**Preliminary Meeting submission by Professor David John Rogers**

**RR Number:** 20055185

**Making submission for:** myself

**Full name:** Professor David John Rogers

**Email:** [redacted]

**For:** Procedural deadline A: 16th April 2025

**Notification:** of any wish to speak at the Preliminary Meeting including the Agenda Item

**How to submit comments?** Upload file (this present one) and possibly make comments at the Preliminary Meeting.

**Comments (with EXAMINATION LIBRARY document references)**

I wish to make comments in six areas. They all fall under Preliminary Meeting Item 3 'Initial Assessment of Principal Issues'

The first comment falls within Principal Issue 'Assessment of Alternatives'

The remaining five comments do not fall under any of the listed Principal Issues (page C1of your letter to Interested Parties, Your Ref. EN010147 and will here be classed as 'Other'.

# Comment 1. Siting and Cumulative Impacts

Preliminary Meeting Principal Issue 'Assessment of Alternatives'

The offer by the National Grid of a new substation for the proposed Botley West Solar Farm (BWSF) removes all justification for siting BWSF quite so close to Oxford city. The developers do not explore alternative sitings for both BWSF and the new substation that would have less of an impact on Oxford.

Oxfordshire is currently experiencing great pressure to expand. It is part of the Oxford-Cambridge super-cluster (with the aim of doubling local economic GVA by 2035). The new housing algorithm increases the housing targets by 60% compared with the already high targets imposed by the previous housing algorithm. The county will also host the new Abingdon Reservoir, providing water for large areas of the S. East.

Even without BWSF, the county is already ahead of the Net Zero target of *"Pathways to a Zero Carbon Oxfordshire"* (PAZCO), a report produced by the Environmental Change Institute in the University of Oxford and signed up to by all District and the City Councils.

The November 2024 Report from Renewable UK, the Aldersgate Group and CPRE, *"Electric dreams: how the planning system can help deliver the UK's low-carbon energy. Final report and recommendations."* encourages the development of

*"... the Strategic Spatial Energy Plan to reduce cascading challenges in the planning system and front-load consideration of the natural environment: The government and National Energy System Operator must urgently deliver the SSEP, Centralised Strategic Network Plan and Regional Energy Strategic Plan, setting out both interim measures and a longer-term plan which*

*ensures the incorporation of strategic planning into decision-making and alignment with other spatial planning."*

The SSEP, and indeed any spatial planning for our NET Zero targets, is currently lacking, while the PAZCO Report advises against local over-capacity of renewables as follows:

*"From just a carbon perspective, as the national grid decarbonises, the marginal benefit of additional local solar capacity lessens which could impact investment justification. In the extreme case of negative national supply, additional solar capacity beyond our relative national share, could reduce Oxfordshire's ability to offset other hard to decarbonise sectors through electricity."*

There is a danger that in our unplanned rush for growth, Oxfordshire will carry more than its fair share of the burden of economic and housing development, of water resources and of renewables beyond our Net Zero targets, all combining to generate that *'cascade of challenges'* to the planning system referred to above. Those who will suffer the consequences are the present inhabitants of Oxfordshire who feel somewhat besieged by the scale and pace of the changes forced upon them, and over which they have no control.

That cascade of challenges is likely to increase, should BWSF be approved, because a separate company Botley Green Energy Centre Ltd, of Ethos Green Energy that specialises in energy storage (i.e. BESS), is in the TEC register to connect 800MW of li-ion battery storage to the Botley 400kV substation, with an expected connection date of 2027 to 2033 (an application is already at the Planning stage, according to the Ethos Green's website). An 800MW battery storage facility would again be the largest in the country to date, with the associated very real dangers of more or less uncontrollable fires, releasing highly toxic fumes near large urban areas. It seems possible that this BESS application could be presented as an 'associated development' (see APP038, 1.6.9, below). Again, the cumulative effects on the county need to be anticipated.

**Comment 1. EXAMINATION LIBRARY document references** (important parts in red)

**APP038**

***Environmental Statement***

*1.4.7 The Project will connect to the National Grid, via a new National Grid 400kV substation, to be located close to the existing National Grid 400kV power line, which runs between Cowley, in Oxford, westwards to Walham in Gloucestershire.*

*1.6.8 The other matters which the Secretary of State must have regard to include Local Impact Reports, prescribed matters, and any matters which the Secretary of State considers are both 'important and relevant' to their decision.*

*1.6.9 A DCO, if granted, has the effect of providing consent for development, in addition to a range of other consents and authorisations, where specified, as well as removing the need for some consents (such as planning permission). Section 115 of the PA 2008 also states that a DCO can include consent for 'associated development', which is development that is not an NSIP in its own right but is functionally related to the NSIP. This may be development that supports the construction, operation or decommissioning of the NSIP; which helps to address the impacts of the NSIP; or is of a type normally brought forward with the NSIP.*

## Comment 2. Acquisition of land rights by BWSF. Freehold or leasehold?

Preliminary Meeting Principal Issue 'Other'

In many places the developers state that the application is for a 'temporary development' (of a solar farm), that the SMP will ensure that the quality of affected agricultural land will be maintained, and that after 40 or so years the land will revert back to its previous agricultural use. Very specifically, we are told that the land ownership will not change as a result of the project, because *'the Site is being leased to the Applicant, not sold'*. We are also told that Blenheim Palace can expect 'long term revenue' for the maintenance of the World Heritage site. 'Long-term revenue' implies a leasehold agreement not a freehold one.

Yet elsewhere in the submitted documents, we are told that the applicants will use compulsory purchase powers to obtain the freehold of all of the land for the solar panels. Freehold means ownership for as long as the applicants choose to retain ownership, and with no guarantee at all that the land will revert to agricultural use. By then, the site will be classified as 'previously developed' and reversion to agriculture of the c.1400 ha of compulsorily-purchased BWSF land seems highly unlikely. Much more likely is that the land will be sold on for housing, at many multiples of agricultural land prices.

This represents a permanent loss of good quality agricultural land.

The developers should justify their wish to acquire the land freehold for an installation that is supposed to be only 'temporary'. It should be possible to write an equally binding leasehold agreement that might at least ensure reversion to agricultural use at the end of the 'temporary' installation.

Importantly, the citizen science group of SolarQ UK has discovered that 17 out of 20 other large area solar NSIPs in England (at a sufficiently advanced stage of the DCO process to have declared their intentions) are adopting the same procedure of using CPO powers granted by the DCO process to acquire the freehold of the solar installation land. None of this is necessary for any 'temporary' installation and it appears to amount to nothing less than a land grab of productive agricultural land under the guise of addressing the Net Zero agenda.

SolarQ has discovered that more that 85% of all the affected land of those 17 NSIPs is of Agricultural Land Classification Grades 1, 2 and 3 – i.e. includes BMV land). Such a widespread and permanent loss of productive farmland threatens the UK's future food security – a developing crisis that should be on the same level as the climate crisis. We should not solve the one crisis at the expense of the other. The powers granted by the NSIP/NPS EN-3 legislation, and the absence of any national spatial plan, mean that large-area solar installations are more or less guaranteed to be approved wherever they are proposed.

**Comment 2. EXAMINATION LIBRARY document references**

**APP007 Land Plans**

Land to be compulsorily purchased is coloured pink. This is all of the area proposed for the solar panels.

**APP022 Statement of Reasons**

**7.1 JUSTIFICATION FOR THE COMPULSORY ACQUISITION POWERS**

After the pre-amble

*7.2.5*

*The scope of the powers of compulsory acquisition proposed in respect of the land within the Order land goes no further than is needed. All the land included within the Order land is needed to achieve the identified purpose of delivering the Project. The Land and Rights Negotiations Tracker [EN010147/APP/3.6] shows the powers being applied over each plot and the requirement for each plot of land demonstrating the assessment that has been carried out on each plot; each plot over which freehold acquisition is required, and the works for which each plot of land is required. Steps have been taken to ensure that the interference with the rights of those with an interest in the affected land is no more than is necessary to deliver the benefits associated with the Project.*

Note: the above mean compulsory purchase of the freehold.

**APP037 Non-technical Summary**

*5.6 The consent being sought for the Project is a temporary one. Temporary consent is being sought for a 42-year period during which the solar farm will be constructed, operated and decommissioned.*

*6.12.5*

*• A Soil Management Plan (SMP) will be developed in accordance with the Outline SMP which will form the Outline Code of Construction Practice [EN010147/APP/7.6.1], which is to be submitted alongside the ES. The Outline SMP will contain measures to maintain the quality of affected agricultural soils, including the requirement to reinstate land (as near as possible) to its former condition post-construction.*

**APP038 Chapter 1 Introduction**

*1.4.4 The consent being sought is a temporary one. It is anticipated that the Project will be constructed, operated and decommissioned within 42 years. At the end of this period all above ground infrastructure (excluding the NGET substation) and equipment will be removed, along with the cables beneath the main solar array areas, with the land reverting back to its previous agricultural use.*

**APP052 Socio Economics**

*15.9.95 Whilst the landownership would not change as a result of the Project (since the Site is being leased to the Applicant and not sold), the construction, operational and decommissioning stages will have an effect on the prevailing land use and farming operations will be changed.*

*15.9.98 Volume 1 Chapter 17: Agricultural Land Use and Public Rights of Way of the ES [EN010147/APP/6.3] estimates that construction of the Project would result in the loss of approximately 1,351.2 ha of arable agricultural land most of which will be temporary except for circa 5.5ha which will be permanently lost during the construction period. This would include areas of land where the substations are located, including the National Grid substation, together with the main and small substations.*

*15.9.105 The sensitivity of the receptor is considered to be **Medium**. The majority of the Site is classified as ALC 3b (59%) and agricultural enterprises do not appear to be high local planning policy priorities. In addition, the number of people employed in farm-based agriculture only*

*accounted for 1.1% of all employment in the Study Area. The vulnerability of the receptor is low since the land will be retained in the same ownership and the recoverability is high given agricultural uses are proposed to be retained on the site after construction.*

*15.9.129 This time-limited and fully reversible impact should be considered alongside the benefits of the Botley West Solar Farm. These include direct benefits to the Blenheim Palace WHS in terms of long-term revenue for the maintenance of the World Heritage property.*

Note: the above do not imply compulsory purchase of the freehold, but imply temporary leasehold of land that will revert to agriculture.

## Comment 3. Capacity and Output of BWSF

Preliminary Meeting Principal Issue 'Other'

The submitted documents are completely chaotic when it comes to the stated capacity and performance of the proposed BWSF. Since it is the performance – in terms of electricity delivered (kWh or MWh) – that supposedly justifies its location in the highly sensitive site between Oxford city and the UNESCO World Heritage site, the very least the developers should do is to explain clearly the benefits that can then be weighed against the disadvantages of such a large installation in such a location.

In many instances the installed capacity and output are completely confused and are often used interchangeably. The numbers given are frequently wrong.

The installed capacity is effectively the 'number on the side of the tin', traditionally styled MWp. This is a function of the number of panels and the maximum possible output per panel (the latter determined under laboratory test conditions and rarely realised in the field). Once the number of panels is determined, and the maximum performance of each, then so is the MWp. MWp does not vary.

The disadvantages of a solar installation scale with MWp – the higher the MWp, the greater the number of panels and the larger the area of land required for them. For BWSF the MWp will be between 1200 and 1375 MWp (NTS, p. 18). Once the total number of panels is determined by the developers, MWp will be a fixed number within that range.

The output of a solar installation is traditionally styled MWe. It's the amount of electricity you get per unit time from the installation (capacity MWp). MWe is very variable and is always less than MWp, often considerably less. Obviously MWe varies with the daily cycle of night and day. Over time it also varies as the performance of the panels deteriorates with age. From the planning and Net Zero perspectives, the advantages of a solar installation vary with MWe, and these need to be balanced against the disadvantages that scale with MWp, the overall size of the installation.

The output power, MWe, cumulates over time to produce an estimate of the amount of useful energy generated in MWh. The total amount of energy generated per year may then supply the average needs of so many thousands of households. It is claimed that the output of BWSF – in MWh or GWh - could supply the annual needs of c. 330,000 households.

The document frequently makes reference to 840MWe power being delivered to the grid by BWSF. This will never happen. The EU PV GIS system predicts the amount of power generated by solar PV systems, once the size and type of installation is input together with its geographical

co-ordinates. Putting in the developer's details for BWSF shows that the output power MWe never exceeds 617MWe (midday in June) and falls to no more than 217MWe in winter (midday, December). The total annual output predicted by the EU PV GIS system is within 1% of BWSF's own figures, so these seasonal figures must be correct. Thus BWSF will never deliver 840MWe to the national grid.

**Comment 3. EXAMINATION LIBRARY document references**

**APP037 Non-Technical Summary**

*5.1.1. The Applicant seeks consent to install and operate approximately 840MWe of solar generation development in parts of WODC, CDC and VWHDC. By delivering approximately 840 MWp of power to the National Grid it aims to... National Grid it aims to provide secure and clean energy to the equivalent of approximately 330,000 homes...*

Note: the confusion of 'install and operate 840MWe' with the installed capacity of 1200 to 1375 MWp. Also 'delivering approximately 840MWp of power...' is incorrect. MWe is delivered to the Grid, not MWp

p. 18 Table 5.1

Watts peak (Wp) 1200 to 1375 MWp

Note: Watts peak refers to the installed capacity. (Only under laboratory test conditions would the output power be 1200 to 1375 MWe).

**APP038**

*1.4 Overview of the Project*

*1.4.1 The Project is formed of three areas of solar installation (Northern Site, Central Site and Southern Site) with interconnecting cables, which together would generate renewable power through photovoltaic (PV) panels. The Project aims to deliver approximately 840MWe of power to the National Electricity Transmission System (NETS), which would provide secure and clean energy of an equivalent level to meet the needs of approximately 330,000 homes.*

Note: see Comment 3 above. The Project will never deliver 840MWe of power.

**APP052 Socio Economics**

p. 30 Education & Skills

*The minimum capacity of solar generation that consent is being sought for – approximately 840 MWe*

Note: MWe is the output not the capacity; and why 'The minimum'?

*15.1.2 PVDP intends to submit an application for development consent to the Planning Inspectorate (PINS) on behalf of SolarFive Ltd under the Planning Act 2008. The proposal is to install and operate approximately 840MWe of solar generation in parts of West Oxfordshire, Cherwell and Vale of White Horse Districts (the Project). This would utilise an area of approximately 1,400 ha and deliver approximately 1,350 MWp of power to the National Grid. The application will be accompanied by an ES prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, as amended (the 'EIA*

*Regulations'), and other required documents including a statement on pre-application consultation.*

Note: again, the developers confuse the installed capacity MWp with the power output MWe. They are not installing MWe; they are installing MWp.

*15.9.26 The operational and maintenance stage is expected to last for 37.5 years. During the operational stage, a Project of 840MW of installed solar capacity is estimated to support 336 full time equivalent direct and indirect jobs. This is based on the Cardiff University study Regional Electricity Generation and Employment in UK Regions (2017) and relates to the number of jobs supported by the Project, in supply chains and via wage effects but does not include employment related to the sale of electricity itself.*

Note: once again the developers misquote the installed capacity MWp, which is between 1200 and 1375 MWp (precise figure TBD). They are confusing their claimed 840MWe with the capacity. This statement is in the section on Operation and Maintenance, local employment prospects, which presumably depends on the number of installed panels (MWp) not on the output from them.

## Comment 4. Slave labour and the source of solar panels

Preliminary Meeting Principal Issue 'Other'

Nothing in said in the various documents beyond a brief comment on the ethical sourcing of the supply chain. Will the developers commit to NOT using solar panels from companies associated with Uyghur and other slave labour practices?

The UK Government very recently had the chance to approve a Lords' amendment to the Great British Energy Bill to ban panels produced by slave labour – passed with a majority of 50 in the Upper House – but shamefully whipped their MPs to vote it down when it returned to the Commons. The UK should follow the leads of both the USA and the EU that have already banned such panels.

**Comment 4. EXAMINATION LIBRARY document references**

**APP037 Non-Technical Summary**

*6.10.7 The Project provides for a number of socioeconomic mitigation measures which will help avoid, reduce or offset likely adverse socioeconomic impacts and enhance any likely beneficial socioeconomic effects of the Project. The measures which are to be adopted as part of the Project are;*

...

*Engage in the ethical procurement of the supply chain.*

**APP052 Socio Economics**

*15.9.39 The number of construction jobs created by the decommissioning stage is considered to be commensurate with the construction stage, however, it is likely the number of indirect jobs created in the supply chain will be reduced as there will be no requirement for manufacturing the solar panels. There will, however, be some indirect job creation associated with the recycling of panels and equipment which is likely to offset this.*

Note: this is in a section titled Decommissioning. The phrase highlighted in red suggests that some indirect needed during construction - for manufacturing the solar panels - will not be needed for decommissioning. But the UK has no solar panel manufacturing industry; the jobs needed for this will be for overseas workers and have nothing to do with local, or even UK, employment.

## Comment 5. Impact of BWSF on local house values

Preliminary Meeting Principal Issue 'Other'

The Planning Inspectorate asked the developers to justify their early claims that solar installations have no effect on local house values. The developers responded by quoting from a single author's un-reviewed documents (a thesis and a non-reviewed article) that showed no effect while ignoring at least two other reviewed papers that do show a significant effect. The developers were made aware of these significant studies by the present author but chose to ignore them. Why?

**Comment 5. EXAMINATION LIBRARY document references**

**APP037 Non-technical Summary**

*NTS 6.10 Socio Economics*

*Introduction*

*The socioeconomic assessment considers the interaction of social and economic factors such as income, education, and employment of the local and regional area and the impact on this that the Project is likely to have. It also assesses any potential tourism impacts of the Project and is informed by the following other environmental topics: • Landscape and Visual Resources; • Noise & Vibration; • Traffic and Transport; • Human Health; • Agricultural Land Use & Public Rights of Way; and • Historic Environment.*

Note: no mention of impact on local house values

**APP052 Socio Economics**

Table 15.5

***Planning Inspectorate comment***

*The Planning Inspectorate broadly agrees that the Project would have a minimal effect on housing value and affordability during operation but states that the ES should explain why.*

***How and Where considered in the ES***

*As part of the literature review in Table 15.9 existing studies which evaluate the relationship between solar farms and property prices in a UK context have been reviewed. The most recent UK study was carried out in 2021 and found no clear evidence of an effect on residential property values from solar Projects in the UK.*

***Cassington Parish Council comment***

*An increasing number of studies show impacts of solar farms on house values.*

***How and Where considered in the ES***

*It is noted that the Planning Inspectorate broadly agrees with the approach of scoping this effect out of the socio-economic assessment considering the nature of the Project during operation and the fact that any impact will be less than significant. As part of the literature review in Table 15.9 existing studies which evaluate the relationship between solar farms and property prices in a UK context have been reviewed. The most recent UK study was carried out in 2021 and found no clear evidence of an effect on residential property values from solar Projects in the UK. It is also noted that according to Department for Business, Energy & Industrial Strategy (BEIS) Public Attitudes Tracker the attitudes to renewable energy are becoming increasingly more positive and thus it would be reasonable to assume that any perceived impacts on housing values as a result of such schemes would also follow the same trajectory.*

Note: The Planning Inspectorate did not broadly agree with the approach of scoping this effect out. It asked the developers to justify why they had done so.

The comment above about 'existing studies' in Table 15.9 refers only to one study by one author [redacted] of UCL.

*Table 15.7 Issues scoped out of the assessment*

*Operation and Maintenance*

***The issue***

*Impact of erection of solar panels on visual receptors and housing values*

***Justification***

*The solar arrays, panels and the substations are relatively low impact in terms of built form, and are only temporary in nature, limiting the potential for any widespread adverse effect on housing value or affordability. Any potential impacts on housing values have been assessed as part of the literature review in Table 15.9. The most recent UK study was carried out in 2021 and found no clear evidence of an effect on residential property values from solar Projects in the UK. Any impact will, therefore, be unlikely to be significant.*

Note: a 'literature review' which turns up only one, non-reviewed publication hardly justifies the name. The developers have been wilfully ignorant and have simply ignored statistically significant evidence in several publications (several from America: 2 from Europe, one of which is from the UK) that contradicts their view. The impact on local house values is a significant externality of large area solar farms, conveniently ignored by the BWSF developers.

In assessing the impact on tourism during the Operational Phase of BWSF in Table 15.11, the developers admit that 1400ha covered by >2 million solar panels up to 2.3m high, and surrounded by >100km of fencing 2.1m high, has the 'most potential to impact upon visitor economy'. If the installation will affect tourists' willingness to visit the area it is also likely to affect house-buyers willingness to buy properties within or near the installation.

## Comment 6. Decommissioning

Preliminary Meeting Principal Issue 'Other'

Decommissioning is covered in the Draft DCO, but it is not clear who is responsible and how it will be paid for. The Helios Solar Farm Inquiry perhaps established a precedent where the

developer made it very clear the landowner will be responsible. In that case, a decommissioning bond will be established around Year 10 of the installation, and the bond amount will be reviewed periodically between then and the end of life of the installation to ensure it will be enough. In the Helios case, the developer will only lease the land from the present landowner. Thus, the landowner will be responsible for decommissioning.

In the BWSF case it appears the landowner will be the developer (since freehold is being sought), so the developer should state how a decommissioning bond will be established to cover decommissioning costs.

**Comment 6. EXAMINATION LIBRARY document references**

**APP015 Draft DCO**

p. 41

*Decommissioning and restoration 14.—*

*(1) Decommissioning of the authorised development must commence no later than 37.5 years following the date of final commissioning. (2) Unless otherwise agreed with the relevant planning authority, no later than eight weeks prior to the intended date of decommissioning of any part of the authorised development' the undertaker must submit to the relevant planning authority for that part a decommissioning plan for approval. (3) Where the undertaker decides to decommission a part of the authorised development that falls within the administrative areas of multiple planning authorities, the decommissioning plan must be submitted to each relevant planning authority and the approval of all relevant planning authorities is required for the purposes of this paragraph. (4) The decommissioning plan must be substantially in accordance with the outline decommissioning plan and must include a timetable for its implementation. (5) No decommissioning works must be carried out until the relevant planning authority has approved the decommissioning plan submitted in relation to those works. (6) The decommissioning plan must be implemented as approved. (7) This requirement is without prejudice to any other consents*

Note: no mention of a decommissioning bond or relevant financial provision

**APP037 Non-technical Summary**

*5.6 The consent being sought for the Project is a temporary one. Temporary consent is being sought for a 42-year period during which the solar farm will be constructed, operated and decommissioned. Decommissioning of the Project is also expected to last 24 months. Other than all 33kV and 275 kV cables (where they have been laid in the public highway and where cables have been laid using horizontal directional drilling – either under rivers, road, rail crossings, or existing landscape features), and any NGET substation, all other solar PV array infrastructure including solar PV modules, mounting structures, cabling, inverters and transformers will be removed from the Site and recycled or disposed of in accordance with good practice and market conditions at that time. An Outline Decommissioning Plan [EN010147/APP/7.6.4], including timescales and transportation methods, ecological and landscape enhancements and other environmental improvements, has been developed in consultation the local planning authority, local community and key stakeholders and forms an integral part of the DCO application. This is secured by way of Requirement in the draft DCO.*

Note: no mention of a decommissioning bond or relevant financial provision

**APP052 Socio Economics**

***Decommissioning***

*15.9,39 The number of construction jobs created by the decommissioning stage is considered to be commensurate with the construction stage, however, it is likely the number of indirect jobs created in the supply chain will be reduced as there will be no requirement for manufacturing the solar panels. There will, however, be some indirect job creation associated with the recycling of panels and equipment which is likely to offset this.*

Note: no mention of a decommissioning bond or relevant financial provision. Revenues will have ceased by the time decommissioning starts. So how will it be paid for?

D J Rogers 15/04/25