



**Application by Mallard Pass Solar Farm Limited for an Order
Granting Development Consent for the Mallard Pass Solar Project
– project ref. EN010127**

Submission by Mallard Pass Action Group (MPAG)
– unique ID ref. 20036230

**Deadline 3:
Comments on Responses to ExA's First
Written Questions**

Q1.0.2 (a)

The Project Parameters are set out in Volume 2 Appendix 5.1 of the Environmental Statement (ES) [AS-012]. In some respects, these differ from the parameters that are set out in the Project Description of the ES [AS-010]. For example, Table 5.7 of the Project Description includes additional parameters for the onsite substation compound (such as details of a 400/30kV transformer and harmonic filters) that are not included in the Appendix 5.1 Project Parameters.

a) For each component of the Proposed Development, please review the project parameters in both these documents to ensure full consistency and clarity as to what is proposed and what the parameters would be. Where differences remain, please explain the reason for this.

b) Given the inconsistencies in the scope of the parameters within these documents, confirm on what basis and using which parameters the ES has assessed the Proposed Development?

The Applicant's answer includes "If the height or mass of any of the individual components were to increase but within the parameters set out in Appendix 5.1, this would not alter the conclusions of the LVIA."

Whilst this may or may not be technically correct, at the moment, the maximum height is determined by the harmonic filters only. Any increase in the height of the bulk of the building itself would have a material impact, especially as the substation will be so visible to A6121 road users, residents in Essendine and beyond in the distance.

Q1.0.5 (c)

Q: Paragraph 12.4.18 of the ES [APP-042] refers to an area of 100sqm per Solar Station.

c) What is the maximum number of Solar Stations that would be likely to be needed for the Proposed Development?

In a reply, the Applicant answer includes "The dDCO does not propose an upper limit on installed DC capacity."

The Applicant does not propose any specific installed capacity. It therefore follows that the Applicant cannot make any statement regarding the number of solar panels, solar stations, and inverters. It is also the case that the Applicant cannot make any claims regarding the power output and possible carbon saving unless the necessary performance factors are quantified in the DCO. Giving "indications" for the purpose of examples, are not suitable substitutions for providing a more definitive worst case scenario.

Q1.0.6

The locations of the primary and secondary construction compounds are shown within Work No 5 of the Works Plans [AS-003] and indicatively on Figure 5.12 [APP-132].

a) Please provide indicative layouts of the primary and secondary construction compounds.

b) The primary construction compound is proposed in the same location as the onsite substation. Provide further details, including any illustrative phasing, for how the footprint of the onsite substation compound could be partially use as the primary construction compound.

Having viewed field 19 many times it does not seem feasible that it can be a primary construction compound, substation and car park for at least 150 cars, HGVs and LGVs, even if some are just there temporarily.

Q1.0.9

Numerous concerns have been raised by local residents in Relevant Representations and at Open Floor Hearings 1 and 2 in relation to the potential effects of the Proposed Development on health and wellbeing. The Applicant explains in its response to the Relevant Representations [PDA-012] that the relevant assessments in the ES conclude that no likely significant adverse effects are expected to arise from these topics. Taking account of the interaction between and potential combined effects, along with the general concerns raised by Interested Parties on this matter, set out and explain in further detail how the Proposed Development (including its construction, operation and decommissioning) would be likely to affect the well-being and mental health of residents living in the locality of the Order Limits.

The Applicant states “It is not considered appropriate to attempt to assess either the current or predicted future mental health status of residents living in the locality of the Order limits, as every person will have different subjective and objective reactions, thoughts, and feelings towards changes to, or influences upon, their environment, whatever those changes or influences may be caused by or attributed to.”

The question refers to well-being as well as mental health. It is of course the case that the Applicant cannot assess the impact on the mental health of individuals. Presumably this was not the purpose of the question.

However, the Applicant could have commented in the general sense on the likely impact of the proposed development on the well-being of residents and visitors. The Applicant chose not to do so, presumably because the Applicant **could not** conclusively **demonstrate** that the Proposed Development would not have a major impact on well-being. Based on extensive and continuous feedback from residents at all stages of the process, the message is clear about the impact the Proposed Development is having on many people.

The Applicant goes on to say visions for the development included seeking to “Respect and enhance features in the landscape and promoting connectivity”. If that was the vision the Applicant has demonstrably failed. It is not understood how the Proposed Development would “enhance features in the landscape.”

The Applicant continues the “Proposed Development, will mean that there will not be an industrialisation of the landscape and the recreational resource will still be able to be enjoyed by residents”. This is at direct variance to previous statements made by the Applicant such as “Landscape and visual effects are considered to be of major/moderate significance.” In the summary of the Main Consultation Document Mallard Pass admits that after mitigation “residual significant effects” will exist.

The final comment of the Applicant in answering to this question is “Taking all of this into account, the Applicant considers that the well-being and mental health of residents in the locality will not be affected by the Proposed Development.” In making this comment the Applicant has overlooked that earlier in the answer the Applicant stated “It is not considered appropriate to attempt to assess either the current or predicted future mental health status of residents living in the locality of the Order limits.”

Those most likely to be able to comment on mental health and well-being are the residents themselves. Given over 1200 people registered as an Interested Party and 95.7% of them are opposed to the Proposed

development, the potential for damage to physical/mental health and well-being is enormous, and already very apparent in the community.

Q1.0.10 (I)

Paragraph 5.13.1 of Chapter 5 (Project Description) of the ES [APP-035] states that the construction phase is anticipated to take 24 months with the final programme being dependent on the detailed design and potential environmental constraints on the timing of construction activities. Please provide an indicative programme in table or Gantt chart form for the proposed construction phase based upon the information and design currently known for the Proposed Development, including (i) variables that might be necessary to deal with potential environmental or other constraints and (ii) any site phasing arrangements.

In part of the answer to this question, the Applicant states “a number of 30MW blocks of PV Arrays will be constructed concurrently, which will also overlap with the construction of the Onsite Substation and will allow similar activities to be undertaken across the site as required.”

The Applicant is unable to give any further details. However, working concurrently across the site could have an impact on noise emission.

Q1.0.11

Paragraph 5.13.8 of the ES [APP-035] sets out the core construction hours which would run from 07:00 to 19:00 Monday to Saturday, and no working on Sundays or Bank Holidays.

- a) Please provide further explanation and justification for these proposed core hours, including the start/finish times and the continuation of construction working hours until 19:00 on Saturdays.
- b) The Local Planning Authorities and Mallard Pass Action Group are requested to provide their comments on the acceptability of the Applicant’s proposed core construction hours.

The Applicant has not answered the question. The proposed working hours have been re-iterated without justification.

The Applicant has qualified the answer given stating “noise disturbance will be minimised ***as far as reasonably practicable.***” Given the length of the construction period, if the Application is approved, the Applicant should use its “best endeavours” to minimise noise disturbance, a legal term against which the Applicant’s performance could be measured.

The proposed working hours should finish before 19.00. Working until 19.00, with the consequent noise of up to 400 workers then leaving the site, will intrude on the on the residents evenings for a period of at least two years. Construction work should cease at 17.00.

Many residents are retired and some others work from home. Thus they will be exposed to noise from construction during the week. The residents and those visiting the area for recreation should, if the scheme is approved, be allowed respite during the weekend and Bank holidays. Construction activity, including deliveries to the site, should not take place during those periods.

Percussive piling, if used, should not take place for eight hours a day. Even with the proposed one hour break, eight hours would be an excessive noise burden for residents.

It might be useful to understand what precedent, if any, has been set by the councils when looking at other planning applications with significant and persistent noisy construction activity.

Q1.0.16

The Grid Connection Statement [APP205] states that an agreement to export 240MW (AC) of electricity to the grid has been reached with National Grid. Paragraph 1.4 of the Grid Connection Statement states that the parameters applied for in this Development Consent application allow for the generation of up to 350 MW (DC) to account for degradation of panels over time, seasonal and daily variations of solar irradiance, and loss of power in the conversion from AC to DC. Can the Applicant explain in further detail on what calculations this additional 110MW has been made?

Paragraph 3.10.46 of the March 2023 Draft Revised National Policy Statement for Renewable Energy Infrastructure (NPS EN-3)

“The direct current (DC) installed generating capacity of a solar farm will decline over time in correlation with the reduction in panel array efficiency. Light induced degradation affects solar panels differently depending on the technology used to construct the panel and is one factor, along with price, that developers need to consider when deciding on a solar panel technology to be used. Applicants may account for this by over-planting solar panel arrays.”

The footnote (84) to paragraph 3.10.46 referred to by the Applicant reads

““Over-planting” refers to the situation in which the installed generating capacity or nameplate capacity of the facility is larger than the generator’s grid connection. In the case described in paragraph 2.10.46 solar generators may install but not initially use additional panels to act as a back- up for when panels degrade, thereby enabling the grid connection to be maximised across the lifetime of the site. For planning purposes, the proposed development will be assessed on the impacts of the over-planted site.” (It is assumed that the reference to the footnote should read 3.10.46 and not 2.10.46)

Thus to the extent that the Applicant proposes to overplant panels, in order to account for panel degradation, the Applicant will be able to install but not initially use those panels.

Over-planting, to allow for variations in light intensity, as referred to by the Applicant, is a direct consequence of the limitations of the Ryhall sub-station. In other solar farm proposals, batteries are used to fulfill this function. This is dealt with further under comments on Q1.2.4 and in MPAG’s WR (REP2-090).

Q1.0.17

Paragraph 5.4.4 of the Project Description [APP-035] of the ES states that the DC generating capacity of each PV (photovoltaic) Module will depend on advances in technological capabilities at the time of construction. Paragraph 5.4.6 goes onto explain that for the purposes of enabling an assessment, the ES has assumed 530,303 panels would be required to deliver approximately 350MW of installed DC capacity.

a) Whilst the choice of PV Module is currently unknown, on the basis of the maximum parameters assessed in the ES, what generating capacity for each individual PV Module would be required in order to provide for the indicated installed DC capacity?

- b) Please provide further details of the range of generating capacity for the PV Modules that are currently available on the market for solar farms?
- c) Based on the technological information currently available to the Applicant, and taking account of expected technological advances prior to the procurement of the PV Modules, how might the generating capacity of the final PV Modules to be used for the Proposed Development affect the total number of panels required for the Proposed Development and their coverage across the site?
- d) What implications might the choice of PV Module and its generating capacity have on the extent of land that is proposed to be the subject of the proposed compulsory acquisition powers?

Whilst the Applicant is correct in stating that the lack of storage in the proposed Development does not totally destroy the rationale for the Development it weakens it significantly. Lack of storage will reduce the flexibility of the Proposed Development in supplying the Grid.

Normally, batteries are used to store power in periods of high light intensity when demand is low. Then, in periods of low light intensity, when generation is also low and normally demand high, power can be supplied to the Grid from the batteries.

As limitations in the Ryhall substation effectively rule out the installation of batteries, the Applicant is proposing to overplant panels in order to supply power to the Grid in periods of low light intensity. This “solution” will use more land than would otherwise be necessary if batteries could be employed. The Applicant has not quantified the area of land required for this purpose.

Overplanting will give rise to more power being generated during periods of high light intensity. This will lead to “curtailment” effectively wasting energy produced by the panels on the extra land. Also, in order to stabilise the voltage in the grid, any over supply will require the production of reactive power. This will be generated at Drax Power Station using fossil fuels thereby increasing emissions.

Thus, without batteries the Proposed Development would consume more arable land than would otherwise be the case, lower the output per acre and efficiency and require the generation of reactive power.

Not being able to use batteries does impact on the viability of the Proposed Development and question the original site selection. Even if battery storage were viable the location of the substation and the proximity of local villages would render battery storage totally inappropriate for the area.

Q1.1.3

Paragraph 2.5.7 of the ES Chapter 2 (EIA Methodology) [APP-032] explains that the decommissioning assessment is based on an assumption that decommissioning would take place after 40 years of operation, but it is noted that the dDCO would allow decommissioning to take place before or after this date. Furthermore, since the Applicant is not seeking a time limited consent there is potential that decommissioning may not occur. Can the Applicant comment on the implications for the conclusions of relevant ES assessment, for example the assessment of impacts to agricultural land, should the operational lifespan of the Proposed Development extend beyond 40 years?

In answering this question the Applicant notes “that the definition of maintain in the draft DCO [PDA-003] means that the Applicant cannot wholesale replace the Proposed Development” This begs the question as to the definition of ‘wholesale’ in the context of the statement.

This is material as most of the proposed development will be comprised of solar panels having a life of 25 to 30 years. The Applicant should be clear on the definition of ‘wholesale’ and, specifically, whether or not such a replacement would be within or without the definition of wholesale.

In giving an answer regarding the Applicants position on the potential life of the proposed Development, the Applicant states that “whilst the EIA has assessed the operational impacts of the Proposed Development as permanent, it is the case that any impacts that are caused by the Proposed Development related to the use of the land are considered to be reversible, pursuant to the management plans secured by the DCO Application.”

Surely it is axiomatic, that if permanent, the impacts will not be reversed. As an aside, if the impacts referred to were to be reversible the same would apply to carbon sequestration and BNG as some of them are reversible too. Additionally where is the evidence to confirm that the soil quality will be no worse after 25, 40 or 60 years than its original baseline?

Q1.2.1

Paragraph 4.3.9 of the Applicant’s Statement of Need [APP-202] refers to the then unpublished ‘Skidmore Review’. Following its recent publication on 13 January 2023 as ‘Mission Zero Independent Review of Net Zero’, comments are invited on any implications this review may have in respect of the consideration of the Proposed Development.

MPAG has already responded to this question in their D2 submission REP2-089.

In referring to the “Skidmore Report the Applicant quotes “The benefits of net zero will outweigh the costs” and believes that “This is too important to get wrong.” This refers to the generality of renewable energy and not just the Proposed Development where the benefits will not outweigh the costs if judged on the “planning balance.”

Q1.2.2

Figure 8.1 of the Statement of Need [APP202] shows Illustrative Generation Capacity Dependability for a combined portfolio of solar and wind in Great Britain, with some supporting commentary in paragraphs 8.8.4 to 8.8.6.

- a) Please provide further details of the methodology and evidence used in providing Figure 8.1, including the number, proportion, size and location of solar and wind generating assets used in its formulation.
- b) What level of certainty can there be that the conclusions derived from this Figure are typical for solar and wind installations as a whole?

Graph 8.1 is not exactly the same as that shown in The Statement of Need. The graph in the Statement of Need does not have a quantified y-axis but is shown as “illustrative.”

However, the key point made in the answer is “the combined portfolio of (solar + wind), when averaged over a period of time, is lower than the variation of each of the portfolios separately, although the Applicant notes that not all individual days will always conform to this observation.”

Averages are not entirely useful when discussing renewable energy. Renewable energy is highly variable from “minute to minute” especially within the context of the UK. The Grid is managed on a “minute by minute” basis. Thus, in general, whilst the wind tends to be stronger in the winter and solar in the summer the contribution of solar and wind to the combined portfolio of the two are more variable than the graph suggests.

Q1.2.4

Paragraph 9.3.11 of the Statement of Need [APP-202] refers to the importance of ancillary service provision such as those available from solar and/or storage assets, as described in Table 9.2 of the Statement of Need, to contribute to the proper functioning of the local National Electricity Transmission System (NETS). Further commentary on the importance of electricity storage is set out in paragraphs 11.5.1 to 11.5.2.

a) Provide further details of why electricity storage is not proposed, including a more detailed explanation for why the Proposed Development’s grid connection agreement does not provide sufficient import power capacity to justify the inclusion of electrical storage capability without a likely significant cost.

b) How does the absence of storage provision, and therefore a lack of any consequent flexibility benefits, effect the weight that should be given to the overall benefits of the Proposed Development in this case? Are there any disbenefits that arise due to the inability to utilise storage at the site of the Proposed Development?

Whilst the Applicant is correct in stating that the lack of storage in the Proposed Development does not totally destroy the rationale for the Development, it does weaken it significantly and tips the planning balance strongly away from the approval of the scheme.

Q1.2.6 (a)

a) Provide a summary of the effect upon, and the implications for, the Government’s Net Zero and climate change commitments should the Proposed Development not be implemented.

b) Taking account of the availability and capacity of other existing points of connection to the NETS or local Distribution Network (both in the region and nationally), what evidence is there of opportunities for other solar projects to come forward in other locations that would be likely to fulfill the Governments Net Zero and climate change commitments in the absence of the Proposed Development?

In answering the question the Applicant gives a considerable amount of background.

To address the question directly the `Governments has an ambition for 70GW of solar by 2035. There is around 14GW of solar already installed leaving 56GW solar to be put in place. This, if the capacity of the Proposed Development is taken as 350MW it would satisfy 0.5% of the remaining requirement.

The requirement of 56GW equals 160 solar farms the size of the Proposed Development, again assuming it has a capacity of 350MW. On the basis of the Proposed Development, it would require some 160,000acres for solar panels and equipment and a total of 400,000acres if all of the additional solar developments had an order limit the same size as the Proposed Development. By way of comparison the county of Bedfordshire has an area of around 300,000acres.

The above comments are based on the data given and calculations made by the Applicant. However, the Applicant has made a number of errors in its calculations and interpretation of data. This is dealt with in detail in the Written Representation (REP2-090) submitted by the Mallard Pass Action Group.

To summarise, for the purpose of commenting on the Applicants answer, the Applicant has claimed that the Proposed Development would generate 350,000MWh/annum. The Applicant has made an arithmetic mistake in coming to this figure and then has not allowed for panel degradation and power lost in the conversion of DC to AC. Taking all of these into account the annual output would equal 253,000MWh/annum only 72% of the figure claimed by the Applicant.

As far the impact on carbon is concerned the Applicant has stated that the embodied carbon of the Proposed Development will be 672,000teCO₂.

Due to the decarbonisation of the grid over time, the total CO₂ reduction over 40 years would only be 423,580 teCO₂ which means the Proposed Development will never actually pay back the carbon used in manufacturing, transportation, construction and so on.

Even based on the inflated energy output calculated by the Applicant, the contribution of the Proposed Development carbon saving would be negative. Thus, the achievement of Net-Zero would be improved without the Proposed Development.

Q1.3.1

Chapter 4 of the Environmental Statement (ES) [APP-034] and Section 5 of the Design and Access Statement [APP-204] provide commentary on the design evolution of the Proposed Development in general terms. A site appraisal of all “available” land is referenced at Section 5.7 of the Design and Access Statement [APP-204]. Section 5.8 states “This appraisal focused on the suitability of the individual fields for PV Arrays and based on environmental, social, economic factors, site visits and desktop analysis by all of the technical disciplines, areas were identified as not being suitable for accommodating PV Arrays were removed, based on the Project Principles...”.

- a) Can the Applicant submit further details of the appraisal undertaken that clearly identifies the criteria and findings for each individual field within the Order limits?
- b) Have fields adjoining the Order limits also been assessed with the criteria?

The fact “the Applicant sought to start from a position of seeking to minimise the extent of compulsory acquisition powers that would be required to be utilised on the basis that deals would be able to reach with those willing landowners” means the landowners knew they were likely to be subject to compulsory acquisition powers from the beginning if they didn’t agree to leasing their land. Is it the case that all the farmers are entering into this with their full support, or that they feel they have no option if CPO is the fallback?.

Q1.3.4

Paragraph 3.1.5 of the Site Selection Assessment [APP-203] states that the Applicant did not consider delivering a smaller scheme with less generation capacity on a smaller area, as a smaller scheme with less generation capacity would not deliver the same capacity or energy security and climate change benefits nor meet the opportunities presented by the secured connection agreement. Paragraph 4.1.7 of the ES [APP-034] lists “alternative sites, size and scale” amongst the alternatives assessed but the subsequent assessment focuses on alternative sites and does not directly address size and scale. Whilst acknowledging that from a policy perspective there is not a “general requirement to consider alternatives or to establish whether a development represents the best option”

(Overarching National Policy Statement for Energy, paragraph 4.4.1), can the Applicant please elaborate on why the consideration of a smaller scheme has not been assessed as a reasonable alternative?

The Applicant has again made a statement in answer to the question that the Applicant cannot quantify namely, “the Proposed Development proposes a substantial infrastructure asset, which will deliver large amounts of cheap, low-carbon electricity during and beyond the critical 2020s timeframe if consented.” Without quantification of the output and an agreed timeline, it makes it extremely difficult to determine the exact benefits of the Proposed Development.

The Applicant goes on to say part of the vision is to “enhance the local environment and be a responsible neighbour (see paragraph 4.2.1 of the Design and Access Statement”). Just how the proposed Development will enhance the local environment is difficult to see and the Applicant has already proved that it is not a responsible neighbour in the way in which it has communicated with the residents through consultation, particularly in the early days of the process.

A site of smaller size could be more sensitively and discreetly located, and present fewer challenges for landscape & visual, residential and recreational amenity, noise, and the many species that will have to grapple with the miles of fencing.

Q1.3.5

Paragraph 3.1.11 of the Site Selection Assessment [APP-203] states that the general topography of the area immediately surrounding the Ryhall substation is gently undulating and therefore this makes a particularly suitable site for solar. Please explain with appropriate evidence why it is particularly suitable and how the topography has influenced the proposed site layout and choice of fields used for the Proposed Development?

Whilst the topography may lend itself to meeting the design and construction needs of the site, it does not improve the landscape and visual impact. Equally as detailed in our Written Representation (REP2-089) irradiance and topography are not optimal relative to other areas of the UK.

Q1.3.6

Paragraph 3.1.11 on page 22 of the Site Selection Assessment (Appendix 1 of the Planning Statement) [APP-203] states that additional Grade 2 agricultural land was identified following further analysis and removed from areas proposed for PV panels where this was in single fields. Chapter 4 of the ES alludes to practical difficulties of farming crops on land of varying quality [APP-034]. Paragraph 12.4.91 states that “In practical terms there is little between the subgrade 3a or 3b land, and the limited amounts of Grade 2 retained within the area for the Solar PV Site are similarly constrained in practical terms.”

a) Please elaborate on the practical reasons why only the additional Grade 2 land in single fields was removed from areas for PV panels in relation to the scope for arable farming.

b) Please clarify the area (in Hectares) and location of additional Grade 2 land that has been identified that has i) subsequently been removed and ii) remains within the area planned for PV panels. Please provide details of the locations of land referenced under i and ii.

The Applicant correctly states that, normally, each field is farmed as a whole irrespective of soil type. Modern farming requires large fields and so it is likely that in many instances fields will contain soils of different ALC grades.

As a consequence of how a farm is managed, and in order to prevent the use of Best and Most Versatile land, fields containing any grade 2 and 3a land should not be used for solar panels. Given the marginal difference between 3a and 3b the default should be if any land parcel has a combination of 3a and 3b, that the whole of the land parcel should not be used for solar.

In its answer the Applicant states “The Proposed development approach taken is consistent with the terms of draft NPS EN-3 paragraph 2.48.15, which explains that solar farm developments are not prohibited on ‘best and most versatile’ agricultural land and that “it is recognised that at this scale, it is likely that applicants’ developments may use some agricultural land.”

It has not been possible to locate paragraph 2.48.15. However, paragraphs to 3.10.13 to 3.10.19 deal with the points raised.

Paragraph 3.10.14 states “While land type should not be a predominating factor in determining the suitability of the site location applicants should, where possible, utilise previously developed land, brownfield land, contaminated land and industrial land. Where the proposed use of any agricultural land has been shown to be necessary, poorer quality land should be preferred to higher quality land (avoiding the use of “Best and Most Versatile” agricultural land where possible)”

And

“3.10.16 It is recognised that at this scale, it is likely that Applicants’ developments may use some agricultural land. Applicants should explain their choice of site, noting the preference for development to be on brownfield and non-agricultural land.” The proposed Development will be using all ‘agricultural land’ not just some, as stated in 3.10.16

Q3.0.3

Chapter 7 of the ES [APP-037] identifies a loss of 75m of species rich hedgerow within the Order limits and within the Essendine Hedgerow south side MacMillan Way Local Wildlife Site (LWS) due to the need to increase visibility splays. The creation of temporary passing points on Uffington Lane is also expected to impact grassland verges, including within the Essendine Verge South East of the Freewards (North Side) LWS and the Essendine Verge (North East Side) Near North Lodge Farm LWS with one passing point in each. An adverse effect of significance at District level is identified for the LWSs in question. Please can the Applicant clarify if alternative access points, visibility splays and passing points been considered in the interests of minimising adverse ecological effects?

Did the Applicant consider the impact on the local community’s recreational amenity as many of the access points are located next to or close to a PRoW?

Has the Applicant identified the hedgerow and trees being removed to facilitate visibility for the access points that are *not within the Order Limits* but on the opposite side of the road and may be the subject of CA?

Q3.0.17

A Green Infrastructure Strategy Plan is provided at Figure 6.11 [APP-173] and within the Design and Access Statement [APP-204]. Section 6 of the Design and Access Statement summarises the key principles of the Green Infrastructure Strategy. They include the following: “reconnection of existing habitats and designated ecological sites through new woodland, grassland and hedgerows planting that is reflective of local soil conditions and existing species and as part of landscape scale GI enhancements and facilitating a network of permeable ‘wildlife corridors’ throughout the Order limits.” However, the plan provided is not particularly clear in terms of the identification of the wildlife corridors and ecological networks to be connected within the Order limits or how these corridors connect beyond the Order limits. Please can an updated plan be provided that provides clarification on the above?

Given the majority of the woodland is encapsulated within the Order Limits but not part of the Order Limits, how can the Applicant promote talk about connectivity and wildlife corridors when they are not in control of all the rich ecological assets inside the Order Limit boundary? The existing landowners will have little interest in maintaining and promoting these isolated woodland areas, and may not even have access. It is critical that all ecological assets within or adjacent to the Order Limits are not compromised in any way and there is a joined-up plan for ongoing management.

Q4.0.8

Paragraph 6.2.13 of the Statement of Reasons [APP-021] states that the residual significant adverse effects will only occur while the Proposed Development is under construction, operational or being decommissioned and will disappear when the Proposed Development is decommissioned.

a) Given that the draft Development Consent Order (dDCO) does not include any time limit for the operational period of the Proposed Development and assuming that the Environment Statement is based on a worse case assessment with no time limit restriction, what weight is given to the possibility that the adverse effects will disappear as stated in Paragraph 6.2.13?

b) How is this factored into the condition imposed under Section 122(3) of the Planning Act 2008 that the Secretary of State needs to be satisfied that there is a compelling case in the public interest for the land to be acquired compulsorily?

The Applicant is required to demonstrate the local benefits, but as outlined in MPAG’s WR (REP2-090), there are no local public benefits of the Proposed Development as a justification for any CA powers sought.

- PRoWs surrounded by solar panels, fencing, solar stations, even with the extra permissive paths are not seen as a benefit by locals. Retaining the PRoWs which already exist is not a benefit of the scheme. Moreover, the PRoW will be substantially degraded as a result of the physical impacts of the proposed development including impacts on the landscape, visual amenity, and tunnelling effects caused by the extensive fencing and built features. It is a dis-benefit of the Proposed Development.
- MPSF suggests 50% of the staff will be sourced from the local area. Of the communities affected, MPSF has not understood the demographic and skill set of the local area. Local employment on this project will, in all likelihood, be very low.
- All the energy generated goes direct into the National Grid which could go anywhere in the country.

- There are no lower tariffs for the local communities, so only the developers and middle men will benefit financially.
- According to MPSF the carbon effects will be adverse for a minimum of 10+ years, some of them felt in the local community by the impacts of the construction traffic. MPAG's calculations suggest 18-24 years.

Q4.0.9

Q1.0.12 above refers to the proposed cable routes, including the use of the A6121 through Essendine. a) Clarification is sought on whether the proposed cable route along the A6121 through Essendine would still be required in the event that an alternative crossing route of the East Coast Main Line is pursued? b) Assuming that the potential crossing of the East Coast Main Line is a reasonable and realistic option, how should such an alternative be considered in determining whether the acquisition of rights, as currently proposed, should be authorised by the Secretary of State?

The applicant states "The Applicant will, however, still need the ability to be able to make a choice, as even if design approval is given, a range of Agreements will need to be entered into, and the Applicant would need the 'backstop' of being able to use its powers. " Is this absolutely necessary? Surely the cabling routing is a key variable of the project and the Applicant has had ample time to agree the final option since inception of the project. It appears from Network Rail's Relevant Representation that negotiations started rather late in the day. However the local residents should not continue to bear the burden and worry of a 'backstop' option being allowed in the DCO and effective for the lifetime of the scheme.

Q5.0.03 (b)

"maintain" – This definition includes the potential for works of a significant nature. For example, to adjust, remove, reconstruct, replace and improve any part of the authorised development. Whilst the definition prevents the removal, reconstruction or replacement of 'the whole of' authorised development, this would still allow for potentially significant works, including at different times during operation. The EM [APP-108] explains that the drafting will enable technological and practice advancement and that flexibility must be built in to keep up with changing standards, controls and advances in technology.

a) In this context, please explain what works are expected to be proposed to the authorised development during operation due to such technological and practical advancement?

b) Why has a restriction been applied to 'the whole of' the authorised development when lesser interventions might still amount to significant elements of work?

This resolves one of the points made with regard to the Applicants answer to Q1.1.3. The Applicant, under the definition of "maintenance", would be able to replace all of the 530,000 panels, the definition would allow replacement of solar panels at the end of their lifetime without the need for a new DCO.

Maintenance is "The work of keeping something in proper working condition care or upkeep including: taking steps to avoid something breaking down (preventative maintenance) and bringing something back to working order (corrective maintenance)."

This definition does not cover the total replacement of 530,000 solar panels with such replacement being made as a result of the life of the panels being exceeded. Nor does it cover the replacement due to advances in technology.

As the Applicant's definition does seem to include the replacement of panels (even though that is not regarded as 'repowering'), then shouldn't the Applicant also demonstrate worst case scenario in terms of all the environmental impacts e.g carbon cost.

Q5.2.8

Requirement 17 (Skills, supply chain and employment)

a) Please set out the full reasons including policy justification for all aspects of the skills, supply chain and employment plan?

b) Paragraph 3.1.2 of the outline Employment, Skills and Supply Chain Plan [APP-211] states that in order for the Plan to be successful, it will need to be implemented as early as practicable prior to the commencement of construction. Consequently, does the time frame for the submission and approval of the Plan (currently prior to commencement) need to be earlier in the scheme development process, or should the final Plan be part of the DCO application process?

c) Should parts (2) and (3) of the requirement refer to the 'skills, supply chain and employment plan' to be consistent with part (1) and the actual title of the plan?

The Applicant may have a vision but it is clear they have little understanding of the demographic and availability of local people. The opportunity for the employment of local people will be negligible. Most of the construction workers will, it is assumed, have specialised skills and be contracted in from outside the area. After all the area they are seeking to recruit from is rural with a relatively small cohort to recruit from.

The operation of the Proposed Development will require few people, and effectively may only replace the jobs that will be lost through the farming supply chain.

In any event the wider area is one of low unemployment and a sizeable proportion of the residents of the local villages are retired.

Q 6.0.12

Paragraph 5.9.9 of the draft Overarching Policy Statement for Energy March 2023 (EN-1) states that consideration will need to be given to the possible impacts, including cumulative, on the wider historic environment and that assessment should include reference to any historic landscape character assessment and associated studies as a means of assessing impacts. a) Notwithstanding the information provided, including paragraphs 8.2.33 to 8.2.34 of the ES (APP-038) and Chapter 6 (Landscape and Visual) [APP-036] please explain in further detail how the Proposed Development has been assessed in the context of its overall impact on historic landscape character, taking

The Applicant seems to only consider the intervisibility between the Proposed Development and any heritage assets and historic landscape/area. The fact these assets are on the doorstep of the Proposed Development and people would regularly have to go past the Proposed Development on their outward or return journey means these areas could be tainted by the industrial nature of the development, diminishing the importance of the asset or landscape character.

Q7.0.6

Paragraphs 12.4.57 and 12.4.58 of the ES [APP-042] states that the land under and around the PV Arrays could be used for the grazing of sheep or fodder production. a) For each farm business affected by the Proposed Development please explain how likely the proposed use for sheep grazing would be, given that the existing farms

are either wholly or primarily arable. This explanation should take account of how the practices of the farm would need to change to accommodate sheep grazing and the incentive for doing so.

The Applicant is correct in stating that currently only Manor Farm has sheep. These are not owned by the landowner nor managed by the staff of Manor Farm. They are kept on permanent grassland.

Comments regarding opportunities for existing farmers in the area or for new entrants are entirely speculative. The Applicant appears to be envisioning a commercial breeding flock, commenting that ewes can lamb outside. The BRE Agricultural Good Practice Guidance for Solar Farms states "Some hardier breeds of sheep may be able to produce and rear lambs successfully under the shelter of solar farms, but there is little experience of this yet." All of the local farms with breeding flocks lamb inside.

In order to manage sheep correctly the flock needs to be in clear view of the shepherd so that they can see those animals that may carry injuries, are lame and so on. It is not possible to do this under a block of solar panels in a large solar farm comprising 52 field parcels.

The Applicant fails to understand what is required as handling facilities stating that all that is required are "hurdles" and not a fixed feature. The Applicant is referred to the 92 page document - A Guide to Designing a Sheep Handling Unit published by the Irish Agriculture and Food Development Authority.

The Applicant points to a number of examples where sheep are farmed under solar panels. BRE Agricultural Good Practice Guidance for Solar Farms. These examples have little bearing on sheep farming in the Proposed Development as all of the examples given involve solar farms that are minuscule in comparison to the Proposed Development. Of the eight examples given, two kept poultry, one was constructed on an airfield, four already had live stock enterprises and the necessary infrastructure. It is not clear as to whether or not the farm in the last example previously kept sheep.

It is perhaps important to understand the purpose of the intended sheep grazing. If the sheep are to graze all year around as part of a sheep farming business, they will destroy any biodiversity created with the grassland as they crop the land very tightly. That would not be to the benefit of the project ecologically. If the sheep are required periodically to keep the grassland down for a couple of months during the year (portable lawnmowers), then that does not constitute continued agricultural use in the true sense of the meaning. Either way it is a hugely impractical and unrealistic undertaking for a solar farm of this scale.

Q7.0.11

Paragraph 12.8.3 of the ES [APP-042] states that the Proposed Development would not result in any irreversible or permanent loss of agricultural land, and therefore there are no cumulative effects associated with other projects. Nonetheless, several Relevant Representations (RR) have raised the issue of the cumulative effects on agricultural land (including Best and Most Versatile (BMV) resulting from other solar farm developments.

a) Please explain this statement in the context that the effects of the Proposed Development need to be considered on a permanent basis given that there is no time limit for its operational phase.

b) Provide an estimate of the total area of BMV agricultural land within the regional area, and express the area of 'temporary loss' from:

(i) the Proposed Development and

(ii) other known solar farm developments as a percentage of that total area? The response should also explain how these figures support the ES conclusion of no likely significant effect from any loss of BMV agricultural land.

The Applicant has failed to look at the other solar farm applications in Rutland and Lincolnshire and the likely cumulative BMV impact if they apply the ALC Provisional maps BMV %. Para 13.6.3 of MPAG's WR (REP2-090) identifies 8,339Ha of applications (this is growing all the time). The BMV area could be as low as 3,769Ha or as high as 5,937Ha. That is just for Rutland and Lincs and takes no account of the national impact which we believe to be in excess of the size of the county of Bedfordshire (ref. Q1.2.6).

Q8.0.1

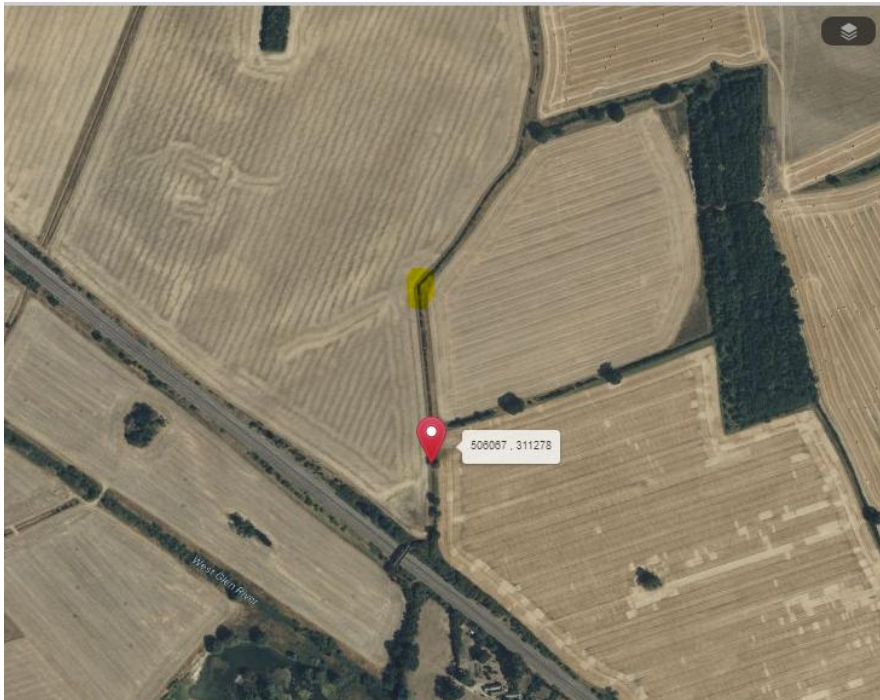
Paragraph 1.1.29 of the Applicant's Landscape and Visual Assessment Methodology [APP-055] states that effects that are Major-Moderate or Major are considered to be significant, whilst effects of Moderate significance or less are "of lesser concern" and not significant. This differs from the standard approach set out in Chapter 2 (Overview of EIA Process) of the Environmental Statement (ES) [APP032]. Please explain why, for landscape and visual matters, effects of Moderate significance are not considered as being significant within the ES?

MPAG's Landscape & Visual expert in her full report (REP2-075) also identifies many inconsistencies and errors with the Applicant's methodology. There are key baselines and principles that need to be followed according to the guidance, without a robust methodology the conclusions cannot be deemed to be robust.

Q8.0.4

Paragraph 6.5.46 of the ES [APP-036] states that photomontages, showing the Proposed Development at Years 1 and 15 of operation, have been prepared for representative viewpoints 1, 2, 4, 8 and 11. Please provide additional photomontages of the Proposed Development from Field no. 35, approximately 50m north of VP06B [APP-138], as well as from any other locations which would aid the ExA's understanding of the likely visual impact of the Proposed Development once operational.

Unfortunately this new photomontage is still too close to VP6B. If it were slightly further North on the corner of BrAW/1/1 as highlighted on the map, it would show you the full extent of the view all the way to Carlby, you can even see the church in the distance. All the fields that can be seen from the revised suggested VP are highlighted in yellow. The original VP6B was taken in a completely inappropriate location at a lower level by the side of the railway line.



This particular view demonstrates why it is important to walk the PROWs in both directions, looking North the view is expansive.

Q8.0.10

Paragraph 6.5.2 of the ES [APP-036] lists the key components that would likely give rise to landscape and visual effects to varying degrees. Drawing on the development parameters and the project description, along with the illustrative material provided and the likely design and form of each component (including but not limited to the onsite substation and ancillary buildings), provide further narrative and explanation for how the likely design and appearance of the different components of the Proposed Development have been taken into account in the landscape and visual assessment.

Most of the documents talk about the solar arrays, but little attention is paid to the visual impact of the tracks, inverter and transformer containers or solar stations, fencing and signage, CCTV etc, which when combined create this industrial unfriendly feel, changing the character and desirability of the area, particularly when in any proximity to residential or recreational amenity.

Q8.0.11

The Design and Access Statement [APP-204] sets out the need for good design and includes Design Guidance that would be used to inform the detailed design process for different components of the Proposed Development.

a) Provide further explanation of how the onsite substation and ancillary buildings (taking account of the different components within that part of the Proposed Development) would be capable of being laid out and designed in order to promote the best possible aesthetic and visual appearance and to minimise its landscape and visual effects.

b) Explain in further detail how the proposed landscaping strategy has been designed in order to seek to minimise the effects of the onsite substation and ancillary buildings.

c) What bearing would the proposed colour and any reflectivity of the solar panels have on their landscape and visual impact?

d) Provide a summary of how the location and final appearance of the proposed invertors, transformers and switchgears (including any associated solar stations/storage containers) would be determined in order to minimise their landscape and visual effects? e) Would there be any differences between the dDCO controls for solar stations and storage containers (noting that Design Guidance PE.4.2 of the Design and Access Statement states that there will be a 50m offset of solar stations from Public Rights of Way). Should the Design Guidance be amended to also refer to storage containers in this respect?

The topography of field 18 and 19 is such that it will be almost impossible to screen effectively. MPAG has watched some farm machinery work in field 18, there is already mature hedgerow which has no impact and the fact the large hard core mound in field 19 (behind field 18) is visible from many directions (not just Essendine) demonstrates the challenge of using that area for the substation location. Field 19 is also not level and slopes downhill towards the railway line, so how will the Applicant manage that with the new substation?

Some consideration with the visual impact should be given to seeing the solar panel infrastructure from the rear, not just from the front as described like "a body of water". There are plenty of cases on the north east and north west end of the site where that will be the case, hence the industrial look and feel.

Q8.0.16

Chapter 16 of the ES (Interactions of effects and summary of cumulative effects) [APP-046] sets out in-combination effects. In-combination effects between landscape and visual effects and noise and vibration has been assessed for Public Rights of Way users. Can the Applicant confirm whether there is potential for other in-combination effects to occur between landscape and visual effects and other potential impacts or other landscape and visual receptors (including effects on the occupiers of residential properties)?

The Applicant says that “no significant effects are anticipated to arise from the Proposed Development to humans, including within their residential properties.” It is not clear as to whether this includes gardens where many residents spend a lot of time.

Q 9.0.1

Paragraph 1.1.24 of Appendix 10.2 [APP-078] of the Environmental Statement (ES) considers a level of 55dB LAeq,1h as a threshold of significant noise effects for Public Rights of Way (ProW) receptors for the operational phase of the Proposed Development (based on the guidance of BS 8233). Please provide further explanation of this threshold for significance and the criteria used in professional judgement to assess the construction, operation and decommissioning effects on recreational users of any ProW (including the proposed new ProW)? This should include the consideration given to existing background noise levels, the character of existing noise and the likely expectations of recreational users of the ProW within the countryside.

Can the Applicant identify a benchmark or guidance on noise levels suitable for horses? They hear noise differently to humans and can be very unpredictable. Given some bridleways are surrounded on both sides by solar panels and associated infrastructure, it is essential that the noise in terms of level and tone is safe for horse riders.

Q9.0.7

Paragraph 5.12.6 of the draft NPS EN-1 (March 2023) requires that, where noise impacts are likely to arise from the proposed development, the applicant’s assessment includes an assessment of any likely impact on health and well-being where appropriate. Submissions have been made by local residents on the potential effects on health and wellbeing. Please explain further how the application has taken this draft policy requirement into consideration?

This comment could apply to most of the noise questions. How has the Applicant taken into account noise travel from wind? What is their baseline, should worst case wind effects be taken into account rather than applying normal conditions if that is the case. Some parts of the site are very exposed and noise travels a long way.

The response from the Applicant “Minor adverse residual effects were identified in some cases. Based on the guidance of Planning Practice Guidance [Ref 10-13] quoted in Table 4 of Appendix 10.1 of the ES [APP-077], this may correspond to some small *changes in behaviour, attitude or other physiological response effects, as well as in some instances to a small actual or perceived changes in quality of life*, but these would be limited and not significant.” This is somewhat worrying, even that so-called small change can have a huge impact on mental health. Given much of the noise is continuous rather than transient, the impact however slight the Applicant believes it to be, should be treated as significant.

The 8 hour piling activity still seems far too intrusive. Reports from other solar farms a fraction of the size have caused significant upset amongst residents unable to escape the persistent noise for weeks and months on end. Will there be a specific phasing plan to mitigate the impacts further across the site, to avoid several locations all piling at the same time and there being a cumulative effect for the residents.

Q10.0.4

Section 6 of the outline Employment, Skills and Supply Chain Plan [APP-211] includes an ethical procurement policy that would apply to potential suppliers. This includes various commitments to be met by potential suppliers including the need to publish an annual modern slavery and human trafficking statement (which is informed by a risk assessment).

- a) Would the statement be subject to scrutiny by a third party?
- b) How would an ethical procurement policy be monitored and enforced?

The Applicant states “Section 4 of the plan has been updated to make it a requirement that modern slavery and human trafficking statements prepared by relevant suppliers are uploaded to the Home Office Register for such statements.

This will enable the relevant planning authorities to monitor compliance with the ethical procurement policy. If the requirements of the plan are not adhered to then this would represent a breach of the DCO requirement and the relevant planning authorities could take enforcement action under the Planning Act 2008 in the normal way.”

Uploading statements to the Home Office Register does not mean that they are complied with nor does it mean that the statements can be monitored in respect to their implementation.

The recent statement and evidence presented by Alicia Kerns M.P. regarding the activity of Canadian Solar still presents major concerns about points to the general disregard the Company has to ethics.

Q10.0.7

Paragraph 14.4.44 of the ES [APP-044] refers to a “growing body of research” that indicates that the presence of largescale renewable energy development is not a significant factor for people when making holiday/leisure decisions. One example of research undertaken in 2013 in Cornwall in the context of a 172MW solar farm is cited. Please can the Applicant provide further examples of research that support the conclusion that large-scale renewables do not negatively impact upon holiday/leisure destination decision making? Is any more recent or local evidence available?

In answering this question the Applicant primarily refers to wind-farms, not solar. There is no logic to this comparison, solar and wind farms being of an entirely different nature. Also there is no suitable precedent to use for solar farms as Shotwick Park at 72MW and 101Ha is a fraction of the size and sited next to an industrial paper mill to which it is supplying energy.

Q12.0.3

In relation to allowances made for climate change, the FRA uses the higher central band for the 2050s climate change allowance for peak river flow (Section 2.2.1). It is noted that the revised peak river flow allowances for the Welland Management Catchment for the Higher 2050s is 10% and so the assessment uses a conservative approach. There is no mention of climate change allowances for peak rainfall intensity; it is not clear what allowance has been applied. Please can the Applicant clarify what climate change allowance has been applied for peak rainfall intensity within the FRA?

In addition to concerns about the impacts of climate change negatively affecting the baseline, there is also the concern of the subsequent impact of **off-site flooding** both in Greatford and Essendine as a result of faster water run-off from the panels into water courses and the River Glen. It is clear the Applicant has mitigated the effects onsite by removing panels from areas sensitive to flooding, but has not specified **definitive** measures to mitigate impacts off-site to residential areas. MPAG’s Written Representation (REP2-090) goes into extensive detail about flood risk impacts.

If the land is trafficked during construction before a grass ley is suitably sown and robust, the ground will be compacted installation of the piles and assembly activity. The Applicant has acknowledged the faster water run-off but believe the grassland will compensate for that. That is only possible if it is not compacted and if the land has not reached field capacity, which normally lasts around 115 days in the local area over the winter months.

Q13.0.3

In answering the Applicant says “The Proposed Development involves the construction, operation and decommissioning of utility scale solar photovoltaic (PV) cells, for which the IPCC Annex III (2014) estimates a lifetime emission of 48 kgCO₂eq/MWh (based on the median value from a range between 8 and 180 kgCO₂eq/MWh).”

Firstly, the median range referred to in parentheses is 18 to 48 kgCO₂eq/MWh and not 8 to 48 as given by the Applicant.

To be clear, it is the Applicant, not the IPCC that selected the 48kgCO₂eq/MWh number.

The Proposed Development is expected to be significantly over the median due to manufacturing in China. Articles discussing Lifecycle Emissions identify that 70% of the Lifecycle CO₂ comes from the manufacturing of panels (Reference: Harvard Kennedy School, Journalist Resource) and compared with panels manufacture in Europe or North America, panels manufactured and shipped from China have the highest embodied carbon dioxide, due to the 50% Coal-fired power-stations used in China’s energy grid. Transportation to the UK from China will be at the higher end of embodied CO₂ as well.

It is therefore expected that the Proposed Development life time emissions will be in the range 72-96kgCO₂eq/MWh.

Q13.0.5

There are inconsistencies within ES Chapter 13 [APP-043] where the effect of the Proposed Development on climate change is considered significant in places but not in others. ES Chapter 17 [APP-047] summarises the effect as not significant whereas the Non Technical Summary [APP-106] states that the effect is significant. Furthermore, the climate change assessment methodology (ES Appendix 13.2 [APP-097]) does not provide a clear explanation as to how significant effects are determined. The Applicant is requested to confirm whether the identified positive effect on climate change is considered significant and explain the methodology for determining significance.

It is suggested that the Applicant has mis-calculated the likely output of the Proposed Development by a significant amount, one of the incorrect calculations being a simple arithmetic mistake. This has a considerable impact on the Applicants claimed beneficial effect on climate change. Details are given in the Written Submission of MPAG (REP2-090).