

7000Acres Response to the ExA's Second Set of Written Questions

Deadline 5

11th April 2024

ExQ	Question	7000Acres Response
2.1.1	<p>Revised National Planning Policy Framework</p> <p>The Revised National Planning Policy Framework (NPPF) was published in December 2023. All parties are invited to comment on the implications of any changes made the consideration of the proposed development.</p>	<p>The revised NPPF includes footnote 62 that states:</p> <p><i>“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.”</i></p> <p>The Letter from the Chief Planner¹ that accompanied the issue of the updated NPPF, in December 2023, stated:</p> <p><i>“A high-level description of the key changes is provided below and was set out by the Levelling Up Secretary in his speech and accompanying WMS, but for the full detail and understanding of</i></p>

¹ https://assets.publishing.service.gov.uk/media/65845c1623b70a000d234df8/11_Chief_Planners_Newsletter_Dec_2023.pdf

		<p><i>the policy please refer to the text of the NPPF itself. In headline terms, the new NPPF:</i></p> <ul style="list-style-type: none"> <i>• gives greater protection to agricultural land through additional reference to the need to address food production, maintaining the emphasis on best and most versatile (BMV) land;”</i> <i>• gives greater protection to agricultural land through additional reference to the need to address food production, maintaining the emphasis on best and most versatile (BMV) land;”</i> <p>The requirement to consider food production as part of this Examination is unequivocal .</p> <p>The update to the NPPF is also consistent with the Written Ministerial Statement of March 25th 2015, which remains extant.</p>
<p>2.1.2</p>	<p>Cumulative Assessments</p> <p>Concerns have been raised about the adequacy of the cumulative assessments before the Examination</p>	<p>7000Acres agrees with the WLDC Written Representation.</p> <p>For there to be a meaningful assessment of the cumulative effects, 7000Acres call for an independent assessment of the</p>

<p>(for example, by West Lindsey District Council (WLDC) in its Written Representation [REP1A-004]). Specifically, WLDC set out that in order for the decision maker to have adequate information before them to make a sound decision, a cumulative assessment that addresses various combinations of solar NSIP are required. The information before us in the Joint Report sets out the cumulative impacts of 4 NSIPs, with additional information relating to 3 others set out in the Technical Note on Cumulative Effects.</p> <p>The EIA Regulations Schedule 3 paragraph 1(b) refers to the consideration of the cumulation with other projects. Also the provisions set out in NPS EN-1 paragraph 4.2.5 are that ‘when considering cumulative effects, the ES should provide information on how the effects of the applicant’s proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well</p>	<p>proposed developments to study the cumulative impacts of all the solar developments within the area (including Steeple Renewables), rather than a desktop review of the submission material by the Applicants themselves.</p> <p>The independent assessment should include evaluating the impacts from one or more schemes, and a combination of the schemes.</p>
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	<p>as those already in existence). With these provisions in mind:</p> <ul style="list-style-type: none"> a. The Applicant is asked to comment on the extent to which this additional information can and should be provided to the Examination; and, b. Other parties are asked to set out what further information should be required. 	
<p>2.1.4</p>	<p>Implications of the increase in the life of the Proposed Development from 40 to 60 years</p> <p>WLDC sets out that, with reference to the implications of the increase from 40 to 60 year life, “the impacts of this change have not been re-assessed so that all parties can understand how this significant increase in the lifetime (to become</p>	<p>7000Acres agree with WLDC that the implications of the increase from 40 to 60-year life, <i>‘have not been re-assessed so that all parties can understand how this significant increase in the lifetime (to become effectively a permanent development) has been considered’</i>.</p> <p>The Applicant has persistently described their proposed development as being “<i>temporary</i>”. Even with the original duration of the operational phase being 40 years, the periods of construction and decommissioning would be likely to extend the</p>

<p>effectively a permanent development) has been considered.’ [REP4-083].</p> <p>More specifically, WLDC suggest that the replacement of BESS/panels associated with the increase in lifespan is likely to give rise to significant environmental effects (especially as the frequency and extent of the replacement is unknown), particularly in relation to traffic, noise, air quality and waste, noting also there could be cumulative effects associated with the other solar projects currently in the system. Furthermore, in the event that significant additional environmental effects were to occur, there is no formal mechanism in place to address this.</p> <p>The Applicant is invited to comment on these concerns, particularly in terms of:</p> <ul style="list-style-type: none"> a. how additional impacts have been accounted for, b. the accessibility of this information, 	<p>overall duration of the scheme to 50 years. In no way can this duration be considered to be temporary; and in human terms this could be considered to be two generations. People will potentially live their entire lives in such a landscape and not know anything else.</p> <p>To propose an extension of the scheme from 40 to 60 years exacerbates the situation of such a development being a de-facto permanent installation for the population living alongside the development.</p> <p>It is clear with the NSIP process that applications should be “front loaded”, and so such a material change to the duration of the scheme as extending its life by 50%, should have been the basis of consultation with the public and for the body of studies conducted by the Applicant in support of their application.</p> <p>Failure to have adequately considered something as fundamental as the operational life of the scheme is a serious oversight by the Applicant, and is material to the basis of the Application, undermining the already unreasonable claim that</p>
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	<p>c. the suggestion that the development would, in effect, be permanent.</p> <p>d. The suggestion that, should the 24% replacement figure be exceeded, there is no mechanism for requiring the Applicant to demonstrate that no significant environmental impacts would occur.</p>	<p>the scheme is “<i>temporary</i>” in nature and rendering inadequate the studies the Applicant has conducted.</p> <p>We have the following specific comments:</p> <p>a. how additional impacts have been accounted for</p> <p>The Applicant appears to claim that increasing the life of the scheme by 50% will have no additional impact. However, their main ES documentation is based on a life of 40 years with no substantial evidence provided to support their claim that increasing the scheme’s life to 60 years will have no additional impact.</p> <p>b. the accessibility of this information</p> <p>The Applicant’s documentation is not consistent. Depending on which part of the documentation is read a different answer will be stated. For example, most of the documentation still states a life of 40 years. Advice Notice Nine paragraph 1.4 requires there is consistency across all documents, this is lacking.</p>
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		<p>c. the suggestion that the development would, in effect, be permanent.</p> <p>In other projects, such as Lullington, the Inspector described 40 years as “<i>generational</i>”. Revised EN-3 2.10.149 states an “<i>upper limit of 40 years is typical</i>”. The Applicant has not stated why 40 years is not sufficient, although their public consultation was based on 40 years. Evidence from research conducted for the Welsh Government shows that agricultural land, in particular BMV may not revert to its original state, so making the damage to soil quality permanent: please see our response to question 2.3.6.</p> <p>d. The suggestion that, should the 24% replacement figure be exceeded, there is no mechanism for requiring the Applicant to demonstrate that no significant environmental impacts would occur.</p> <p>A full response is shown in 2.9.3. In summary, the Applicant is underestimating the replacement cycles of the solar panels and takes no account of replacement on economic grounds. This will</p>
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		<p>impact on transport, waste, noise and GHG emissions. By understating the PV panel replacement requirements the Applicant has not taken full account of the impact of their scheme, and the cumulative impact on the region, so not applied a reasonable worst case to the EIA.</p>
<p>2.2.1</p>	<p>Future Agricultural Use - Grazing</p> <p>The Applicant states that the land is 'available' for agricultural purposes, however there is no firm commitment to making the land available for such purposes. ES Chapter 19 Soils and Agriculture [APP-057] (para. 19.9.18) states that during operation "<i>grass below and between the solar panels will need to be managed. This management can include grazing by livestock where appropriate</i>" Furthermore, para. 19.10.8 states that, during operation, "<i>opportunities for farm enterprises to utilise the land within the</i></p>	<p>There is no recent history of large-scale sheep farming in Lincolnshire.</p> <p>Due to the collapse in the price of wool and low wholesale lamb meat prices, it is highly improbable that anything more than a token flock of sheep will ever be grazed on this scheme and the other solar schemes totalling 13,000 acres in the local area. Productive grass, such as would be grown on this fertile land, can support circa 6-10 sheep per acre. So, to achieve a "<i>significant beneficial effect</i>" circa 11,400 sheep (769 ha, 1900 acres at 6 sheep per acre) would be required for this scheme, and cumulatively 78,000 sheep for all the NSIPs in the local area.</p>

<p><i>sites will be limited to periods of grazing small livestock”.</i></p> <p>There is no guarantee that the land will be used for grazing, that there is no decision made on whether it is appropriate to do so. If it is utilised, that use may be limited. This impact is concluded as being a ‘significant beneficial’ effect despite the scope and availability of land for the production of food being reduced.</p> <p>Please can the Applicant explain how, at WBSP and cumulatively across other projects, it has concluded the significant benefit effect? With regard to cumulative impact on agriculture, of multiple solar projects within the county, will there come a point at which the impact is not assessed as beneficial?</p>	<p>In reality this, and the other solar NSIPs, will displace food production abroad and not be replaced by productive sheep farming.</p> <p>The House of Commons Environmental Audit Committee Report², 29 November 2023, paragraph 201 states:</p> <p><i>“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.”</i></p> <p>Paragraph 31³ of the Report states:</p> <p><i>“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:</i></p>
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² <https://publications.parliament.uk/pa/cm5804/cmselect/cmenvaud/312/report.html>

³ <https://committees.parliament.uk/publications/42481/documents/211176/default/>

		<p><i>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.”</i></p> <p>Therefore, both as a single development and cumulatively with the other local solar NSIPs, the Applicant’s description of some limited grazing opportunities cannot be credibly described as providing a “<i>significant beneficial effect</i>”. Due to displacing food production overseas the global impact will be adverse.</p>
<p>2.2.2</p>	<p>Agriculture – Long-term Impact</p> <p>Environmental Statement (ES) Chapter 18 – Socio-economics, Tourism and Recreation [APP-056] concludes in paragraph 18.1.4 that socio-economic impacts during operation on the agricultural industry</p>	<p>The ES understates the likely impact of employment loss arising from the loss of agricultural land and lacks transparency in its assessment of any jobs lost, or the nature of any jobs created.</p> <ul style="list-style-type: none"> • Limited interpretation of likely roles would suggest that any job creation locally will be in lower skilled, lower paid roles, and be

<p>will be limited to impacts on the agricultural industry through taking the land out of production for the lifetime of the Scheme. Para 18.7.15 quantifies the impact, concluding that:</p> <p><i>“The Scheme is projected to impact on up to 769 hectares of agricultural land for the operational lifetime of the Scheme, this will therefore cause approximately 13 FTE agricultural sector jobs to be lost ...This impacts approximately 0.3% of the agricultural sector employment, and as such is a low magnitude impact. Due to its low sensitivity this results in a long-term minor adverse effect to the Local Impact Area. In the Regional Impact Area, this is a 0.03% reduction in agricultural employment, representing a negligible change to a receptor of low sensitivity. Therefore, the effect is long-term negligible adverse”.</i></p>	<p>unlikely to sustain livelihoods in the same way that jobs lost from agriculture.</p> <ul style="list-style-type: none"> • There is little or no 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. • The Applicant refers to the loss of 13 agricultural jobs is being detailed in ES Chapter 19: Soils and Agriculture (in 18.7.15 of ES Chapter 18). The author was not able to find any analysis of jobs / employment loss in Chapter 19, therefore the basis upon which the number of agricultural jobs lost has been calculated cannot be scrutinised.
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	<p>This is based on the assumption that sheep farming would continue agricultural use of the site underneath the panels. However, LCC has stated that the type of agriculture change to grazing is not like-for-like replacement.</p> <p>Please can the Applicant confirm the proportions of land locally and regionally which may be removed from agricultural use, and provide comments on how the potential 60 year removal equates to a 'long-term negligible adverse' effect. Other IPs may optionally comment.</p>	
<p>2.2.3</p>	<p>Farming Methods</p> <p>IPs familiar with local agricultural methods have stated that much of the crop growing land around the Order area is almost never ploughed, just harrowed. Please can IPs and the Applicant provide</p>	<p>This response has been provided by an agronomist and farmer with over 50 years of <u>practical</u> farming experience in this region.</p> <p>The choices growers make can be influenced by</p>

	<p>further information on this, and if or how it may affect the assumptions, reasoning and conclusions of relevant parts of the ES.</p>	<ol style="list-style-type: none"> 1. soil type 2. The type of crop you intend to plant. 3. The condition of the soil at the time. 4. The time of year when deciding. 5. The level of soil compaction created by the previous crop. 6. How have preceding weather conditions affected soils and what do I need to do to rectify any issues. <p>Let's consider 3b soils.</p> <p>Soil drainage and structure are key to growing successful crops.</p> <p>Clean open ditches and drainage schemes are essential.</p> <p>Compacted 3b soils must have the compaction removed before sowing a new crop otherwise they will become waterlogged in winter and suffer more in a drought. One needs to maintain a crumbly friable soil structure to enable good root growth and assimilation / uptake of nutrients from the soil.</p>
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		<p>One must also understand cultivation techniques can change due to outside influences due to environmental policies set by government, the price of fuels, fertilizers and pesticides. Most farmers at present are trying to address the issue of carbon emissions by applying what you refer to as harrowing because it consumes less diesel fuel than ploughing.</p> <p>The wise grower will also deep cultivate / subsoil to ensure the land drains efficiently during that cropping year. This can be more beneficial than ploughing.</p> <p>What I believe to be an excellent system is to have a rotational approach by ploughing every fourth year and minimum tilling in between and subsoiling for improved rooting and drainage. Some crop roots penetrate the subsoil to a depth of 1 metre.</p> <p>Just because one hasn't seen a plough in the field doesn't mean the field hasn't been subsoiled because modern machinery combines subsoiling and harrowing in one pass in an effort to keep costs and CO2 emissions down.</p> <p>This autumn / winter has been wetter than average but is nothing new to the seasoned grower.</p>
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		<p>One very important point to mention is arable farmers have been suffering for the last 30 years with a very pernicious weed called black grass. The weed genetically developed resistance to a range of herbicides. Rotational ploughing every 4 years helps to control blackgrass because every year the blackgrass lies buried, one third of the seed population dies thus reducing the population of viable seeds when the soil is ploughed in rotation. This rotational programme ensures an appropriate tillage of the soil. If the soil was left fallow it would grow black grass and seeds would get blown onto nearby fields still being farmed.</p> <p>The ES Chapter 19 makes general comments about farming methods without the benefit of local knowledge. For example, 19.8.12 states that ploughing takes place annually, which is not current practice. As identified above, less intrusive methods are actually used to cultivate the soil and so the benefits identified by the Applicant are over stated. If the land was left fallow it would grow black grass and other invasive weeds that would not be beneficial to the local environment.</p>
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2.2.4	<p>Isopropyl Alcohol – Impact on Soil At ISH3, and in its submission at DL4 (Written Summary of the Applicant’s Oral Submissions at Issue Specific Hearing 3 and Responses to Action Points) [REP4-070] the Applicant confirmed that only water is used for cleaning and that “The panels require minimal cleaning as they have a self-cleaning coating”. Can the Applicant confirm that this is de-ionised water? Further, that if or where soiling remains on the panels after rinsing, what is the procedure? IPs suggest that cleaning with de-ionised water is repeated. Where any soiling continues to prove stubborn, IPA (Isopropyl Alcohol) with a concentration of less than 10% may be used. If this is the case then can the applicant confirm that the use of IPA will have no effect on the soil health?</p>	<p>The use of any chemicals to assist with cleaning of the panels will definitely have an effect on soil health. This oversight by the applicant is another example of where they have not considered the reasonable worst case in their applications. This chemical effect must be analysed by the Applicant, taking into account the extremely large number of panels and the effects of 60 years of cleaning. The analysis should be reported to the Examination.</p>
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<p>2.2.6</p>	<p>Best and Most Versatile land</p> <p>Do the amendments to the Outline Soil Management Plan: Revision A REP3-016 provide additional confidence for Natural England and the Host Authorities to ensure the correct Agricultural Land Classification (ALC) will be identified and the soil managed to ensure that any disturbed land will be restored to a similar ALC grade. If not please explain why not.</p>	<p>It is 7000 acres' contention that the Applicant's professional judgement is open to doubt and that Natural England's soil expert should have analysed the ALC results and given this Examination their own professional judgement as to the veracity of the results. We note that the Applicant has not responded to the issues we raised in REP1A-011</p> <p>Research by the Welsh Government⁴ calls into doubt if BMV land can ever be returned to its original state after 60 years of use as a solar industrial site. In particular, the research identified that installing large solar arrays on farmland results in deep soil compaction, increased water runoff and runoff from panels can lead to rivulets, which can lead to soil loss by erosion.</p>
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⁴ <https://www.gov.wales/sites/default/files/publications/2023-08/impact-solar-photovoltaic-sites-agricultural-soils-land-ssep21-22-03-work-package-3.pdf>

<p>2.2.7</p>	<p>Written Ministerial Statement 25 March 2015</p> <p>Please can IPs comment on the extent to which the Written Ministerial Statement of 25 March 2015 in relation to BMV, if they have not already done so.</p> <p>Please comment how it is relevant and important to the consideration of the effects of the development on BMV in this case.</p>	<p>The High Court has recently dismissed an appeal by Island Green Power and upheld the principles stated by the Planning Inspector regarding the Lullington solar scheme.</p> <p>https://www.bailii.org/ew/cases/EWHC/Admin/2024/295.htm</p> <p>The following is extracted from the Lullington Planning Inspector’s Appeal Decision. Hearing held on 18 April 2023 by Gareth W Thomas BSc(Hons) MSc(Dist) DMS MRTPI an Inspector appointed by the Secretary of State. Decision date: 21 July 2023. Appeal Ref: APP/F1040/W/22/3313316 Land North of Lullington, Swadlincote, Derbyshire, DE12 8EW⁵</p> <p><i>“Decision</i></p> <p><i>1. The appeal is dismissed.</i></p> <p><i>Best and Most Versatile Agricultural Land</i></p>
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⁵ <https://www.north-herts.gov.uk/sites/default/files/2023-08/CD188%20Appeal%20ref%20APPF1040W223313316%20relating%20to%20Land%20North%20of%20Lullington%2C%20Swadlincote%2C%20Derbyshire.pdf>

		<p>8. <i>The parties agreed that the Written Ministerial Statement (WPS) dated 25 March 2015 relating to the unjustified use of agricultural land remains extant. It states therein that any proposal for a solar farm involving the best and most versatile agricultural land (BMV) would require to be justified by the most compelling evidence (my emphasis).</i></p> <p>9. <i>The WMS is linked to updated National Planning Policy Guidance1 (NPPG), which explains that where a proposal involves greenfield land, consideration should be given as to whether the proposed use of any agricultural land has shown to be necessary, whether poorer quality land has been used in preference to higher quality land and to whether the proposed development would allow for continued agricultural use where applicable and/or where biodiversity improvements around arrays would be provided. This is reflected in the National Planning Policy Framework (the Framework) which suggests that where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of higher quality.</i></p> <p>11. <i>Paragraph 174(b) of the Framework states that planning decisions should recognise the intrinsic character and beauty of</i></p>
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		<p><i>the countryside, and the wider benefits from natural and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.</i></p> <p><i>22. There is no definition of what might constitute ‘compelling evidence’ but I accept the Council’s arguments that the evidence fails to demonstrate that there are no suitable poorer quality areas of land in the study area that could be used or accommodate the appeal development save for a broad brush map based review. In this regard, the appeal proposal contravenes relevant provisions of BNE4 of the SDLP, the NPPG and the WMS. The loss of just under 50% of BMV is a significant negative aspect of the appeal proposal which weighs heavily against the development.”</i></p> <p>Based on the High Court Judgement and the Lullington Appeal Decision, it is clear that the Written Ministerial Statement of 25 March 2015 remains extant. In addition to the NPS, the NPPF footnote 62 reiterates the importance of farming land and food production in finding a balance between energy needs and feeding the UK population.</p>
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		<p>Although the percentage of BMV land claimed by the Applicant in the case of WBSS is smaller than Lullington, the total acreage of BMV land is likely to be similar, due to the large size of WBSS, and therefore should be regarded as a significant loss of BMV land.</p>
<p>2.2.8</p>	<p>Permanent or Temporary Nature of Loss of Agricultural Land</p> <p>The ExA notes that LCC does not consider that the removal of agricultural land for a period of 60 years can be classed as temporary and this should be assessed as a permanent loss of agricultural land. REP3-042 states that “A 60 year lifespan is all but equivalent to an entire life time and, on a human scale, is hardly “temporary” in the common use of this word. The effects of this longevity should be</p>	<p>7000Acres agrees with LCC that 60 years cannot be classed as temporary use. Some Planning Inspectors have even considered 40 years as “<i>generational</i>”⁶.</p> <p>EN-3 states that an upper limit of 40 years is typical. The Applicant’s public consultation and the majority of the ES is based on a period of 40 years. The Applicant has not explained why 60 years is required.</p> <p>Research from the Welsh Government identifies that BMV land may be permanently damaged and never returned to its original</p>

⁶ <https://www.north-herts.gov.uk/sites/default/files/2023-08/CD188%20Appeal%20ref%20APPF1040W223313316%20relating%20to%20Land%20North%20of%20Lullington%2C%20Swadlincote%2C%20Derbyshire.pdf>

	<p><i>assessed as essentially permanent effects as that is how they are experienced in reality”.</i></p> <p>IPs are invited to comment on the temporary nature and provide any evidence as to how they consider the relative degree of permanence V temporary loss.</p>	<p>state⁷. In this case, the loss of farming land, especially BMV, is likely to be permanent.</p>
<p>2.3.2</p>	<p>Biodiversity Net Gain</p> <p>The ExA notes that Requirement 9 now provides that the BNG Strategy must include details of how the strategy will secure a minimum of 69.4% biodiversity net gain in habitat units, a minimum of 43.7% biodiversity net gain in hedgerow units and a minimum of 26.6% biodiversity net gain in river units</p>	<p>7000Acres highlight the point that there is very little experience or track record of the use of the BNG methodology, and while a number of case studies have been published, e.g. by Natural England, these are hypothetical illustrations of the methodology, and cover relatively small areas of development (<10ha.) in comparison to large scale solar development (e.g. Island Green Power’s proposed West Burton and Cottam schemes are over 1000ha. each).</p>

⁷ <https://www.gov.wales/sites/default/files/publications/2023-08/impact-solar-photovoltaic-sites-agricultural-soils-land-ssep21-22-03-work-package-3.pdf>

	<p>for all of the authorised development during the operation of the authorised development, and the metric that has been used to calculate that those percentages will be reached.</p> <p>The units quoted differ from those set out in e.g. the Planning Statement, in order to act as a 'buffer' in the event that circumstances change over time. Please can the Applicant provide a comment on the BNG Units secured within the dDCO and rationale as to the specific level of buffer selected. Please can IPs comment on the same.</p> <p><i>Note Question 2.5.12 addresses the BNG Requirement 9 dDCO approach to wording.</i></p>	<p>To rely on such an unproven methodology in the face of development on such unprecedented scale would seem to undermine the potential to accurately estimate the potential BNG improvements across the various categories highlighted by the ExA.</p> <p>In combination with such evidence as the recent short video highlighting the conditions during the construction of Cleve Hill Solar Farm⁸, the environmental damage to the area during construction is extensive. West Burton will be over twice the land area as the Cleve Hill scheme, once "over planting" has been accounted for, and the in-combination effects of other NSIP schemes in the region mean that the assumed recovery of habitats and species necessary to assure the BNG gains cannot be assumed.</p> <p>Notwithstanding this, Natural England Report NEER012 reviews the impact of solar farms on wildlife and ecology. It concludes that "<i>The lack of evidence available relating to the ecological impact of solar farms is concerning</i>" and that "<i>more needs to be done to understand the interaction between these new</i></p>
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⁸ [Cleve Hill Solar Park \(youtube.com\)](https://www.youtube.com/watch?v=...)

		<p>[renewable energy] <i>technologies and the ecology that they are ultimately designed to protect</i>".</p> <p>7000Acres believe that it is, in effect, a huge experiment to rely on the BNG methodology to deliver actual improvements across such a vast and unprecedented area of development as the WBSP, particularly when considered alongside other super-large-scale ground mounted solar developments proposed in the immediate region. There is also a low base of confidence in such schemes having historically delivered ecological improvements to mitigate harms from infrastructure development.</p> <p>7000Acres therefore would therefore propose that little weight is afforded to claims for the WBSP to improve BNG, without significantly more evidence and research into the effects of such large-scale solar installations on land in the UK.</p>
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<p>2.3.6</p>	<p>Decommissioning – Significance of Effects</p> <p>The significance of effects for decommissioning are not listed in the ES. Can the Applicant explain how decommissioning effects have therefore been considered and assessed as the ES should assess the worst case scenario for all stages of the Proposed Development.</p> <p>If it considers that a reasonable worst-case is that the effects at decommissioning would be the same as during the construction phase, please explain how it has accounted for future changes beyond the construction phase. Also, please set out whether or not the potential for significance of effects may</p>	<p>During Research by the Welsh Government⁹ it was identified that agricultural land can be permanently damaged by solar installations and it might never be possible to revert the land to its original condition. The Applicant has failed to address the following issues identified in the research:</p> <ul style="list-style-type: none"> • Supporting piles corrode and break during extraction, leaving metal structures in the soil. • Extracting piles leaves voids in the soil. • Galvanised piles contaminate the soil. There is evidence that high zinc levels in soils affects the soil biological activity (Moffett et al, 2003). • Different soil textural classes have more resilience to structural damage and are more responsive to remediation during soil handling. Silt loam soils and heavy soils with >27% clay content have low resilience to damage. Soil should only be handled or trafficked when as dry and as friable as is practicable. If handled or trafficked in adverse conditions damage to the soil structure can easily occur.
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⁹ <https://www.gov.wales/sites/default/files/publications/2023-08/impact-solar-photovoltaic-sites-agricultural-soils-land-spep21-22-03-work-package-3.pdf>

	<p>increase over time, and how this has been included in the assessment.</p>	<ul style="list-style-type: none"> • Developers may consider that the scrap value of the panels etc on site will cover the costs of decommissioning. There are few contingency plans in place and should operators encounter financial instability and the economics of solar PV change during the project life and trigger early decommissioning then this may influence the reversion of the site to agriculture and other changes of land use may be sought. • The management history of non-BMV agricultural land will influence the baseline soil reference values and the potential carbon capture benefit of solar PV sites. There may also be greater environmental risks during construction, operation and decommissioning on non-BMV agricultural land. Soils may be at field capacity or have a clayey or silty soil texture with a landform resulting in surface water runoff. In such instances there may be a greater risk of soil erosion and pollution of water courses. <p>None of these issues identified in the research apply to the construction phase, and so a straight read-across of the impacts from construction to decommissioning are not valid. In not considering the decommissioning phase of their scheme, the</p>
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		<p>Applicant has not provided a reasonable worst-case assessment of the harm their scheme will cause to the region, so yet again is not compliant with Advice Notice Nine..</p>
<p>2.3.7</p>	<p>Waste</p> <p>Table 3.13 of the oOEMP (Rev C) [REP4-054] has been updated to refer to the waste management strategy which <i>“will be provided as a standalone document requiring approval from the Waste Management Authority as set out under Requirement 14 of the DCO [EX4/WB3.1_E] to ensure operational waste is managed suitably, and that waste arisings are sent for handling at facilities within the waste local authorities that have capacity to do so without adversely impacting upon their capacity to handle waste arisings for all other waste streams in the authority area”</i> Further amendments set out topics to be included.</p>	<p>Please see our response to Q 2.9.3.</p> <p>The Applicant has understated the replacement rate of the PV panels. In particular they have taken no account of replacing panels on economic grounds. A reasonable worst-case assessment is that the number of panels replaced will be multiples of the numbers claimed by the Applicant in their ES. A similar comment also applies to other electrical equipment, including the BESS where a current economic life of 10 years is standard, not the 20 years stated in the ES.</p>

	<p>LCC has previously requested additional assurances relating to future waste arising from the project. Please can the Applicant and LCC comment on progress, and set out LCC as waste authority concerns regarding impact of waste both from WBSP and also cumulatively.</p>	
<p>2.3.8</p>	<p>Opportunity Cost of Renewable Energy Sources</p> <p>How has the loss of arable crops which are used for production of renewable energy been taken into account in the assessment of effects on climate change in the Environmental Statement Chapter 7: Climate Change Revision A [REP1-012].</p>	<p>There are two primary dimensions to cover when considering the opportunity cost of renewable energy crops displaced by the proposed development:</p> <ul style="list-style-type: none"> i. The absolute quantity of renewable energy associated with displaced energy crops. ii. The relative value of the energy displaced through the loss of energy crops versus that provided by solar. <p>While the volume of electricity produced from the land by solar will be higher than that from displaced energy crops, the loss of existing biofuel-derived energy must be considered as a reduction in the benefit claimed by the developer, as the net effect of the scheme will be a gain in solar renewable energy, but a loss of biofuel-derived energy.</p>

		<p>The Applicant has based their greenhouse gas assessment on the volume of green energy produced by the development without considering the displaced renewable energy, therefore the Applicant's current assessments have overstated the decarbonisation benefit of the scheme.</p> <p>Furthermore, the nature of the energy has not been considered, in that crop-derived biofuels are produced in gas and liquid forms which can be stored long-term, e.g. for winter heating demand, or transported in a way that can decarbonise other sectors of the economy, e.g. road, rail, aviation and shipping. For example, the UK has a mandate for using 10% Sustainable Aviation Fuel¹⁰ (SAF), i.e. biofuel, by 2030. This illustrates the much greater flexibility of bio-fuel derived energy, in comparison to solar, which is intermittent and much less flexible. Solar produces most power when it is least needed in the UK, and currently, it can only be stored in relatively small volumes to power for short durations using BESS technology. As a result, the relative usefulness and value of a unit of biofuel derived energy will, on average, be much greater than an equivalent</p>
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¹⁰ <https://assets.publishing.service.gov.uk/media/6305fca9e90e0729d7707973/sustainable-aviation-fuels-mandate-summary-of-consultation-responses-and-government-response.pdf>

		<p>volume of solar energy. Not considering the displaced energy production and its use in delivering flexible energy are significant omissions in the material produced by the Applicant.</p>
<p>2.4.5</p>	<p>Funding Statement</p> <p>The Applicant’s position in relation to project funding is set out in the Funding Statement [AS-045], with further detail provided in response in relation to WQ 1.4.14 [REP3-038] in relation to the availability of funding. In terms of the availability and adequacy of funding, the Applicant is asked to further comment on key risks associated with securing funding, including the implications of external matters, including recent global events, supply chain issues and fluctuations in prices and interest rates for the ability to fund the Proposed Development. Further, the Applicant is asked to comment on the measures on place to prevent the exercise of compulsory</p>	<p>7000Acres is extremely concerned over the statement in [AS-045] that the Macquarie Group now has a 50% share in Island Green Power.</p> <p>Macquarie has a dubious record in the UK, where it has shown extremely poor stewardship of public utilities, such as Thames Water and Southern Water.</p> <p>Due to past conduct by a major investor, the need for a Decommissioning Bond becomes even more important.</p>

	<p>acquisition powers until the Secretary of State has approved a form of security from the Applicant.</p>	
<p>2.5.2</p>	<p>Article 2 (Interpretation)</p> <p>With reference to the definition of “Maintain” set out in Article 2 [REP4-24], as noted in first written question 1.5.3 [REP3-038], and discussed in ISH2, is wide ranging in being able to ‘alter, remove, refurbish, reconstruct, replace and improve any part’ of the authorised development to the extent it would not be possible to ‘remove, reconstruct or replace the whole of, the authorised development’. This definition does not rule out the possibility that all, or the large majority, of the development, including the panels, may be replaced during the operation period of the Proposed Development. Noting particularly the anticipated 60 year operational life of the Proposed Development, the Applicant is asked to clarify:</p> <p>a. Why it is necessary for there to be flexibility within the draft DCO such that most of the panels could be</p>	<p>Please see our response to Question 2.9.3.</p> <p>Either the Applicant will replace the solar PV panels, based on their economic life, to maintain the energy generation of the scheme, or they will only replace panels that have failed. In the former case, the current Chapter 7 and Review of Likely Significant Effects at 60 Years are incorrect and misleading. In the latter case, the total energy generation of the scheme over its life is much less than claimed and so the Applicant’s Chapter 7.8.61 claiming “<i>a total energy generation figure of around 21,956,988 MWh over the estimated 40-year assessed lifetime</i>” is incorrect and misleading. A similar comment can be applied to the batteries used in the BESS, where they will need replacing more frequently than stated.</p> <p>In the opinion of 7000 Acres, the definition of “<i>maintain</i>” in the dDCO should be more precise and state what activities the Applicant/Operator may conduct based on commercial grounds,</p>

	<p>replaced over the operation period, albeit such works would not be all carried out at the same time?</p> <p>b. Based on available evidence, what percentage of panels on existing solar farms are replaced for maintenance during their operation (on an annual basis and overall across their operational period to date)?</p> <p>c. Noting Article 5 (Power to maintain authorised development), does the Applicant foresee the possibility that the large-scale replacement of panels (for example 25%, 50%, 75% or 90% of solar panels within the Order Limits) would be likely to give rise to any materially new or materially different effects that have not been assessed in the environmental statement?</p>	<p>rather than just replacing or repairing a device following a total failure.</p> <p>If the definition of “maintain” in the DCO is not corrected, then a mechanism should be established for the LPA to have oversight and control of the rate of equipment replacement. This will permit the LPA to control the impact on traffic, waste, noise, GHG emissions, soil degradation above and beyond the understated impact identified in the ES.</p>
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<p>2.6.3</p>	<p>Health Assessment</p> <p>7000 Acres is concerned that the various Health reports have not been prepared by “<i>an expert in health</i>”. Please can 7000 Acres provide a reference to a requirement for such evidence to be prepared by a health expert, and identify specifically what it considers to be lacking from the various reports.</p>	<p>The author of the 7000Acres response to questions 2.6.3 and 2.6.5 is a health professional who has over thirty years’ experience of working in Lincolnshire Health as a General Practitioner and in a leadership position within the local Lincolnshire NHS.</p> <p>Please see the document Institute of Environmental Management and Assessment (IEMA): Guide to Effective Scoping of Human Health in Environmental Impact Assessment. IEMA guidelines were referenced by the Applicant during the Issue Specific Hearing 4 (ISH4) and in the Addendum on Health and Wellbeing for West Burton as industry standards to setting out the Health and Wellbeing section in the Environmental Impact Assessment.</p> <p>We quote under Section 2.5 of this document (Aims, Audience and Terminology), which clearly states that “<i>the audience of this guide are Environmental Impact Assessment health practitioners</i>” who are “<i>responsible for drafting and conducting scoping reports in England, Wales, Scotland Northern Ireland, and the Republic of Ireland</i>”.</p>
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		<p>7000 Acres believes that Human Health and Wellbeing should have been commissioned by LANPRO externally to prevent bias and allow for an independent assessment produced by experts in health who understand what is required especially around population health.</p> <p>From the document Institute of Environment Environmental Management and Assessment (IEMA): Determining significance for Human Health in Environment Impact Assessment, the guidance suggested that Human Health significance in the Environmental Impact Assessment should include an “expert” judgement supported by evidence, which is sadly lacking in the Human Health section within the West Burton EIA document, and that this relies on professional judgement of what is important, desirable or acceptable.</p> <p>We gather a Town Planner completed the section on Health and Wellbeing within the LANPRO Environmental Impact Assessment documents within the Chapter Socioeconomics. This should have been completed by an Environment Health Practitioner. May we point out the whole purpose of an Environmental Impact Assessment is to assess firstly the effects of this scheme on the environment, and secondly to ensure that</p>
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		<p>the population’s health is not affected as result of the scheme itself. Therefore, Human Health and Wellbeing requires a separate chapter within the Environmental Impact Assessment and not as it was presented in the LANPRO documents.</p> <p>In addition, the Guidance to the Environmental Impact Assessment Regulations 2017 https://www.gov.uk/guidance/environmental-impact-assessment#Preparing-an-Environmental-Statement1 states:</p> <p>“Preparing an Environmental Statement</p> <p><i>Where it is decided that an assessment is required, the applicant must prepare and submit an Environmental Statement. The Environmental Statement must include at least the information reasonably required to assess the likely significant environmental effects of the development listed in regulation 18(3) and comply with regulation 18(4).</i></p> <p><i>To help the applicant, public authorities must make available any relevant environmental information in their possession.</i></p>
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		<p><i>To ensure the completeness and quality of the Environmental Statement, the developer must ensure that it is prepared by competent experts [7000Acres emphasis]. The Environmental Statement must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts.”</i></p> <p>The Applicant has instructed specialists in soil analysis, archaeology, glint and glare, BESS safety and others, why not a health specialist?</p> <p>The ES assesses some health aspects in a piecemeal manner but does not consider all the aspects required, or take a cumulative account of all the issues. Please see our REP1A-015 for a comprehensive answer on the issues we consider are missing from the Applicant’s assessment. In addition, we are making written responses at Deadline 5 regarding The Applicant’s Addendum 21.1: Human Health and Wellbeing effects.</p>
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<p>2.6.5</p>	<p>Health Impact Assessment</p> <p>Paragraph 4.3.18 of Environmental Statement Addendum 21.1: Human Health and Wellbeing Effects</p> <p>February 2024 [REP4-077] explains that the Applicant’s view is that Policy S54 requirement for a HIA is for TCPA planning applications, and the HIA scoping process is therefore determined by the local planning authority, whereas HIA scoping for NSIPs is determined by the Planning Inspectorate. A separate HIA had not been scoped in, and therefore was not required to be undertaken for this Scheme. Elsewhere, other ‘local’ policy requirements in adopted plans where a local planning authority determines TCPA planning applications are readily addressed, with compliance being demonstrated. Examples include the OLEMP para 4.8.4 reference to the Lincolnshire BAP priority, and references to the Central Lincolnshire Local Plan (2017) and Draft</p>	<p>The applicant states that the scope and assessment methodology for each of the ES chapters relevant to human health was agreed in March 2022. This included input and consideration of comments and requirements from local planning authorities and statutory bodies responsible for human health.</p> <ol style="list-style-type: none"> 1. Good Governance dictates transparency. Please explain which statutory bodies were consulted. 2. Was the scoping discussion with national, regional or local Public Health? <p>We ask this with reference to the Applicant’s comment that “<i>no additional consultation was undertaken as it was considered that the comments received were sufficient to be able to undertake the human health assessment in accordance with the scoping opinion</i>”. 7000 Acres believes that further consultation beyond this was required and that this is demonstrated by the lack of breadth on human health and wellbeing assessment in the ES document provided by LANPRO.</p>
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	<p>Bassetlaw District Local Plan (2021) at Paragraph 14.3.2 of Chapter 14: Transport and Access. In the latter’s case, it states that “The proposals have also been considered in the context of the following documents”.</p> <p>Please can the Applicant (and other IPs, optionally) comment further on why various local policies provide relatively greater context for consideration of the proposals.</p>	<p>Were the relevant bodies aware at the time of the huge scale development planned so that they could advise at the time the potential cumulative effects? We now have 13,000 acres surrounding a population of over 40,000 people, and this presents concerns to human health and wellbeing and justifies a Health Impact Assessment because of scale. Presenting these schemes under National Infrastructure Planning Projects somehow bypasses local planning authorities, in this case Lincolnshire who have under the Central Lincolnshire Local Plan a Health Impact Assessment Guidance for planning applications. They have followed the National Planning Practice Guidance.</p> <p>From the industry guidance document Institute of Environment Management and Assessment (IEMA) guidance; Health in Environmental Impact Assessment, it states that “<i>the Environmental Health Impact Assessment considers human receptors in relation to air and water quality, noise and light disturbance</i>”. “<i>Furthermore, the socio-economics chapter of EIA’s typically include the implications on public services (including health services), education and employment</i>”.</p>
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		<p>The Applicant does not believe a Health Impact Assessment is required in this case. However, if our local authority planners have policies as set out in the Central Lincolnshire Plan with guidance, they believe that major schemes like this do require a Health Impact Assessment. The IEMA document states that this should be conducted voluntarily as good practice. 7000 acres believes this should be standard and advocates the missed opportunity and clearly demonstrates the deficiencies within their EIA document. The Health Impact Assessment (HIA) looks at population health and the effects this scheme and the others would have on them and therefore would highlight health inequalities e.g. elderly population and those with dementia. An HIA is outcomes focused and clearly this is lacking in the current EIA produced by LANPRO.</p>
<p>2.6.8</p>	<p>500 Metre Buffer</p> <p>WLDC states that the 500m buffer area fails to capture the wider community that will experience the impacts of the project during construction, operation and decommissioning. It identifies that the role of a stand-alone (non-EIA) HIA would be to</p>	<p>7000Acres agrees with WLDC that a 500m buffer will fail to capture the wider community that will experience the impacts during the 60+ years of construction, operation and decommissioning of this scheme.</p>

	<p>capture all impacts and demonstrate policy compliance in the context of the planning balance. It states that the reliance on an EIA to remove the requirement of a HIA is flawed, unless it can be demonstrated that a precautionary approach has been taken and that all impacts have been identified, assessed and mitigated [REP4-082]. Following receipt of the Deadline 4 Submission [REP4-077] please comment on the extent to which a stand-alone HIA could capture impacts on the wider community.</p>	<p>In our response to 2.6.3 we have identified a number of major areas which the Applicant has failed to assess. A stand-alone HIA will capture the wider issues, and combination of factors, the current ES lacks.</p>
<p>2.6.9</p>	<p>Long-term Health Impacts</p> <p>WLDC does not believe the Applicant’s assessment adequately considers the construction and long-term impacts of the cumulative schemes on local</p>	<p>7000Acres agrees with WLDC’s assessment. Please see our detailed comments in REP1A-015.</p>

	<p>residents' health and wellbeing who use these roads for recreational purposes.</p> <p>Please can the Applicant set out how the ES has taken into account the local amenity impact of the cumulative construction traffic associated with the proposed solar schemes, as well as access to local health services, and the impact on the mental health that traffic could have on the community.</p>	
<p>2.8.3</p>	<p>Glint and Glare Assessment</p> <p>Looking at the assessment of effects on local road users, the Applicant has suggested, in response to concerns raised in the Local Impact Reports REP3-0371 that 'traffic density of local roads is low and the speed at which traffic will be travelling is low. Therefore, a low magnitude of effects is predicted and detailed modelling is not required' .</p>	<p>EN-3 paragraph 2.10.104 requires:</p> <p><i>"When a quantitative glint and glare assessment is necessary, applicants are expected to consider the geometric possibility of glint and glare affecting nearby receptors and provide an assessment of potential impact and impairment based on the</i></p>

	<p>The Applicant is asked to please respond to the question of whether it is reasonable to exclude possible effects on the basis of low traffic volumes?</p>	<p><i>angle and duration of incidence and the <u>intensity</u> of the reflection.”</i></p> <p>EN-3 paragraph 2.10.158 requires:</p> <p><i>“Solar PV panels are designed to absorb, not reflect, irradiation. However, the Secretary of State should assess the potential impact of glint and glare on nearby homes, motorists [7000Acres emphasis], public rights of way, and aviation infrastructure (including aircraft departure and arrival flight paths).”</i></p> <p>As the Applicant has made no quantitative attempt to assess the intensity of the glare, then their claim that <i>“a low magnitude of effects is predicted and detailed modelling is not required”</i> cannot be justified. Furthermore, they have not complied with 2.10.158 that requires the potential impact on motorists to be assessed. EN-3 does exempt the minor roads which are the transport arteries of this region.</p> <p>In addition to vehicles, the local roads are used by walkers, cyclists and equestrians. No attempt has been made to assess the loss of amenity to these road users.</p>
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		<p>Dismissing the need for modelling of the effect of glare on road users is consistent with the Applicant’s shallow and incomplete approach in:</p> <ul style="list-style-type: none"> • Only considering an observer height of 1.8m. • Assessing glare impact if it occurs for more than 60 minutes a day or 3 months per year; this is twice the value used in other projects, such as the Gate Burton and Longfield NSIPs. • Failing to assess the cumulative effects of glare. • Failing to assess the impact on <u>all</u> road users.
<p>2.9.1</p>	<p>Cumulative climate change effects</p> <p>Appendix E of the Joint Report on Interrelationships with other NSIPs [REP4-059] refers to the professional judgements made on the cumulative effect on climate change.</p> <p>The Applicant is asked to please explain why it is possible to assess cumulative effects on Climate</p>	<p>This question is answered in two parts:</p> <p><i>i) General weaknesses within the Joint Report on Interrelationships with other NSIPs</i></p> <p>The Joint Report on Interrelationships with other NSIPs considers the details of communication, co-ordination and collaboration between the Applicants of four schemes, Gate Burton, Cottam, West Burton and Tillbridge.</p>

	<p>Change given the national rather than local scale of the impact.</p>	<p>The report elects to exclude Steeple Renewables Project on the basis that information is not sufficiently well developed to be considered. However, it would be simple to include the boundaries on the outline map as a minimum and, given the knowledge and experience of 4 other schemes, it would be reasonable to make baseline assumptions to enable Steeple Renewables to be included in the report, albeit with a reduced level of detail in certain areas. The omission of Steeple Renewables is a clear shortfall in the report and provides a further example of a missed opportunity by the Applicants to communicate transparently about the widespread scale of development in the region.</p> <p>Appendix E is titled “Review of Cumulative Effects”, and considers the information made available for the Gate Burton, Cottam, West Burton and Tillbridge schemes. It is worth noting that within this review, there are frequently differences between the conclusions made by developers in their assessments. Such conclusions can vary significantly, e.g. ranging from “no significant effects” to “moderate or large adverse effects”, and vary across many areas of consideration, e.g. Climate Change, Ecology, LVIA, Socio-Economics, Human Health and Waste. This clearly demonstrates the subjective nature of such</p>
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		<p>assessments, based upon pseudo-methodologies and the reliance on “professional judgment”.</p> <p>The report identifies differences in methodology as being a potential reason for the differences, citing the example of the use of different impact areas by the Applicants, but the report does not provide any details to justify this position across so many areas of consideration.</p> <p>There is no attempt to pool expertise and findings, no critique of which methodologies or approaches may yield a more effective assessment of the cumulative impacts. The review therefore does not improve the understanding of cumulative impacts, therefore the treatment of the subject is superficial and inadequate.</p> <p>The report concludes that despite such a range of assessments by different developers, it has “not deemed these outcomes are in conflict with one another”. Again, the report provides little evidence upon which to base this assertion and fails to explain in detail the underlying reasons for such differences.</p> <p>Overall, while the report describes how the Applicants communicate, co-ordinate actions and collaborate, it falls short of being a thorough consideration of cumulative effects and is</p>
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		<p>therefore an inadequate basis for evidence and should be given little weight.</p> <p>For there to be a meaningful assessment of the cumulative effects, 7000Acres call for an independent consideration of the proposed developments to study the cumulative impacts of all the solar developments within the area (including Steeple Renewables), rather than a desktop review of the submission material by the Applicants themselves.</p> <p><i>ii) Implications of approach on National v Local assessment of Climate Change effects.</i></p> <p>With regard to the specific detail of whether Climate Change can be assessed on a national versus local level, it is unclear from the report how such a vastly different interpretation between the Gate Burton/Tillbridge and Cottam/West Burton schemes can be meaningfully explained. It would seem that Cottam/West Burton have assessed some “more local” interpretation benefit as having a “major cumulative beneficial effect”, yet none of the material provided by the Applicants have considered Climate Change impacts sufficiently broadly, e.g. omitting the net CO2 impact of displacing food and energy</p>
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		<p>crops, or the impact of committing of land to solar ahead of, and in competition with other decarbonisation needs. In addition, given all the schemes would connect directly to the national grid, the power will be consumed some distance from the solar panels and there will be no local benefit to the villages or towns in the immediate area where the energy would be produced.</p> <p>Given the scheme is being assessed as a “Nationally Significant” infrastructure project, it would seem anomalous to give any weight to a Climate Change impacts as being significantly beneficial on a local level, particularly when two schemes have concluded that at a national level “no significant cumulative effects are identified”.</p> <p>To argue that the existence of multiple schemes has an accelerating effect on decarbonisation is to assume that there are no other alternative or competing routes to solar deployment. 7000Acres have already highlighted the potential for rooftop solar that continues to be spurned every day, with every new commercial and domestic building constructed, and cited Germany as a clear example of what can be delivered on rooftops, often much more quickly than by having embarked on super-sized NSIP-scale ground mounted solar schemes.</p>
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<p>2.9.2</p>	<p>Electricity Generation</p> <p>Interested parties have challenged the rationale for the use of the grid connection at the West Burton 400kV substation for this solar project in terms of its electricity generating capacity (see, for example REP4-116), with the suggestion that such valuable high-capacity Grid connections need to be used effectively.</p> <p>The Applicant is asked to please respond to this point with reference to relevant policy provisions.</p>	<p>Valuable high-capacity Grid connections need to be used effectively.</p> <p>The Applicant has not challenged the explanation set out by 7000Acres¹¹, 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 and therefore takes pressure off National Grid’s queue for transmission connections.</p> <p>It is therefore a statement of fact that connection at a high-voltage substation is not essential for the deployment of solar or to meet the UK Government’s 70GW ambition.</p> <p>Indeed, the deployment of large-scale solar schemes in the way that has been proposed by the Applicant and others, would sterilise strategically important grid connection points. To</p>
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¹¹ [EN010132-001176-7000 Acres - Written Representations \(WR\) 4.pdf \(planninginspectorate.gov.uk\)](#)

		<p>decarbonise, it is understood that the country will need equipment such as nuclear reactors (including small modular reactors) and electrolyzers at GW scale. These installations will require high voltage, high power grid connections, and the use of such connections for solar schemes will sterilise 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.</p> <p>The foreseeable consequence of this is to divert already scarce resources that are 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 being the need to deploy the grid infrastructure to support offshore wind, the unnecessary connection of solar to HV substations, miles from the panels, puts additional pressure on this supply and skills chain (see Recommendations 14 & 15 from the Electricity Commissioner's Report¹²).</p> <p>National Grid's struggles with the volume of grid connections it is facing is well documented. The UK electricity regulator,</p>
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¹² [Electricity-Networks-Commissioner-report-to-SoS.pdf \(esc-production-2021.s3.eu-west-2.amazonaws.com\)](#)

		<p>Ofgem, wrote to both companies within National Grid (Electricity System Operator, ESO and Electricity Transmission ET) in March 2023^{13 14}, allowing longer durations for the provision of connection offers, in an attempt to improve the actual connection dates for the majority of connecting parties. More recently, in February 2024^{15 16}, Ofgem have granted National Grid a further 3-month extension across all projects, citing an “unprecedented volume of applications” for connections, which implies a scale of network reinforcement that is “more than will be recommended in NGENSO’s network plan for Great Britain’s electricity transmission system out to 2035”. To effectively decarbonise, the UK will need to transform its electricity network to deliver offshore wind connections as a key priority. It is essential that unnecessary schemes, such as that proposed for West Burton, are not allowed to add to the congestion and scale of challenge faced by National Grid.</p> <p>The case put forward by the Applicant is that their scheme is essential requirement to decarbonise and to achieve 70GW of</p>
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¹³ [Letter of Support NGENSO NGET 2 stage process_NGENSO1677590690384.pdf \(ofgem.gov.uk\)](#)

¹⁴ [Two Step Process Letter of Support for National Grid Electricity Transmission \(ofgem.gov.uk\)](#)

¹⁵ [Two Step Process extension letter for National Grid Electricity System Operator \(ofgem.gov.uk\)](#)

¹⁶ [Two Step Process extension letter for National Grid Electricity System Operator \(ofgem.gov.uk\)](#)

		<p>installed capacity, but this is not borne out by the evidence provided by UK Warehouse Association¹⁷ and Ecotricity¹⁸, which demonstrate the potential scale of rooftop solar in the UK, or the experience of Germany (7000Acres answer to ExA's First Written Questions, Q1 1.9.4¹⁹), which has already installed 80GW of solar capacity, without a single scheme of the size proposed by the Applicant for West Burton.</p>
<p>2.9.3</p>	<p>Panel Replacement</p> <p>Concerns are expressed by a number of parties relating to the Applicants reference to an assumed replacement rate of 0.4% of panels per year, as set out in ES Chapter 7 Climate Change [APP-045]. Paragraph 7.8.52 sets out that this figure is based on 'supplier input' and has been applied to the</p>	<p>The Applicant claims a 0.4% failure rate for their PV panels, without providing any evidence. This will result in 24% of the panels needing replacement within the 60-year life of the scheme and 60% of the panels lasting 100 years.</p> <p>The evidence submitted by the trade body, Solar Energy UK, to the House of Commons²⁰ stated:</p>

¹⁷ [Delta-EE Publications \(ukwa.org.uk\)](http://ukwa.org.uk)

¹⁸ [GBF-Report-Solar-v14.pdf \(ctfassets.net\)](#)

¹⁹ [EN010132-001265-7000 acres - Responses to the ExA's First Written Questions.pdf \(planninginspectorate.gov.uk\)](#)

²⁰ <https://committees.parliament.uk/writtenevidence/113682/pdf/>

	<p>estimated 40 year life of the development. With reference to this information:</p> <ol style="list-style-type: none"> a. The Applicant is invited to set out further details of the assumptions on which this figure is based; b. Set evidence to justify the application of the 0.4% replacement rate as a linear rate over 60 years; c. Other parties are invited to provide alternative evidence to suggest that this approach is not credible. 	<p><i>“The lifespan of a new solar panels is also increasing. The typical operational lifespan of a new solar panel can now be 35 years or longer.”</i></p> <p>Therefore, based on the solar industry’s own evidence, a reasonable worst case is a 35 year life. Applying a 35 year life, the physical failure rate will be 100% before the original 40-year life of the scheme is reached. It is not a reasonable worst-case assumption that only 24% of the PV panels will need replacing over 60 years.</p> <p>In addition, the economic life of the PV panels must be considered as this will require PV panels to be replaced before their physical end of life is reached²¹. The economic life of any asset is the period over which the expected revenue from operating the asset exceeds the expected operating costs incurred to earn that revenue. This additional replacement cycle is due to the degradation of PV panels, with electrical output declining over time. It is an historic assumption that the power output from PV panels degrades by circa 1% per year, so it will degrade by 60% at the end of the scheme’s operational life, if in</p>
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²¹ <https://www.ref.org.uk/attachments/article/374/Economic-Solar-Generation.pdf>

		<p>the highly unlikely event that the panels survive that long. Research using utility scale solar installations has shown that degradation is worse in real life than previously measured under laboratory conditions²². The research identified real world degradation rates equal to $2.56 \pm 0.3\%$/year in June 2020, and for the subsequent years the degradation is $2.71 \pm 0.2\%$/ year and $3.32 \pm 0.3\%$/year, in June 2021 and 2022, respectively. This reduction in generating capability is in addition to the physical life of the PV panels.</p> <p>During the 15 year period covered by the Contract for Difference (CfD) financial support will be provided to the operator. Under the CfD Scheme²³ 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 indexation²⁴ this is £64.56 per MWh). At the end of the CfD support, the operator will compete on the energy market on a fully commercial basis</p>
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²² [Investigating defects and annual degradation in UK solar PV installations through thermographic and electroluminescent surveys | npj Materials Degradation \(nature.com\)](#)

²³ <https://assets.publishing.service.gov.uk/media/64fa0473fdc5d10014fce820/cfd-ar5-results.pdf>

²⁴ [AR6 Core Parameters \(publishing.service.gov.uk\)](#)

		<p>at a significantly lower daytime price per MWh, sometimes in summer a negative price due to curtailment. As solar power is generated only during daylight, with peak power produced in the middle of the day when demand is lower, PV panels will have to be replaced on a frequent basis in order to maintain economic levels of energy production. Failing to do so will result in a decreasing energy production/revenue but fixed costs. The Applicant has failed to take account of replacing PV panels on economic grounds in their ES. However, they have sought a very lax and wide-ranging definition of “maintain” in the DCO that will permit them to change panels at will. The combination of degradation and end of CfD subsidies is likely to result in an economic life of the solar assets of no longer than 20 years²⁵.</p> <p>In order to assess the true impact on transport, waste, noise, and GHG emissions, the Applicant should provide evidence regarding the true replacement cycle of the PV panels; failure to do this will render the SofS unable to assess the true impact of this scheme.</p>
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²⁵ <https://www.ref.org.uk/attachments/article/374/Economic-Solar-Generation.pdf>

<p>2.10.2</p>	<p>Noise and Other Limits</p> <p>7000 Acres suggest that the ExA should consider placing limits on Noise and other emissions, but give no indication as to what the figures for these limits should be. Please set out the limits that you would suggest would be appropriate and the reasoning to justify the figures you have provided.</p>	<p>The Noise Policy Statement for England (NPSE) defines :</p> <p><i><u>“NOEL – No Observed Effect Level – This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to noise;</u></i></p> <p><i><u>LOAEL – Lowest Observed Adverse Effect Level – This is the level above which adverse effects on health and quality of life can be detected;</u></i></p> <p><i><u>SOAEL – Significant Observed Adverse Effect Level – This is the level above which significant adverse effects on health and quality of life occur.”</u></i></p> <p>As identified by WLDC in [REP1A-006], the Applicant has provided incomplete and contradictory information covering noise and vibrations. It has not established a clear baseline for noise and vibration measurements.</p>
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		<p>In addition, the Applicant has not provided a reasonable worst-case assessment of the amplitude and frequency range of noise and vibration emitted during construction, maintenance and operations of the scheme. Therefore, it is not possible to suggest appropriate limits as the Applicant has not provided the required information to which 7000Acres can respond.</p> <p>NPSE states that it is not possible to identify a single objective noise based measure that defines LOAEL and SOAEL that is applicable to all sources of noise in all situations.</p> <p>The Applicant must provide the missing information and clarity requested by WLDC in [REP1A-006] before any limits can be identified. It is likely that a range of limits will be required depending on the frequency of the noise or vibration and the time of day.</p> <p>The ExA is requested to take note of the aims in the NPSE:</p> <p><i>“The first aim of the Noise Policy Statement for England: Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.</i>”</p>
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		<p><i>The second aim of the Noise Policy Statement for England: Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.</i></p> <p><i>The third aim of the Noise Policy Statement for England: Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.”</i></p> <p>As maintaining and improving health and the quality of life are key components of the NPSE, applicable noise limits should be set to LOEAL to minimise any adverse effects. An increasing level of adverse effects would occur between LOEAL and SOEAL, so not minimising the adverse effects. Setting the noise limits to LOEAL would be consistent with the first aim, which is to avoid significant adverse effects, which would occur at SOEAL.</p> <p>In addition, it has been noted that the Applicant’s noise assessment does not take account of the hearing range of</p>
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		<p>protected species, including bats (20 kHz – 108 kHz) and owls, that could be impacted by noise generated by WBSS.</p>
<p>2.10.3</p>	<p>Process and Methodology</p> <p>ES Chapter 2: EIA Process and Methodology [APP-040] states, at Paragraph 2.4.18: "<i>Following the classification of an effect, clear statements will be made within the topic chapters as to whether that effect is significant or not significant. As a rule, major and moderate effects are generally considered to be significant, whilst minor and negligible effects are considered to be not significant.</i></p> <p><i>However, professional judgement will be applied, including taking account of whether the effect is permanent or temporary, its duration / frequency, whether it is reversible, and / or its likelihood of occurrence. "</i></p>	<p>Noise and its impact on human health should be dealt with under the aegis of a HIA as it has multiple implications, including on mental health for receptors choosing to live in a quiet rural area.</p> <p>In the opinion of 7000Acres, it is reasonable that the threshold for moderate magnitude should be set to LOAEL, i.e. the level at which adverse effects on health and quality of life commence.</p> <p>If moderate magnitude is set at the SOEL level then a significant adverse impact on health will not be avoided.</p>

	<p>Please confirm what professional judgment is applied in not considering moderate as a significant effect and why the moderate magnitude has been defined as the Significant Observed Adverse Effect Level.</p> <p>If the ExA and the Secretary of State decided that moderate effects are significant, how would this alter the findings of ES Ch15 : Noise and Vibration APP-053 ? Please explain your answer.</p>	
<p>2.13.3</p>	<p>Local Economic Impacts – LIS</p> <p>IPs are invited to provide an update on the alignment of the project with the LIS</p> <p>Revision B of the Planning Statement refers to the Greater Lincolnshire Local Industrial Strategy, and within comments on Policy S28 of the Central</p>	<p>The Applicant’s response focuses on the temporary employment benefits during the construction phase of the project and fails to address the potential for long-term adverse impacts of the development on the agricultural supply chain, agri-food, visitor economy, accommodation and food services.</p> <p>With regard to employment, the Applicant highlights the benefits of their scheme in having a positive impact in the renewable</p>

	<p>Lincolnshire Local Plan. The policy advocates the provision of employment opportunities around urban areas, including Lincoln and Gainsborough. The Applicant also highlights the growth sectors within the LIS, specifically “agri-food, manufacturing, business services and the visitor economy, including accommodation and food services”.</p>	<p>energy sector. Looking more widely, the region will have lost a significant volume of jobs in energy sector as a whole, with the closure of Cottam and West Burton coal-fired power stations, and the benefit highlighted by the Applicant arising from roles during construction will only be temporary. The Applicant argues that the scheme provides valuable “diversification” by offering roles outside of agriculture and tourism, however both of these are areas of key growth within the LIS. It is therefore disingenuous of the Applicant to comment on the Policy with regard to employment, highlighting the potential for “diversification”, without acknowledging their own assessment that there will be a decrease in employment within the region through the operational life of the scheme, in an area which already faces significant deprivation and limited opportunities.</p> <p>The Applicant considers the use of land necessary owing to the scale of capacity required, however solar can be deployed in a disaggregated mannerr, in much smaller capacities, e.g. on rooftops, and make the same energy contribution. It is only the choice of the developer to occupy a high-voltage, high power grid connection and size solar capacity accordingly that has driven the use of land.</p>
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		<p>Overall, therefore, there appears to be very little alignment between the proposed development and the LIS.</p>
<p>2.13.4</p>	<p>LCC response to First Written questions 1.13.6 [REP3-042] refers to a variety of projects and community benefits. It notes that provision of community benefits is not a material consideration in determining renewable energy planning applications. WLDC [REP3-044] also states that the use of a community to ‘compensate’ affected persons is also not an appropriate mechanism to address such matters.</p> <p>IPs are invited to comment further on such measures and provide any relevant updates on this aspect</p>	<p>7000Acres agree with the points made by WLDC that a community fund or its use cannot be deemed an appropriate mechanism to address those impacted by the development or be any sort of valid mitigation. The concept of a community fund should therefore not be given any weight in the planning decision, particularly as there is no “mandate” for such a mechanism within the Order.</p> <p>7000Acres made the point that Community benefits were a prominent part of the initial communications by the Applicant, in brochures and display stands. Since then, the idea of community benefits has barely featured in the course of the examination or in material produced by the Applicant .</p> <p>In reality, the more that people have found out about the scale, size, dimensions and impacts, the more it is felt that no community benefit scheme could ever compensate for living</p>

		adjacent to large areas of 4.5m high panels that could never realistically be mitigated with hedgerows.
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