caused by importing the cereals and other crops required to replace the loss of agricultural land. The emissions from importing crops over a 60-year period are likely to be considerable.

5.3 Summary

The Applicant has not provided a detailed breakdown of their calculations. Furthermore, some of the descriptions do not explain how they arrived at their conclusions, why some assumptions were applied and how references support their case. The Applicant has not provided sufficient clear evidence to allow interested parties to give “*intelligent consideration*” of the project”.

6. 500 MWh (uncapped) Battery Energy Storage System (BESS)

EN-1, EN-3 and EN-5, and their drafts, do not consider BESS. The Infrastructure Planning (Electricity Storage Facilities) Order 2020 is determined through the Town and Country Planning Act by LPAs. The PA2008, Guidance on Associated Development Applications for Major Infrastructure Projects is clear on the requirements for what constitutes Associated Development. There is currently insufficient evidence for the ExA to conclude that the BESS would be Associated Development or an aim in itself.

As the Applicant has adopted a Rochdale Envelope, they have made limited information available about the BESS. Amongst other things the following details are unclear:

- Any indications as to the total power of the BESS (rated in megawatts)
- Any indications as to the storage capacity and duration of storage (rated in megawatt hours)
- Sufficient evidence regarding the network and how the PV cells will be connected to the BESS
- Any explanation over the energy balancing role of the BESS and energy import from the National Grid. These features are discussed in publicity material but not in the dDCO, so will they be a feature of the BESS?

7000 Acres believes that these questions must be answered before the Examining Authority can conclude if the BESS is Associated Development. Applying the principle of a Rochdale Envelope, the “reasonable worst case” assessment is currently that the BESS is not Associated Development, as it will be capable of trading power with the National Grid at night and winter months when the PV cells are not generating power. As the Consent will be for operating a “generating station”, revenue

operations when the scheme is not capable of generating power should be viewed as a separate system. The Guidance states in paragraph 5 (iii) that:

“Developments should not be treated as associated development if it is only necessary as a source of additional revenue for the applicant, in order to cross-subsidise the cost of the principal development”.

Paragraph 6 states: *“It is expected that associated development will, in most cases, be typical of development brought forward alongside the relevant type of principal development or of a kind that is usually necessary to support a particular type of project, for example (where consistent with the core principles above), a grid connection for a commercial power station.”*

Annex A and B to the Guidance provides examples of general types of associated development and specific examples for onshore generating stations. At no point is “battery” given as an example.

6.1 Summary

It is clear that there is no National Policy Statement or Guidance to PA2008 that allows a 500+MWh BESS to be installed as part of a solar NSIP. The Applicant has provided no evidence why a BESS of this size is required, why its capacity should be uncapped and why it needs to trade energy with the National Grid. 7000Acres believes that the BESS is an *“additional revenue for the applicant, in order to cross-subsidise the cost of the principal development”*. As the BESS is aimed at cross subsidising the solar project, and so not associated development, it should be heard under a separate application in accordance with the Infrastructure Planning (Electricity Storage Facilities) Order 2020, i.e. determined through the Town and Country Planning Act by the LPA.

7. Ethical Supply Chain

The Applicant [EN10131/APP/3.1 paragraph 6.4.5] references the following solar PV panel of choice: *“Jolywood JW-D144N-166 module rated at 470 Watts”*.

There is strong evidence that a substantial part of the solar PV panel supply chain in China, from the extraction of polysilicon to the production of panels, uses slave labour (Helena Kennedy Centre for International Justice: Sheffield Hallam University, 2021). Furthermore, [REDACTED] is identified as a

solar PV panel manufacturer that has elements of its supply chain utilising slave labour (Eventide-Special Report, 2021). The Applicant should verify their supply chain is free from all slave labour.

8. Bio Diversity

8.1 Regulations

The Environment Act 2021 Section 99 makes biodiversity gain a condition of NSIP planning permission. This requirement is expanded in Schedule 15 to the Act. Schedule 4 (1)

“Section 105 (decisions in cases where no national policy statement has effect), after subsection (2) insert—

“(3)Where there is a biodiversity gain statement under Schedule 2A in relation to development of the description to which the application relates, the Secretary of State may not grant the application unless satisfied that the biodiversity gain objective contained in the statement is met in relation to the development to which the application relates.

(4)Subsection (3) does not apply to the extent that the Secretary of State is satisfied that deciding the application in accordance with that subsection would have an effect referred to in section 104(4), (5), (6) or (7).”

8.2 Applicant’s Response

The Applicant addresses this requirement in: Biodiversity Net Gain Assessment Document Reference: EN010131/APP/7.9. There is no detailed explanation how the values in biodiversity were determined. Reference is made to desk study, few details are provided on actual site surveys. The Applicant does not take account of the increased biodiversity resulting from changes to Government Policy, such as the Country Stewardship and Sustainable Farming Incentive. Therefore, as no credit is given for changes to Government Farming Policy, the Applicant’s baseline assessment is likely to be too low.

The document does not appear to consider biodiversity of animals, birds and invertebrates but concentrates on flora. There is no assessment in this document of the adverse impact on birds who are displaced by the change from open farmland to an energy landscape. A loss of bird life will result in a decrease in overall biodiversity.

8.3 Conflicting Evidence

Natural England (Natural England, 2016) and the Planning Inspectorate (Alder, n.d.) both identify that there is limited evidence to support claims that utility solar increases biodiversity. Natural England state:

“Due to the spatial requirements of utility scale solar PV developments, the physical landscape of UK habitats will be affected by the implementation of these technologies necessitating an understanding of the potential effects that solar PV may have on biodiversity. Understanding requires evidence which is traditionally gathered through robust scientific investigation and peer reviewed publication. No experimental studies specifically designed to investigate the in-situ ecological impacts of solar PV developments were found in the peer reviewed literature. Considering that cumulative installed global PV capacity is projected to reach between 450 GW and 880 GW by 2030, up from 67 GW in 2011 (Gan and Li, 2015), this lack of ecological evidence is heavily under representative of the interest and investment in solar PV deployment.”

Furthermore, Adler concludes that:

“In the literature, concerns have been raised that solar PV developments have the potential to negatively impact a broad range of taxa including birds, bats, mammals, insects and plants. In light of this, it is highly recommended that research is undertaken into the ecological impacts of solar PV arrays across a broad range of taxa at multiple geographical scales”.

8.4 Summary

There is no clear evidence that utility scale solar farms do increase biodiversity. The Applicant has not clearly demonstrated they meet the requirements of the Environment Act 2021.

9. Rochdale Envelope

During public open days Low Carbon quoted the “Rochdale Envelope” to several residents as a reason why detailed information did not need to be provided at that stage. It resulted in members of the public being denied information. However, Advice Notice Nine: Rochdale Envelope paragraph 3.4 states:

*“There is opportunity within the statutory Pre-application procedure for applicants to determine the most appropriate consultation programme for their needs and to time the consultation to appropriate stages in the evolution of the Proposed Development. **However, the consultation must***

be undertaken on issues that have been clearly identified and on a Proposed Development that is as detailed as possible. The bodies consulted need to be able to understand the proposals. The details of the Proposed Development should therefore be described as clearly and simply as possible. Obviously fewer options and variations within a project description make it easier to understand, especially by those less familiar with the PA2008 process.”

Even now at the Examination Stage, the Applicant still retains information on key topics, such as the BESS, that is required to assess this project. During a Public Consultation the Gunning Principles should be applied. In this case it is clear that two Principles have been ignored: firstly, there has been insufficient information provided to give “*intelligent consideration*” of the project; secondly, there has been inadequate time for consideration and response due to the enormity of this and the other three adjacent solar projects.

10. Temporary Use of Farmland

The Applicant’s dDCO seeks approval to use the land for 60 years, although this might be extended. 7000Acres disagrees that 60 years is temporary use of the land. Our concern is supported by the Planning Inspector for the Lullington solar farm (The Planning Inspectorate, 2023):

“Whilst the 40-year period may allow for the restoration of the soil structure and reduce the problems associated with nitrates usage, it appears to me, as it has done to other Inspectors at appeals cited by the Council, that 40 years would indeed constitute a generational change.”

7000Acres agrees that changing the use of the land for 60 years would not be “*temporary*” but “*generational*”.

11. Bibliography

AAH Consultants , 2023. *LANDSCAPE AND VISUAL REVIEW OF THE DEVELOPMENT CONSENT ORDER APPLICATION FOR THE GATE BURTON SOLAR PROJECT FOR LINCOLSHIRE COUNTY COUNCIL*, s.l.: s.n.

Alder, P. M., n.d. *BIODIVERSITY AND SOLAR FARMS*. [Online]

Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010118/EN010118-000503-Prof.%20Mike%20Alder%20-%20Other-%20Biodiversity%20Ecology%20and%20natural%20Environment.pdf>

Eventide-Special Report, 2021. *Eradicating Forced Labour from Solar Supply Chains*. [Online]

Available at: https://www.pv-magazine.com/wp-content/uploads/2022/12/Handout_Eventide-SpecialReport.pdf

[Accessed 21 July 2023].

Helena Kennedy Centre for International Justice: Sheffield Hallam University, 2021. *In Broad Daylight Uyghur Forced Labour and Global Solar Supply Chains*. [Online]

Available at: <https://acrobat.adobe.com/link/track?uri=urn%3Aaaid%3Ascds%3AUS%3Ad360ffab-40cc-4d83-8b8b-a8bd503286a3>

[Accessed 21 July 2023].

Natural England, 2016. *Evidence review of the impact of solar farms on birds, bats and general ecology*, s.l.: Natural England.

The Planning Inspectorate, 2023. *Appeal Ref: APP/F1040/W/22/3313316*. [Online]

Available at: <https://acp.planninginspectorate.gov.uk/ViewCase.aspx?caseid=3313316>

[Accessed 26 Jul 2023].