

Summary statements from 7000Acres regarding matters that they have previously raised during the examination that have not been resolved to their satisfaction.

Cottam Deadline 6

5 March 2024

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1. Executive Summary

7000Acres feels compelled to restate many key points of our case, as the Applicant has not responded to our numerous concerns in a meaningful way. Based on the submissions made by Lincolnshire County Council, West Lindsey District Council, 7000Acres and other Interested Parties, the Applicant has not taken full account of the cumulative impact of this and the other 5 solar NSIPs, plus sub NSIP energy schemes, in the local area.

We fully understand the policy ambition for 70GW of installed solar capacity. However, we will show that current Government Policy on energy, climate change, and land use do not support inefficient schemes such as the Cottam Solar Project. We will show that the Applicant's claims on the benefits for the scheme are not justified.

The National Planning Policy Framework identifies that availability of land for food production should be considered but this has been dismissed by the Applicant. A High Court Judgement confirmed that the Written Ministerial Statement of the 25 March 2015 remains extant and relevant, contrary to the Claimant's (Island Green Power) argument that recent amendments to net zero targets and delivery budgets had reshaped the policy framework for renewable energy.

The Applicant has failed to provide any mitigations for their scheme. Instead, they conducted a Public Consultation based on a 40 year operational period, then amplified the harm by increasing the operational period by 50% to 60 years. The Applicant maintains that 4.5m high solar panels will be used, despite the considerable adverse impact on the local environment. The only mitigation proposed by the Applicant is screening vegetation. This will take circa 15 years to become effective, and even if effective, it will adversely change the local environment.

The Applicant has not conducted a Health Impact Assessment to identify the effect this, and the other local solar NSIPs, will have on people's physical and mental health. Instead, it has

used a general planner from the Lanpro consultancy, i.e. a lay person, to conduct a shallow and simplistic desktop assessment. 7000Acres recommends that the Applicant should use a health professional to conduct a valid assessment.

We retain serious concerns over how the Applicant has assessed a number of issues, including flooding, visual impact, Biodiversity Net Gain, noise, Battery Safety, Greenhouse Gas Emissions and suitable alternative sites.

As the Cottam Scheme cannot be mitigated effectively, it is evident that there is a strong case for refusal, particularly as it is clear that the Government's ambition for 70GW of solar capacity can be delivered by rooftop solar and smaller, less intrusive ground mounted installations, such as the 125-200 acres sites envisaged in EN-3 (EN-3 2.10.17).

2. Introduction

7000Acres is a collection of concerned residents formed from over 30 villages in and around the footprint of the Cottam, West Burton, Gate Burton, Tillbridge and Steeple solar industrial projects. We have over 1,000 members.

Overall, the Applicant has failed to show clearly how the very limited benefits of their scheme outweigh the considerable harms identified by the Councils' experts and Interested Parties.

The NSIP process is supposed to be "front loaded"¹. The Applicant's Public Consultation cited a 40-year operational period and then changed it to 60 years, and altered the cable corridor routing, immediately the Examination commenced. The Applicant entered Examination without a mature plan and their shallow and incomplete documentation reflects this.

The Applicant has ignored the major issues raised during the Statutory Consultation, not proposed any mitigations and instead worsened the harm by increasing the operating period of the scheme by 50% (20 years).

We retain many concerns regarding matters that have not been resolved to our satisfaction. In general, the Applicant has not engaged in the Examination process by providing further details or clarity on the need for the scheme and how they will mitigate the major harm it will cause to the area. Instead, they have merely repeated their flawed case in response to the issues raised by Interested Parties and in the ExA's Written Questions.

For these reasons we feel compelled to restate many key points of our case as the Applicant has not responded to, or addressed, our numerous concerns in a meaningful way.

¹ PA0228 Advice Notice Sixteen - Introduction

Firstly, we will discuss the need for this scheme and what benefits it might provide. We will then identify the harms this and the other solar NSIPs will impose on the region. We will show that the Applicant has not consulted in a straightforward and transparent manner and has not followed important relevant processes and guidance.

3. UK Energy Policy Landscape

7000Acres understands the policy ambition for 70GW of installed solar capacity, and while the evolution of the 2024 NPS suite clearly facilitates large-scale ground mounted solar above 50MW, there are no explicit policy targets or calls for such extensive large scale ground mounted solar as proposed by the Applicant. By contrast, an acceleration of rooftop deployment has been called for by the Government's own reviews and others (e.g. CPRE).

UK Energy Publications

The Applicant has not challenged the points made by 7000Acres in the WR, which note that solar is not part of the Government's 10-point plan for a Green Industrial Revolution (2020), and that the evolution of the landscape in relation to solar and its inclusion in policy is essentially in flux. In this shifting landscape and in the face of the many challenges, the Skidmore Review calls for a *"taskforce and deployment roadmaps in 2023 for solar to reach up to 70GW by 2035"*. Such calls for a coordinated approach to decarbonisation are commonplace, also being cited in recent reports from the UK Climate Change Committee², National Audit Office³ and the Business, Energy and Industrial Strategy Committee⁴, further details are included in 7000Acres WR REP2-090.

From these reports, it is clear that to decarbonise, the UK faces many challenges, among which those most pressing concerns are:

- The need for overall co-ordination and planning of the energy system
- The resolution of grid connectivity issues – especially to deliver offshore wind generation
- Inadequate pace of deployment of wind and nuclear power generation

² [Delivering a reliable decarbonised power system - Climate Change Committee \(theccc.org.uk\)](https://www.theccc.org.uk/reports/2023/06/2023-taskforce-and-deployment-roadmaps-for-solar-to-reach-up-to-70gw-by-2035/)

³ [Decarbonising the power sector - National Audit Office \(NAO\) report](https://www.nao.org.uk/wp-content/uploads/2023/06/Decarbonising-the-power-sector-National-Audit-Office-NAO-report-2023-06-20.pdf)

⁴ [Decarbonisation of the power sector \(parliament.uk\)](https://www.parliament.uk/business/committees/committees-a-z/business-energy-and-industrial-strategy-committee/committees-reports-and-publications/2023-06-20-2023-taskforce-and-deployment-roadmaps-for-solar-to-reach-up-to-70gw-by-2035/)

- The need to manage energy flexibility and intermittency of renewable energy sources

While solar has its part to play, it features very little in the landscape of key challenges to be overcome for the UK to make a success of decarbonising the power sector, and existing rates of deployment do not appear to be a concern, thereby undermining the call by Applicants for extensive acceleration of solar deployment through large-scale ground mounted solar. 7000Acres note that, while Skidmore and others call for a “rooftop revolution”, there is an absence of an explicit call for an equivalent “ground-mounted gathering” of solar.

The Skidmore Review⁵

The Applicant has not acknowledged the key recommendations within Skidmore, namely the call for a “rooftop revolution” to deploy solar, as well as the call for a “*taskforce and deployment roadmaps in 2023 for solar to reach up to 70GW by 2035*”. As the Skidmore Review was commissioned and then published by the Government, it should be taken as *de facto* Government Policy.

Despite this call for co-ordination and rooftop deployment, the Applicant is pushing ahead with a large-scale ground-mounted scheme. Presumably, the Applicant agrees with the principle of rooftop deployment, as long as it doesn’t interfere with consent for their ground-mounted scheme.

The current massive rush to ground-mounted schemes has the real potential to derail rooftop deployment at scale before any stirrings of a revolution. The Applicant states that rooftop solar would not diminish the need for the scheme, and that Section 7.6 of the Statement of Need describes why, however this section does not mention rooftop solar and offers no such explanation.

It is noted that the Applicant also has failed to address the points that materially relate to solar deployment at scale. For instance:

⁵ [MISSION ZERO - Independent Review of Net Zero \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/100000/mission-zero-independent-review-of-net-zero.pdf)

- The Skidmore Review states the aim should be that “projects are not imposed on local communities”, as appears to be the case within West Lindsey, where there is overwhelming opposition to the proposed large-scale solar schemes.
- The Applicant does note that the report recognises the “importance of local action and local plans” and that “people and places must be empowered to deliver net zero through a full alignment on a local level”; however the Applicant does not appear to be able to reference any such empowerment or alignment in the case of their proposed scheme.
- The Applicant fails to note that the Skidmore Review states that *“solar farms in the countryside should not be planned piecemeal, but in a co-ordinated fashion as part of a Land Use Strategy”*.

The Skidmore Review also takes a holistic view of decarbonisation, noting the interdependency between decarbonisation across different sectors, including energy, food, agriculture, nature and what all this means for land use. The Applicant has not addressed this point, despite the significant use of land which the scheme requires.

NPS Framework Overall:

Within the 2024 NPS EN-1, Section 1.6 clarifies the arrangements for handling the transition between the 2011 suite and the suite due to come into force in 2024. Section 1.6 states that: *“for any application accepted for examination before designation of the 2023 amendments, the 2011 suite of NPSs should have effect”*.

The 2011 documents make virtually no reference to solar. Within EN-1 (2011), the Overarching Policy envisages large scale renewable energy generation from wind (offshore / onshore), Biomass, EfW, Wave and Tidal, citing the UK’s abundant national resources in these areas – notably, this does not include solar. Solar is only mentioned once, to highlight the need for back-up capacity to manage intermittent generation.

With regard to land use, the 2011 NPS EN-1 (5.10.8) requires that Applicants “should seek to minimise impacts on the Best and Most Versatile Agricultural Land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations”.

The 2011 NPS EN-1 also advises that the Inspector should give little weight to the loss of poor-quality land (including 3b), “*except... in areas... where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy.*” Notwithstanding the unusually high proportion of land that has been assessed by the Applicant as 3b and which is nevertheless highly productive, it is clear that within the area of West Lindsey in which the Cottam Solar Project is proposed, there is a demonstrable link between agriculture, the environment and the local economy, therefore the exception should apply.

Within NPS EN-3, National Policy Statement for Renewable Energy Infrastructure, solar is not mentioned in 82 pages of guidance, whereas, onshore wind, offshore wind, biomass, waste combustion, wave and tidal are all covered.

Critical National Priority

Following consultation feedback, the 2024 NPS has evolved the definition of “a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure”, where low carbon infrastructure is defined as “for electricity generation, all onshore and offshore generation that does not involve fossil fuel combustion...”. This is an evolution of the dNPS (March 2023), which defined the CNP only “for the provision of nationally significant new offshore wind infrastructure (and supporting onshore and offshore network infrastructure)”.

This very recent change, following a very close margin of feedback (with 35 in agreement with the March proposed draft definition of CNP, and 39 in disagreement). It is worth noting that this is from a total of 157 responses, 61 of which were from the categories “Business /

Trade Association” or “Commercial Organisation”. Many of the names of these organisations are redacted from the consultation feedback report, but of the named respondents, many were bodies with interests in solar development, e.g. Solar Energy UK, Eden Renewables, EDF and Scottish Power Renewables.

The result of this is that there is no particular emphasis within the NPS on any one technology over another, even though it is a matter of fact that not all technologies are able to contribute to decarbonisation in equal measure. For instance, wind is foreseen by National Grid to produce over 70% of the UK’s electricity by 2050, which is presumably why it was singled out in the original definition of CNP in the March 2023 draft NPS. By contrast, solar will deliver an order of magnitude less than wind, at around 7%, even with up to 90GW of deployed capacity.

The result is that the definition of CNP is rendered effectively meaningless within the NPS, as there is no differentiation between technologies, despite their differing contributions. Although the NPS equates such diverse contributors as offshore wind, solar, wave and geothermal, in weighing impacts and benefits, the Secretary of State is directed to “*take into account its potential benefits including its contribution to meeting the need for energy infrastructure*”. This allows the SoS to consider the contribution such technologies can make.

Evaluation of schemes in the 2024 NPS suite

As described above, the Secretary of State is able to consider the functional contribution a proposed development may make.

In addition to this, “*Good design*” includes how infrastructure “*relates to the landscape it sits within*” and that “*applying good design to energy projects should produce sustainable infrastructure sensitive to place, including... efficient in the use of natural resources, including land-use*”. The scale of the Cottam project and height of panels, in comparison to the local landscape and villages, demonstrates a design that lacks sensitivity to place. Allied to land use, is the subject of the use of agricultural land. The NPS states “*Where development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality*” (this principle of a “*hierarchy*” of

preferred land use is further expanded in emerging the 2024 NPS EN-3). In the case of Cottam, the Applicant has focused entirely on the quality of agricultural land, not demonstrated necessity to use agricultural land.

Also, within “Good Design”, the NPS notes the importance of *“the functionality of an object – including fitness for purpose and sustainability”*. Section 2 of 7000Acres WR REP-117 (*“The role of Solar in Energy Provision and Decarbonisation”*) describes the constraints around the functional contribution solar can make to energy and decarbonisation, which are limited to the point where the benefits do not outweigh the harms arising from ground mounted solar installation at such a large scale.

From the NPS, in decision-making, the Secretary of State *“should be satisfied that the Applicant has considered both functionality (including fitness for purpose and sustainability) and aesthetics including its contribution to the quality of the area in which it would be located, any potential amenity benefits, and visual impacts on the landscape”*.

With regard to alternatives the NPS states that the *“decision making process of the existence (or alleged existence) of alternatives to the proposed development is, in the first instance, a matter of law”*. The NPS recommends that the *“Secretary of State should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security, climate change, and other environmental benefits) in the same timescale as the proposed development”*.

In the case of Cottam, the Applicant has created an extremely narrow envelope of alternatives, starting with grid connection access, then has sought to secure sufficient *ad hoc* pockets of land to justify use of the grid connection. On that basis, the discussion of alternative sites by the Applicant is superficial, in that rooftop solutions, or use of brownfield sites were never genuine considerations. For example, the EDF Manager of the Cottam Power Station confirmed in 2023 that no representations had been received from IGP with regard to the availability of the future brownfield site when the existing power station demolition is completed in 2025.

On the other hand, in order to decarbonise effectively, even without retrofitting solar to existing rooftops, the capacity of Cottam could be deployed each year by making use of new-build domestic rooftops, thereby providing a much more rapid deployment of the same capacity, with fewer adverse impacts than the Cottam scheme.

The NPS also describes the impacts on landscape, stating that effects “*arise not only from the sensitivity of the landscape but also the nature and magnitude of change proposed by the development*”, noting that “the scale of energy projects means that they will often be visible across a very wide area”. The Secretary of State should judge “*whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project*”. The combination of the colossal scale of ground mounted solar projects such as Cottam, and the other local solar NSIPs, as well as the unprecedented height of the solar panels, is not sensitive to the landscape.

In their written submissions and during ISH, the Applicant has tried to characterise the 7000Acres arguments as opposing Government Policy. We are in fact arguing the opposite, it is Government Policy that rooftop and brownfield sites should be used in preference to productive farming land. Our argument is consistent with Ministerial Statements, the NPPF and both current and emerging NPS.

4. The Need

The need for solar vs. the need for large-scale ground-mounted solar

7000Acres agree there is an urgent need to decarbonise. We recognise that solar has a role to play in decarbonisation and that the UK Government has set out an ambition for 70GW of installed solar capacity by 2050. However, while the headline figure of 70GW has been frequently quoted, it is vital that the anticipated contribution of the 70GW solar capacity is understood, as part of the overall picture of need.

National Grid FES (Future Energy Scenarios) expects solar to make a relatively modest contribution by 2050; between 7% and 10% of UK electricity demand (even in scenarios of

up to 90GW of installed solar capacity). For that output, FES 2023 (Data Workbook)⁶ expects solar may account for up to 25% of the UK's installed generating capacity. This is due to the inherent inefficiency of solar generation in the UK's northern location. For context, wind would account for 43% to 47% of installed capacity but is expected to contribute between 69% to 72% of national demand.

At the core of 7000Acres concerns is that the potential benefits of solar do not warrant ground-mounted deployment at such large scale, with all the attendant consequences. 7000Acres therefore strongly reject there is a need case for extensive ground mounted solar deployment in the UK as the primary route to delivering the Government's 70GW ambition. However, this does appear to be the current trajectory of applications, which continues despite repeated calls for a "rooftop revolution" as a means of delivering solar, such as in the Mission Zero – Independent Review of Net Zero (Skidmore Review)⁷, and from the CPRE⁸.

5. Cost

The Applicant has claimed the electricity generated will be "low cost" (Statement of Need 1.2.9) but this is false. Under the Contract for Differences (CfD) Scheme⁹ the Applicant will be paid an agreed strike price: the recent Contracts for Difference Allocation Round 5 resulted in a typical solar cost of £47 per MWh (CfD scheme prices are quoted in 2012 prices, with the latest indexation¹⁰ this is £64.56 per MWh). The peak generation of all solar will be around the middle of a sunny day in summer, when the typical grid price is frequently much lower, and already sometimes negative due to curtailment.

The graphs below are taken from BMReports¹¹ (website of the UK Electricity balancing and settlement market) and show the first three Mondays of July 2023 (Monday is chosen as this

⁶ [Future Energy Scenarios \(FES\) | ESO \(nationalgrideso.com\)](#)

⁷ [MISSION ZERO - Independent Review of Net Zero \(publishing.service.gov.uk\)](#)

⁸ [A rooftop revolution: turning possibility into reality - CPRE](#)

⁹ <https://assets.publishing.service.gov.uk/media/64fa0473fdc5d10014fce820/cfd-ar5-results.pdf>

¹⁰ [AR6 Core Parameters \(publishing.service.gov.uk\)](#)

¹¹ [Electricity Data Summary | BMRS \(bmreports.com\)](#)

is frequently the highest demand day of the week), and show that system prices are frequently significantly lower than the indexed strike price. For 03/07, the price falls to £-75 per MWh, but hovers around zero for much of the peak solar output period. For 17/07, the price plummets to £-185 per MWh, and is around £22 per MWh for much of the peak solar output period. These figures demonstrate the relatively low spot market prices of electricity during periods when solar output is at its greatest, and the relatively high cost solar operators will be paid during these periods, through CfD prices.

Over the same period, the weekly average prices ranged from £115 per MWhr to £125 per MWhr (Electricity Prices: Forward Delivery Contracts, Weekly Average, from Ofgem)¹², which provides an indication of the much higher cost of energy during periods at other times of the day, when solar is not able to contribute to the electricity system.

This demonstrates that, while the Applicant may argue the cost of deploying solar is low, the value of when the bulk of solar energy is produced in the UK, is already when prices are among their lowest, and therefore this must be considered when weighing the benefits and impacts of large-scale ground-mounted solar installation.

¹² [Wholesale market indicators | Ofgem](#)



As raised by 7000Acres in Section 2.2.2 of 7000Acres WR REP2-080, suppliers are already identifying ways to encourage energy usage during periods where it is anticipated that solar generation will be high, by offering half-price tariffs during this time. Therefore, in the context of when the energy is available and how it can be used, paying £47 per MWh (indexed to £64.56 per MWh in 2023 prices) is not low cost.

6. The Benefits

The volume of energy the scheme will deliver

We have already touched on the relatively small contribution solar will make, even with 70GW of solar capacity installed. At its heart, this is because the UK has very low levels of solar gain on a global scale. This should make the UK an unlikely choice for some of the largest concentrations of ground-mounted solar capacity in the world. Nevertheless, the 4 NSIP schemes in West Lindsey could see development on a similar scale to the largest schemes in China or India, notably in areas with much greater solar gain, and far fewer pressures on land use.

Recognising that, even if 90GW of solar will only deliver up to 10% of energy production, a 500MW solar scheme would contribute only 0.055% of the UK's annual demand. This cannot be considered to be a sufficiently material contribution to the energy system to warrant the harms associated with ground-mounted solar development at the scale proposed.

Countries must make use of the natural resources they have, in order to maximise yield. This point is made by the technical author of the Applicant's Statement of Need, in a separate paper "*Power System Fundamentals*"¹³, which states that, located in north-west Europe, the UK "*has potential for plentiful wind generation but has low solar generation potential*". So, the Applicant's own specialist has undermined the Statement of Need.

The scheme being proposed by the Applicant is being considered for "*overplanting*", i.e. with capacity installed greater than the grid export capacity. This "builds in" a certain level of self-curtailment. It means that solar panels in this area, which is already one of the lowest areas of solar gain worldwide, would, by design, then have a deliberately reduced output. These would be some of the lowest yielding panels anywhere on earth. Perhaps in an economic spreadsheet such a decision would make sense, but in terms of deploying resources efficiently to decarbonise, this is a backward step.

¹³ [Humbeat Limited - Resources](#)

The importance of when energy is delivered

In terms of benefits, 7000Acres have highlighted other limitations with solar generation, particularly the mismatch between greatest demand (heavily biased towards winter evenings), and greatest solar electricity production (summer days, typically with lower demand). This is of particular concern given the limited options for long-term energy storage, i.e. season to season, rather than the short-term BESS facility proposed by the Applicant. Production without the ability to use in the moment or store, will lead to energy being wasted, or “curtailed”. Uncontrolled deployment of solar will result in more curtailment, therefore a less efficient and more expensive path to decarbonisation, ultimately resulting in higher energy bills for consumers. Section 2.1.3 of 7000Acres WR REP2-080 further describes the scale and cost of curtailment, and Section 7.3 of 7000Acres WR REP2-080 considers the Applicant’s treatment of the subject in the SoN.

7. Security of Supply

The Applicant has claimed that solar enhances security of supply, by adding diversity of energy sources to the electricity system. In terms of security of supply, the primary challenge is to keep the lights on and meet demand. The Applicant has glossed over the fact that, even with 70GW of solar capacity installed, none of this can be counted on to meet peak demand, which is on winter evenings. The security of supply gains from having a contribution of up to 10% of solar per year on the electricity system are therefore relatively minor. For the Applicant to state the minor advantages of solar in security of supply, without addressing the “elephant in the room”, i.e. that solar won’t contribute to security of electricity supply when the country needs power most, is an example of partial information presented to the Examining Authority. This is further discussed in Section 7.2 of 7000Acres WR REP2-080, which also describes the Applicant’s limited treatment of the potential of solar to contribute to the UK’s Capacity Mechanism, which is the primary market tool for ensuring sufficient electricity capacity is available to National Grid (system adequacy).

8. The Harms

Land use 1: Overall

The Applicant has not addressed one of the key points raised by 7000Acres, which is that there are exceptional pressures on land use in general, and cropland in particular, much of which come from the need to decarbonise, therefore the extensive and uncontrolled use of land for large scale ground mounted solar will only serve to exacerbate this problem, impeding requirements to plant 30,000-70,000 hectares of trees per annum and establish peatlands. In their analysis of land use for decarbonisation, the UK Climate Change Committee make no reference or allocation to land being used for extensive large-scale ground mounted solar. The Government has already been criticised for “overpromising” finite land with its multiple ambitions for land use in a report by the Royal Society on the subject of Land Use. The Government has recognised the competing tensions for land use and has committed to developing a Land Use Framework. The pressure on land use is also highlighted in the Skidmore Review.

The Applicant has focused solely on the 3a/3b debate, in terms of Agricultural Land Classification, and has failed to address the issue of overall pressure on land use, or acknowledge the role it is playing in exacerbating this situation.

The House of Commons Environmental Audit Committee Report¹⁴, 29 November 2023, states:

“The Government should designate food security as a public good and incorporate food security and environmental goals more explicitly in the design of the Environmental Land Management schemes.”

In paragraph 31, the report then states:

¹⁴ <https://publications.parliament.uk/pa/cm5804/cmselect/cmenvaud/312/report.html>

“It is also the case that many of the countries from which the UK imports food are climate-stressed, potentially jeopardising supply in the future. Furthermore, because UK food production tends to be relatively intensive in nature, any production offshored could triple or quadruple the biodiversity impact, as explained by Dr Elizabeth Boakes:

Every hectare of arable land that we convert to housing or something and then offshore the food production must be replaced by on average 2.9 hectares of land overseas, which will often be in tropical countries that will, therefore, have a much higher biodiversity impact, sometimes three to four times higher than in the UK.”

So, in addition to producing no power when demand is high, the scheme will do environmental damage by displacing food production abroad.

Land use 2: Agricultural Land Classification

We retain our concerns over the ALC methodology applied by the Applicant. The Applicant has not addressed our concerns, merely repeated their initial flawed assessment. The 7000Acres Rep 105 identifies a number of anomalies in the ALC survey conducted by the Applicant.

The principle that BMV land must not be used “without compelling evidence” has recently been upheld in the High Court,¹⁵ where the Applicant for the Lullington solar scheme (Island Green Power) lost their appeal. Importantly, the High Court case confirmed that the Written Ministerial Statement of March 25th 2015 remains extant and relevant, contrary to the Claimant’s argument that recent amendments to ‘net zero’ target and delivery budgets had reshaped the policy framework for renewable energy. Applying the High Court Judgement would effectively remove Cottam 3b site as this land has numerous areas of ALC grade 3a land dotted within its boundaries. The other parcels of land making up Cottam 1, 2 and 3a would need their layouts adjusted accordingly to remove the ALC grades 2 and 3a land from the development.

¹⁵ <https://www.bailii.org/ew/cases/EWHC/Admin/2024/295.html>

Permanent Loss of BMV Land

7000Acres request the ExA takes account of recent research by the Welsh Government¹⁶ and others¹⁷ that installing large solar arrays on farmland results in deep soil compaction and increased water runoff. Runoff from panels can lead to rivulets, which then lead to soil loss by erosion. Additionally, good quality soil can be downgraded by compaction and damage caused by removing the solar foundation and piles¹⁸. Unless low pressure tyres and tracks, along with only working the land in dry conditions is secured, then soil compaction and degradation is a reasonable worst case assessment. It is apparent that the Applicant has not taken account of this recent research and has not addressed damage to the soil by compaction.

Book of Reference Anomalies

The Book of Reference is still at odds to the Lend Registry information with regard to the owner of the 42 parcels of land that make up the majority of Cottam 1. This is therefore problematic if approval of this NSIP is granted.

Adverse Impacts on Decarbonisation Efforts

Three major reports have been published this year that assess the decarbonization of the power sector and the UK's current progress towards delivering on that goal. In doing so, they describe the main challenges and the extent to which solar plays a role.

¹⁶ <https://www.gov.wales/sites/default/files/publications/2023-08/impact-solar-photovoltaic-sites-agricultural-soils-land-spep21-22-03-work-package-3.pdf>

¹⁷

https://www.researchgate.net/publication/343578893_Effects_of_Revegetation_on_Soil_Physical_and_Chemical_Properties_in_Solar_Photovoltaic_Infrastructure

¹⁸

https://www.researchgate.net/publication/343578893_Effects_of_Revegetation_on_Soil_Physical_and_Chemical_Properties_in_Solar_Photovoltaic_Infrastructure

These reports come from the UK Climate Change Committee (CCC)¹⁹, the National Audit Office (NAO)²⁰, and by the Business, Energy and Industrial Strategy Committee (BEIS)²¹.

Together, their most pressing concerns are:

- The need for overall co-ordination and planning of the energy system
- The resolution of grid connection issues – especially to deliver offshore wind generation
- The inadequate pace of deployment of wind and nuclear power generation
- The need to manage energy flexibility and intermittency of renewable energy sources

Solar simply does not feature in the landscape of key challenges to be overcome for the UK to deliver on decarbonising the power sector.

Extensive deployment of large-scale ground mounted solar will serve to impede decarbonisation efforts by:

- Creating a significant additional pressure on land-use (see above). Solar can be deployed on rooftops, thereby removing a source of pressure on land use. The choice of developers to pursue the economic opportunity of large-scale ground-mounted solar puts more pressure on land, a finite and precious resource in the UK, which must also meet demands for housing, commercial development, food production, as well as making its own contribution to decarbonisation, through planting forests and establishing peatlands.
- Diverting scarce resources vital for higher priority decarbonisation efforts. There are already shortages of skilled engineering staff, transformers and high voltage equipment. With the key priority being identified as the need to deploy the grid infrastructure to support offshore wind, the unnecessary connection of solar to HV

¹⁹ [Delivering a reliable decarbonised power system - Climate Change Committee \(theccc.org.uk\)](https://www.theccc.org.uk)

²⁰ [Decarbonising the power sector - National Audit Office \(NAO\) report](#)

²¹ [Decarbonisation of the power sector \(parliament.uk\)](https://www.parliament.uk)

substations, miles from the panels, puts additional pressure on this supply and skills chain (Recommendations 14 & 15 from the Electricity Commissioner's Report²²).

- Sterilising strategically important grid connection points. To decarbonise, it is understood that the country will need further nuclear reactors (including small modular reactors), electrolysers and other equipment. Such equipment will require high voltage, high power grid connections, and their use for solar schemes will sterilise these connections for decades. The consequence of this will be the need for yet more grid infrastructure, and / or a delay of such technology being deployed.
- Displacing crops. By covering productive farmland with solar panels, the crops grown within the region would need to be produced elsewhere. These crops are a mixture of food for people, animal feed and crops for biofuels. There is no consideration as to the net carbon effect of these crops being displaced, nor potential impacts on food security. The NPPS footnote 62 is very clear:

“Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality. The availability of agricultural land used for food production should be considered, alongside the other policies in this Framework, when deciding what sites are most appropriate for development.”

9. Timespan

The revised EN-3 (November 2023) 2.10.65 states that an *“upper limit of 40 years is typical”*. The Applicant is seeking approval for 60 years, which when the construction period is taken into effect, will permit the system to be operational until circa 2089. Ground mounted solar panels will be obsolescent long before 2089, so this extensive period of time is not justified. The Applicant has not explained why they need consent for such an extensive period of time, and not the *“temporary use”* identified in EN-3.

One of the grounds that led to the refusal of the Lullington solar scheme was timescale, where the Inspector stated that 40 years was not temporary use (as required by EN-3) but a *“generational change”*.

²² [Electricity-Networks-Commissioner-report-to-SoS.pdf \(esc-production-2021.s3.eu-west-2.amazonaws.com\)](https://www.amazonaws.com/esc-production-2021.s3.eu-west-2.amazonaws.com/Electricity-Networks-Commissioner-report-to-SoS.pdf)

For locals, residents and visitors, the experience of the scheme will not be temporary. It will be permanent, occupying the majority and if not the entirety of their lifetime.

10. Size of the Scheme

EN-3 (November 2023) describes a typical 50MW solar scheme as being 125 to 200 acres in size. Although it does state that size will vary, there is no support for a scheme over ten times that size. Furthermore, the cumulative impact of the multiple solar schemes in West Lindsey, and just across the River Trent, are completely beyond anything envisaged in the NPSs, with each of the schemes being as large as the current biggest solar schemes in Europe.

11. Height of the Solar Panels

The Applicant has not provided a clear explanation why it is necessary to use solar panels that are 4.5m high, whilst other similar schemes, such as Sunnica²³ or Stow Park use panels up to 2.5m high. Use of 4.5m high panels is unprecedented in the UK. Panels with a height of 2.5m could be screened almost immediately by typical Lincolnshire hedges and mitigate much of the visual impact.

12. Visual Impact

The Applicant has failed to address the concerns raised by Interested Parties. 7000Acres agrees with the WLDC assessment that states the industrial development of the landscape will (paragraph 4.11, AHH):

“bring about an extensive change on land use...and subsequently the openness and perception of solar development: creating what may be perceived as an ‘energy landscape’ as opposed to rural or agricultural one at present, which is a complete change of character.”

²³ [EN010106-005906-December 23 information request.pdf \(planninginspectorate.gov.uk\)](#)

13. Landscape Character

West Lindsey District Council's Written Representation (5.54) states that:

'The Cottam Solar Project will cause significant harm to the landscape character of the area, altering it from its agricultural use and character potentially irrevocably. The visual effects on communities and visitors will be significant.'

In addition, the Council continue that they, *'are unclear as to why the Applicant has continued to promote a project that has direct negative impacts upon it.'*

WLDC's consultants ((4.9, AHH Planning Consultants, Landscape & Visual Review Lincolnshire County Council, Cottam Solar Project) disagree with the Applicant's assessment that their scheme is moderately beneficial. AHH state:

'we are not in agreement with the findings of the landscape assessment, and do not see any appropriate justification for assessing significant beneficial landscape effects on both landscape character areas, or individual contributors to landscape character by the construction and operation of a large solar development.'

Since the above assessment by West Lindsey District Council and throughout the Examination process, the Applicant has not amended the Scheme to accommodate the issues raised. In contrast, the Applicant has increased the unreasonably long-life span of the Scheme from 40 years to 60 years. The Applicant has repeatedly failed to propose effective mitigation, relying on vegetation as their sole mitigation. Even the Applicant concedes that this will take up to 15 years to become effective (although they take no account of reduced foliage in the winter months), the sole proposed mitigation measure is not valid and does not adequately alleviate harms.

Therefore, 7000Acres concludes that the above statements by West Lindsey District Council, remain valid, and that significant harm will occur in relation to landscape character if the Cottam Scheme were to be approved.

14.Flooding

Although the developer considers: *'The proposed strategy aims to mimic the natural drainage conditions of the site as much as possible'* and *'the Scheme's impermeable^{Note} area will remain consistent to its pre-development state'*, once the panels are installed, the area in the rain shadow beneath the panels will not be available for flood mitigation.

Note: The Applicant may have intended to say "permeable" rather than "impermeable".

Rainwater, normally mitigated by infiltration over the entire area, will fall onto the impervious panels, run to the lowest point, cascading onto the ground along the drip line of the panel, thereby concentrating the flow onto a significantly smaller area. This will result in channelling of the surface water runoff along the drip line, with insufficient residence time for complete infiltration and local saturation of this localised area, during periods of prolonged rainfall.

This lack of mitigation will inevitably lead to local flooding and a much greater contribution to an already existing problem in the wider surface water catchment area of the River Till, receiving drainage from adjacent solar schemes, which if approved, would create the same problem and for the same reasons.

On 19 November 2023, several thousand acres of farmland in the catchment area of the River Till, were inundated after a period of heavy rain, interrupting normal farming practices over a much wider area due to water logging caused by high water levels within drainage ditches. Also, roads to the villages of Stow and Sturton by Stow were flooded, preventing access by emergency services.

The Applicant claims the landowner will maintain the drainage but this is not secured. Welsh Government research²⁴ on solar schemes identifies that flooding risk increases if drainage is not maintained or the ground compacted during construction.

15. Health

7000Acres remain concerned there is no Health Impact Assessment associated with the proposed concentration of developments within the West Lindsey region. We maintain that a desktop review is not satisfactory, and understanding a broad depth of current quantitative data is essential. The Applicant has used a general planner from the Lanpro Consultancy to assess the health impacts. This has resulted in a shallow and incomplete assessment that does not address the health and wellbeing issues identified by the health professional in the 7000Acres team.

We maintain that these projects should have been seen as one, as there is a cumulative impact effect on health and wellbeing that needs to be considered. As four separate single schemes, this potentially negates an assessment, however as one scheme, this would definitely prompt one due to scale and potential impacts on people. By not doing this assessment, demonstrates the Applicant's inability to clearly understand how the project will harm health and wellbeing in a rural community.

Our view is supported by WLDC, who in their response to ExA question 2.2.3 state:

"WLDC maintains that, in order to comply with development plan policies, a Health Impact Report should have been submitted with the application. The report is separate to the EIA, as its purpose goes beyond the scope of simply identifying 'likely significant' impacts, to the identification of all potential impact. A HIA would allow the assessor to be more qualitative in its assessment and seek to identify impacts that, although may not be 'significant' in EIA

²⁴ <https://www.gov.wales/sites/default/files/publications/2023-08/impact-solar-photovoltaic-sites-agricultural-soils-land-spep21-22-03-work-package-3.pdf>

terms, will still be adverse impacts that every effort should be made to mitigate and taken into the overall planning balance.”

Please refer to our evidence presented at Deadlines 1 and 5.

16.Socio-Economic

The breadth of area chosen for Impact Assessment is too wide and misses Gainsborough within the socio-economic study, a town with some of the most deprived areas within the country. This should be considered as a fault in the study.

The Applicant has provided only limited information which lacks transparency in its assessment of any jobs lost, or the nature of any jobs created. There is little or no evidence presented of community benefit through employment from the development, in an area that is in desperate need of jobs and prospects. The loss of farming livelihoods therefore can only be seen as an erosion of opportunity. This is particularly material as any perceived benefits of the scheme will be outside the region that is most severely impacted by the scheme, and which already suffers deprivation.

While the Applicant claims their compliance with policies within Local Plans, the Applicant has not addressed the specific points raised by 7000Acres in highlighting the significant amount of work that has been carried out to develop plans for the future of the region. Despite being extremely conscious of climate change and actions to decarbonise the economy, this work makes no proposals for the development of large-scale ground mounted solar as a contribution to the development of the region. In particular:

- The industrialisation of an area of Lincolnshire through extensive deployment of large-scale ground mounted solar would serve to undermine the Agrifood ambitions of the Lincolnshire Industrial Strategy as well as the appeal for visitors and the ambition to improve areas of deprivation through the stimulation of the Visitor Economy.
- The Central Lincolnshire Plan sets out objectives for Land Use (protecting the resources of the county) as well as for Climate Change and Energy. Where solar does

feature, it is primarily in relation to retrofit to buildings or incorporation into building design.

- The CLP sets out policies for Renewable Energy as well as the protection of landscapes. The criteria to be met for a renewable scheme to be acceptable are clear, including considerations of scale, impacts on landscape character, visual amenity amongst other issues. What is also clear is that meeting these criteria would be impossible for a scheme at the scale of Cottam.

17. Climate Change Assessment

7000Acres retains its concerns over the greenhouse gas (GHG) assessment made by the Applicant (Chapter 7: Climate Change). The Applicant has repeatedly failed to provide further information on how it reached its conclusions. It still has not provided a meaningful assessment of the GHG emissions generated during replacing degraded solar panels, batteries and decommissioning. It has not taken account of the GHG emissions caused by importing the crops displaced by the scheme. Many of the assumptions made by the Applicant are highly optimistic and so not consistent with Advice Notice Nine, which requires a reasonable worst case assessment.

18. Biodiversity Net Gain

The Applicant does not take a reasonable worst case approach when assessing biodiversity net gain. 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. A balanced expert report would have identified the relevant research and addressed the conclusions made in the Natural England research.

7000Acres agrees with WLDC (Local Impact Report - Cottam.2.0), where it states:

Ecology 20.11. "During construction, the Scheme will result in the loss, degradation and fragmentation of habitats. It will also cause disturbance to the flora and fauna of West Lindsey. There is also the potential that the Scheme would introduce invasive species.

Operational impacts of the Scheme could include light disturbance to bats and birds. There is also the potential that Battery and Energy Storage System (BESS) will generate noise attraction or disturbance. Maintenance activities could also have an impact on ecological receptors.”

The Applicant takes no account of the net biodiversity harm caused by producing equivalent amounts of crops overseas. The House of Commons Environmental Audit Committee²⁵ identified that the biodiversity net harm was three to four time any potentials local gains when food production was moved overseas. A true biodiversity NET gain must include the adverse impact of outsourcing food production.

These adverse effects have not been assessed by the Applicant.

19. Battery Energy Storage System (BESS) Safety

The Applicant has failed to address the concerns raised over BESS safety. It is acknowledged that this is emerging technology, but as the Applicant has chosen to adopt a Rochdale Envelope then their assessments must be based on a reasonable worst case assessment (Advice Notice Nine). A Reasonable Worse Case Assessment would be to base their safety case on current technology and current safety requirements.

In particular, the Applicant has not taken a full account of a BESS Thermal runaway, the release of toxic gases and the impact of the polluted firewater on the local environment. Sufficient water, bunding and fire water storage should be secured in the DCO.

20. Cumulative Impact

NPS EN-1 4.2.6 and Advice Notice Seventeen require the Applicant to consider how the *“accumulation of, and interrelationship between effects might affect the environment,*

²⁵ <https://publications.parliament.uk/pa/cm5804/cmselect/cmenvaud/312/report.html>

economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.”

The Applicant’s Technical Note on Cumulative Effects of Additional Schemes (Document reference: EX4/C8.2.11) and Environmental Statement Addendum: Cumulative Effects (Document reference: EX5/C8.4.23.1) both dismiss any cumulative impacts caused by the various solar NSIP schemes in West Lindsey and across the River Trent.

The proposed landscape change to the region and locality is overwhelming. It is evident that each Scheme will have compounding effects on the others and yet the Applicant has stated that there will be beneficial effects in Landscape Character at National and Local levels but does not offer valid justification of their findings. West Lindsey District Council (Written Representation, 5.112) state:

‘that such impacts cannot be deemed ‘beneficial’ due to their obvious harm as alien features in the countryside and have a significant adverse impact upon both visual amenity and landscape character.’ We fully support the Council’s assessment.

In contrast to the findings for the Cottam Solar Project LVIA Cumulative Landscape and Visual Effects and Residential Effects Amenity Assessment, the Gate Burton Scheme has assessed there to be a moderate adverse impact based on cumulative impact of the West Burton, Tillbridge Solar and Cottam Solar schemes. West Lindsey District Council finds the assessments of both cumulative assessments by Gate Burton and Cottam are in conflict. Lincolnshire County Councils consultants, AHH, found:

‘that the cumulative change to the landscape will be considerable and significant, 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. 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 or agricultural one at present.’

The “professional judgment” applied by the Applicant when claiming that multiple solar NSIPs in the local area will not have any cumulative impact is fanciful and is an outlier compared to other professional viewpoints.

7000Acres retains its concerns regarding the cumulative impact of the 6 solar NSIP schemes, and other sub NSIP energy projects, on:

- Socio-economic impact
- Land use
- Health and wellbeing
- Landscape and Visual Amenity
- Glint and glare
- Transport and access
- Ecology
- Drainage and flooding
- Cultural heritage

The Applicant’s glib and shallow assessment of the cumulative impact on the region is unacceptable and makes a very weak case. We also agree with the Lincolnshire County Council conclusion that:

“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”.

21.The Applicant’s Approach

Throughout the Public Consultation the Applicant failed to consult in good faith. It made partial and misleading claims that resulted in 7000Acres writing to the Planning Inspectorate.

The Applicant has chosen to apply a Rochdale Envelope but has frequently failed to follow the requirements of Advice Notice Nine. Consistently, they have not applied a reasonable worst case assessment, but instead taken an over optimistic approach to their benefit. For example, they have not taken full account of the GHG emissions generated during decommissioning, nor taken account of importing the crops displaced by this scheme.

The Applicant has tried to downplay the impact their scheme will have on the region. For example, they have repeatedly produced misleading diagrams, photomontages, incomplete maps and videos: please see our Deadline 5 Submission: Comments on the Applicant's Aerial Flyover Footage.

22. Failure to Adequately Consider Alternatives

Fundamentally, the Applicant has not challenged the explanation set out by 7000Acres, that solar panels generate electricity at low voltages, and there is no inherent need for solar to be connected using high voltage grid connections. Nor has the Applicant challenged the statement that deployment on rooftops needs no grid-scale infrastructure adjustments, and typically needs little or no adjustments to local distribution networks. This explains why this approach therefore takes pressure off National Grid's queue for transmission connections. It is noted that the Applicant has made no comment on the evidence provided in the 7000Acres WR, citing reports from the UK Warehouse Association and Ecotricity on the potential capacity for rooftop solar to make an overwhelming contribution to delivering the Government's ambition for 70GW of solar, there being, as a result, no real case for extensive ground mounted deployment.

The Applicant therefore has not challenged potential capacity for deployment of solar on rooftops as an efficient alternative to large-scale ground-mounted solar and has not demonstrated any credible consideration of this route as an alternative to meeting the Government's ambition, having been solely focused on the availability of a high-voltage, high power grid connection.

23. Decommissioning Bond

7000Acres believes that a Decommissioning Bond should be provided to ensure that sufficient funds are available to decommission the scheme in 65 years' time (5 years to implement and 60 year time period for the scheme). This was also proposed by Lincolnshire County Council for the Gate Burton scheme. This should be secured in the DCO: failure to do so could render the land unusable for farming if the operator went into administration. Therefore, the loss of land would be permanent and not temporary, as required by EN-3.

24. BESS

The Applicant has not clearly explained why a BESS of this size is required to support the solar generation. The Applicant for the Mallard Pass solar NSIP states that their scheme is economically viable without a BESS. In the case of Mallard Pass, only an export BESS is technically feasible, therefore the Applicant is not installing a BESS as it will not provide an additional income from energy arbitrage. This demonstrates the primary purpose of a BESS is generating an additional income from energy arbitrage and not storing power generated onsite.

The Applicant has frequently provided incomplete or misleading information, for example they claim battery storage is supported by EN-1

National Policy Statement Draft EN-1 (March 2023) para 3.3.25 provides that *"storage has a key role to play in achieving net zero and providing flexibility to the energy system, so that high volumes of low carbon power, heat and transport can be integrated."*

EN-1 uses the word "battery" once. EN-3 does not refer to batteries at all. EN-1 3.3.29 states that the Infrastructure Planning (Electricity Storage Facilities) Order 202043 removed all forms of electricity storage, other than pumped hydroelectric storage, from the definition of nationally significant energy generating stations under the Planning Act 2008. Therefore, a BESS is outside the NSIP scheme and should be assessed as a stand-alone scheme, approved by the LPA, and not consented under the Trojan Horse of a solar NSIP.

The Application is for a Generating Station. The main economic purpose of the BESS is energy arbitrage using the National Grid connection. As the solar scheme will only be capable of generating power during daylight, and only generate close to the claimed 500MW on sunny summer days, the BESS will be the main source of income between Autumn through Winter to Spring, and only source of income at night. Therefore, the BESS provides an additional source of income to the solar generating station. As it is an additional source of income, it is not Associated Development in accordance with the PA2008, Guidance on Associated Development Applications for Major Infrastructure Projects.

25.Summary

Based on the submissions made by LCC, WLDC, 7000Acres and other Interested Parties, the Applicant has not taken full account of the harm generated by the Cottam NSIP. In particular, the Applicant has not taken full account of the cumulative impact of this and the other 5 NSIPs, plus sub NSIP energy schemes, under consideration.

It is clear that the harm caused by this scheme greatly outweighs the limited benefits of this solar industrial plant. 7000Acres agrees with WLDC in stating:

“The Scheme will have an adverse impact on the landscape and character setting in West Lindsey throughout all the stages of the development and cannot be mitigated.”

Therefore, as the Cottam Solar Project cannot be mitigated, it is evident that there is a strong case for refusal of the scheme.

The Applicants of such schemes are alone in seeking to justify the massive aggregation of solar panels and land they consume. 7000Acres observe that:

- Despite the urgent need to decarbonise, domestic and commercial rooftops continue to be built without solar panels, thereby missing the most obvious and quickest route to increasing solar capacity every day.

- There is an urgent need, but the urgency is to do what is right, and what will make prudent use of the country's resources, looking holistically across energy, food and land use, acting with confidence in a way we will not look back on with regret.

Overall, it can be difficult to cover the ground of an entire application "in a nutshell", but in overall terms, pursuing decarbonisation through the deployment of **large-scale ground mounted solar is a clear example of pursuing compromised, short-term benefits, but suffering profound, long-term consequences. In these terms, the Cottam Solar Project amounts to a basic failure of sustainability.**