Submission by Mallard Pass Action Group (MPAG)

– unique ID ref. 20036230

Deadline 6:

Comments on Responses to ExA's further 2nd Written Questions

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1. Design/ Need/Site selection

1.1 Time limited Consent of 60 years

1. 1.1 The ExA noted in Q1.0.2 'Paragraph 3.10.58 of draft NPS EN-3 indicates that a time limited consent would not prevent the Applicant at a later date from seeking to extend the period of consent." That makes perfect common sense. It enables a decision to be made taking account of the benefits and impacts in a more informed and tangible way. Setting a 60 year time limit means it is impossible to accurately assess the impacts of this development alongside climate change, population growth and movements; changing government policy & priorities; and other emerging technologies.

1.1.2 The Applicant was of the firm belief a time limited scheme was not required, yet in the latter stages of the planning process has abandoned this approach for a fixed time of 60 years.

1.1.3 There is no rationale provided for this 60 year time limit whatsoever, it is:

- 50% higher than 40 year baseline set for decommissioning;
- 50% higher than the typical time described by NPS en-3 para
- 50% higher than the time limit set for most approved solar farms today

1.1.4 The Applicant in their response to Q1.0.3 says the potential implications are likely to be "limited" and "overall the conclusions of the Environmental Statement would remain largely the same". How can that be the case when we were comparing a time unlimited application with a 60 year time limit now? This is a huge step change and fundamentally necessitates a fuller re-review of the ES.

1.1.5 The Applicant says that it "considers 60 years to be a reasonable time period to maximise the low carbon electricity generation for the Proposed Development for as long as possible, and to allow for technological innovation – there is no reason that the limit should be set by reference to the current market for product lifecycles, when this could change." Mr Phillips for the Applicant at ISH1 though explained "a 40-year life span is the best-case scenario on the current available technology", the reality according to Canadian Solar's website is panels have a 25-30 year life. It is unlikely cost effective technological change will advance so much in the next 12-18 months before the design specification would have to be laid down, that the panels will last 40 years and certainly not up to 60 years.

1.1.6 Therefore the most significant implication of this change to 60 years is that the solar panels will need to be replaced in totality. Also ancillary equipment may need to be replaced more than once, namely inverters and transformer and the wooden fence posts currently specified as security fencing around the site.

1.1.7 Previously the Applicant had clarified that there would not be a wholesale replacement of the panels, albeit the DCO wording in Part 1, article 2 was a little vague and perhaps allowed for whole replacement to be drip fed over an undefined period. Now the time limit is set at 60 years the dDCO wording has been amended at deadline 5 to allow for full replacement as the meaning of 'maintain' has been caveated in blue below:

> *"maintain" includes inspect, repair, adjust, alter, remove, refurbish, reconstruct, replace and improve any part of the authorised development, but not remove, reconstruct or replace the whole of, Work No. 1 to the extent that such works do not give rise to any materially new or materially different*

environmental effects than those identified in the environmental statement and "maintenance" and "maintaining" are to be construed accordingly. The interpretation depends on where the emphasis is placed.

1.1.8 Setting a 60 year time limit cannot be described as *'not giving rise to any materially new or materially different environmental effects'*, and therefore the ES chapters need to be reassessed. Just adding some additional clauses in the outline management plans does not translate into a thorough review of the implications and necessary changes.

1.1.9 The potential implications of the change to a 60 year time limit:

1.1.9a Operational noise and traffic.

- There is a control in article 5 of the dDCO to prevent maintenance activities causing materially new or different environmental effects. Annual maintenance schedule was promised at deadline 4, at deadline 5 accompanying traffic and environmental info in oOEMP.
- To replace 530,000 panels would require more than 1000 40ft containers (527 panels per 40ft container). The 40ft containers may have to offloaded at the primary compound and reloaded onto smaller HGV loads.
- Given no more than 5 2-way HGV movements are allowed a day according to the Applicant, it would take over 200 days to replace all the panels and that is assuming the 40ft containers are not offloaded onto smaller HGV loads to transport across to the secondary compounds sites.
- It is highly unlikely the Applicant would phase this change over this period of time as it would not be efficient or economical. Therefore it is clear there would be materially different effects over and above the 5 2-way HGV allowance permitted during the operational period.
- Panel replacement towards the end of life will not be on a panel by panel basis as it is not efficient to do that. Changing of the panels will be done on the most economic and efficient method e.g. field parcel by field parcel.
- Therefore it is clear the replacement of the panels would trigger an assessment under Institute of Environmental Assessment guidelines.

1.1.9b Carbon costs.

- The applicant only ever mentions low carbon energy generation but none of the downsides of the associated carbon costs. Currently they state the level of carbon saved is less than the embodied carbon and that was based on a 40 year model. Replacing the panels will require manufacturing and transportation of the replacement panels all over again at some point mid way through the life of the scheme, just at the time when the government wants to hit Net Zero.
- There will be 2 lots of recycling to consider from this development, mid term and after decommissioning which will result in considerable environmental impacts.

1.1.9c BMV loss and soil quality.

- To take fully productive agricultural land (41% being BMV) out of arable production for 60 years is a huge risk in the context of food security and future government policy.

- There is no guarantee whatsoever after 60 years that the land can be returned to its original state as the Applicant claims it would do. There is no data or evidence to claim the benefits or harm over such a long period and therefore it is an unqualified assumption.
- Equally there is also no guarantee after 60 years that the presiding landowner will want to return the land to arable production.
- Mallard Pass has the highest % of BMV of NSIP projects currently under Examination. Given that knowledge, would it not be prudent to have a sensible time limit and apply to extend the consent if and when required at a later date.

1.1.9d Community.

- 60 years is not the kind of certainty the community would be hoping for. They would expect a tangible logical time period with an end date in sight which meant less likelihood of families and communities being broken due to existing residents deciding to move away from the area.

1.1.9e Biodiversity Nett Gain

- This can be created but it has to be maintained. The OLEMP makes no provision for monitoring and managing the land up to 60 years if required. If after 15 years there is no further monitoring of the solar and mitigation areas there is a huge risk the BNG will not be maintained properly. The Applicant should be determining what outcomes they are seeking from the development, just focussing on habitat creation.

1.1.9f Water resources

- With climate change, rising sea levels, no one can forecast the baseline conditions in or leading up to 60 years. The mitigations this development put in at the beginning may or may not work for a while, but there is a greater potential for them to fail with more extreme climate conditions over a 60 year period. 60 years needs to be re-modelled in the context of climate change and mitigations strengthened to offset the impacts.

1.1.9g Socio-economics

- Whilst there are some short term benefits from construction that could easily be achieved through redirecting labour to rooftop projects on residential and commercial buildings, it is not a reason to approve this development.
- Business rates are equally not a material planning consideration.
- Tourism however is, and down track Lincolnshire once thought of as the 'bread basket' of the UK will become synonymous with large scale solar plants based on the pipeline of projects today. Tourism is not just about visiting Burghley House, it is about attracting people to our countryside, pubs, shops and restaurants and other local businesses. The long term impact on the local economy could be disastrous.

1.1.9h Monitoring

- The Applicant needs to clarify the necessary changes in monitoring and management activities over the 60 year period to ensure all ecological and environmental aspects are properly assessed and managed.

1.2 Fencing

With reference to the Applicant's response to Q1.0.10 the following response has been provided by Carly Tinkler, MPAG's landscape and visual expert who has particular experience in this area of her work in connection with other clients. (The detail below in italics is directly extracted from her report).

Q1.0.10 a) (DeterTech *Theft From Solar Farms* report (February 2023)):

i) *The Applicant notes that 'the vast majority of offences are extremely close to A roads' (which is so that thieves can make a quick getaway. Their response states that 'Mallard Pass is not directly accessible from an A Road and the closest access to the Solar PV from the A road is 650m'. In my opinion, 650m is 'extremely close' to an A-road: if a vehicle was travelling at 50mph, it would travel 650m in around 30 seconds.*

ii) *The Applicant states that 'A security fence won't prevent organised criminal gangs from forcing entry or cutting their way through the security gates into the Solar PV Arrays'; however, of course, all access gates would have to be to the same specification / of the same security level as the fencing.*

iii) *The Applicant notes that 'DeterTech are a security consultancy business' which 'will have an interest in the provision of security services'.*

iv) *Indeed, that is considered (for example, by DOCOs I have spoken to) to be one of the reasons why the report does not recommend – or even mention - the use of high-security fencing, despite it being the most obvious solution to the problems (the report recommends 'regular (daily if possible) walks of the perimeter fence line to identify holes cut that could be a precursor to an upcoming theft'. Where there are several kilometres' length of fencing on a site, as is the case here, that would surely be highly impractical).*

v) *The difference in cost between deer-proof and high-security fencing is another issue: on average, deer-proof fencing is c. £10 per linear metre supplied and installed, whereas 'moderate-level' security fencing (which can withstand a 5-minute attack as opposed to the 10-minute delay fences recommended by several DOCOs) is c. £300 per linear metre supplied and installed.*

vi) *The Applicant states that they have 'followed the 'BRE Planning Guidance for the development of Ground Mounted Solar PV systems' and the advice provided by Devon & Cornwall Police Authority by [inter alia]:*

- *Planting up and managing the boundaries of the Solar PV Areas; to prevent and deter unauthorised access from the highway;*
- *Planting up alongside perimeter fencing which isn't located alongside an existing hedgerow as shown on the Green Infrastructure Strategy Plan [APP-173];'*

However, some DOCOs (for example, Suffolk Constabulary) are now recommending that, 'where appropriate, security fencing systems are transparent to facilitate observation from outside the site'; planting along fence lines would not allow the required transparency.

Q1.0.10 b) and c) (engagement and / or consultation with Designing Out Crime Officer (DOCO)

i) *The ExA asked the Applicant whether there had been any engagement and / or consultation with the relevant DOCO/s, and if not, 'it is requested that such a response(s) is/are now sought and reported to the Examination'.*

ii) *The Applicant's response was that for various reasons, including a lack of response from the Police and Crime Commissioners during the EIA Scoping procedure, 'the Applicant has not identified a need to engagement with the 'Designing Out Crime Officer' or similar post holder within the host authorities'.*

iii) *Of course, it is likely that when Scoping was being carried out, solar crime was not a widely-known phenomenon, hence the lack of response. Nowadays, many DOCOs respond to planning applications for solar developments in rural areas where deer-proof fencing is proposed even if they are not on the LPA's list of consultees.*

iv) *For the purpose of this exercise, I decided to contact the Lincolnshire and Leicestershire Police's DOCOs myself, and ask if they had any comments about the use of deer-proof fencing as a security measure generally, and at the Mallard Pass site specifically.*

v) *The Leicestershire DOCO is on leave until the 25th of September, but the Police said they would try to find someone else to respond. At the time of writing, no one had got back to me, but if they do, I will advise.*

vi) *The Lincolnshire DOCO explained that he was not familiar with the Mallard Pass proposal, but said that in terms of security protection, in his opinion and experience, deer-proof timber post and wire fencing is ineffective ("as much use as a chocolate fireguard"). He said that until relatively recently, there were high levels of solar crime in the county, but the number of incidents had reduced somewhat. This could possibly be due to the Police's recommendations for high-security fencing (what he described as "ugly paladin fencing or weld mesh", and usually Level 2 or 3) and it now being installed on some of the larger sites.*

vii) *He also said that CCTV was recommended as a matter of course, but whilst it was usually installed on most of the sites, some systems were being turned off due to the high running costs.*

Q1.0.10 d) (insurance)

i) *The Applicant states 'it is confident that it will be able to be insured on the basis of its current proposals'.*

ii) *I discussed the matter of insurance in paras. 5.1.64 – 66 of my May 2023 Landscape and Visual Review report, explaining that 'some of the insurance companies which cover solar developments are now stating that they will not accept stock-proof fencing'. Since then, things have moved on.*

iii) *I am currently acting as expert witness for an LPA at an inquiry (appeal against refusal to grant planning permission for solar development, PINS ref. APP/A1910/W/23/3317818, LPA ref. 22/01106/MFA) at which security fencing has been the subject of much discussion.*

iv) *Partly to inform my evidence for that inquiry (and as noted in my Landscape & Visual Response to the Issue Specific Hearing 2 (ISH2): Environmental matters (July 2023)), I spoke to several solar insurance companies, large and small. The responses indicated that the smaller companies were not aware of solar crime problems, and currently they would insure certain solar developments; the*

larger companies were aware, and either said that they do not insure solar developments any more, or may not in future.

v) *One of the larger commercial insurers, Marsh Commercial[1], now has the following on its forms for solar development insurance applications (with my emphasis)* (The form was previously supplied in response at deadline 4 (REP4-054):

Security

• Ground Mount - Fencing in place of at least 1.8 m to 2m in height: Yes / No

*Type of fence installed? (**Note stock fence is not adequate**).*

Security Standard BS EN 1722?

vi) *Finally, I spoke to the British Insurance Brokers Association (BIBA), who were helpful. In summary, the current situation appears to be that BIBA and many of their members are aware of the solar crime and security fencing problems, and there are moves in the industry to address them. However, their opinion is that progress is likely to be fairly slow. In the meantime, some insurance companies would almost certainly continue to insure solar developments with deer-proof security fencing, but for how long is uncertain.*

Assessment of landscape, visual and ecological effects of high-security fencing

i) *The Applicant's EIA should be based on a 'cautious worst-case approach'[2]: "such an approach will then feed through into the mitigation measures envisaged […] **It is important that these should be adequate to deal with the worst case**, in order to optimise the effects of the development on the environment" (para 122 of the Judgement, my emphasis).*

ii) *As mentioned above, when the EIA was carried out, solar crime was not a widely-known phenomenon, and there would have been no reason to consider alternatives to deer-proof fencing. Now, the situation has changed, and there is enough evidence to indicate with a high degree of certainty that **the worst-case scenario would be high-security fencing**.*

iii) *Therefore, **the Applicant should now be required to carry out a full assessment of landscape, visual, and ecological effects arising from the use of high-security fencing**. The type of fencing assessed should be that which is most frequently recommended by DOCOs, ie to a minimum of LPS 1175 level 3, and to a minimum height of 2.4 metres.*

iv) *Given the potential for significant adverse landscape, visual and ecological effects over such a long period of time, **it is critical that the assessment is carried out at this stage**. If left until after permission has been granted, the danger is that the change in specification would be waved through without the adverse implications of the change being realised.*

v) *This matter was briefly mentioned in my Landscape & Visual Response to the Issue Specific Hearing 2 (ISH2): Environmental matters (July 2023), but to reiterate, late last year, at a solar development approved and under construction, an application was made to Babergh and Mid Suffolk District*

[1] https://www.marshcommercial.co.uk/for-business/renewable-energy-insurance/solar-panel-and-projects

[2] Judge Sullivan J. (as he was then) in R. v Rochdale MBC *ex parte* Milne (No. 2) [2000].

Councils (DC/22/05018) for 'a Non Material Amendment relating to DC/19/01601 - to amend the fence type from deer fence to V-mesh'.

vi) *The upgrade was for 'security purposes', and it was handled as a non-material change under delegated officer powers.*

vii) *Unfortunately, it was only when the fencing was erected that officers and local communities realised that the V-mesh fence resulted in far higher levels of adverse landscape and visual effects.*

Fencing planning condition

i) *I raised the matter of the above non-material amendment to the originally-proposed fencing at the above-mentioned inquiry, and as a result, the parties are in the process of drawing up a condition to deal with the eventuality of a change in specification post-approval.*

ii) *Should the Mallard Pass application be approved with deer-proof fencing, I suggest something along the lines of the draft condition being drawn up, which is currently worded as follows:*

*'Notwithstanding any details submitted, no development (excluding demolition, tree protection works, groundworks/investigations) shall take place until details (including layout, materials, colour and finish) of [inter alia] fencing, boundary treatments and gates… shall have been submitted to and approved in writing by the Local Planning Authority… **The details submitted shall be accompanied by an assessment of landscape, visual and ecological effects**' (my emphasis).*

iii) *The emboldened part of the above draft condition is essential, due to the levels of landscape and visual effects arising from high-security fencing being significantly higher than those arising from deer-proof fencing.*

iv) *Regarding ecological effects, see comments on response to Q1.0.10 d) below.*

Q1.0.10 e) (Requirement 8 of the dDCO)

i) *This question also relates to a potential future change of fencing specification.*

ii) *As part of their response, the Applicant says, 'it has never been proposed that the illustrative materials it has submitted should be secured. They have informed, but have not been the basis of the Applicant's LVIA assessments'.*

iii) *I am concerned about this statement: it is clear that the Applicant's LVIA assessed effects on the basis of the fencing being deer-proof timber post and wire: if there had been any uncertainty about the type of fencing proposed, it would – or should – have been stated. If the specification was later changed to high-security, I have no doubt that the assessment would conclude that levels of landscape and visual effects would be significantly higher than reported.*

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Q1.0.10 g) (ecological effects of high-security fencing)

i) *The Applicant says that they 'can see no reason why passages for mammals could not be integrated into the perimeter fencing'.*

ii) *Some time ago, I spoke to companies that manufacture the type of high-security fencing recommended by the Police. I was told that not only would it be extremely difficult and expensive to cut mammal gates into the fences, but it would also invalidate the security certificate.*

1.3. Battery Energy Storage System (BESS).

1.3.1 The Applicant is clearly aligned with MPAG's viewpoint in their answer to Q1.0.14 that the solar farm without BESS has far less value and benefit than one with BESS. In response they say "this analysis demonstrates that an export-only BESS co-located with solar generation is able to provide significantly less services to NGESO than one which is also able to import from the grid".

1.3.2 A BESS is not a requirement but absence would reduce significantly the value of the Proposed Development to the Grid. Based on the Applicant's data provided it would seem for now the Proposed Development cannot in its current configuration and design economically have a BESS. However as all NSIP developments in operation, approved or going through NSIP process have BESS, this highlights the limitations of the proposed development.

1.3.3 As renewables contribute an increasing share of the electricity market BESS will become more important. Renewables are not reliable without sufficient BESS capacity. More stand alone BESS will be required if solar farms do not include co-located BESS. However, if not co-located, a BESS cannot save the potential energy available caused by clipping and system curtailment.

1.3.4 It is interesting to note that Fosse Green Energy, also a Windel Energy and Recurrent Energy (Canadian Solar) company quote 111,000 homes for a 350MW DC peak output and 240MW AC export capacity. MPAG can only presume that the difference in number of homes supplied relates to the lack of a BESS resulting in less clipping and curtailment, highlighting the sub-optimal nature of this development.

1.4. Carbon costs

1.4.1 The Applicant outlines in the oCEMP submitted at deadline 5 they will provide a statement within the detailed CEMP(s) "using published data from Government and/or International Climate bodies that demonstrates that the lifecycle emissions of the Proposed Development will deliver a carbon benefit over the lifetime of the project in light of the proposed detailed construction methodology". Surely a critical part of the Statement of Need is that the Applicant is clear and fully transparent upfront about its contribution to Net Zero.

1.4.2 Chapter 13 on Climate Change makes a comparison between how much carbon the Proposed Development would save over time and life cycle carbon. The Applicant shows the Proposed Development

would save 423,000 equivalent tonnes of CO2, but the anticipated life cycle carbon 672,000 equivalent tonnes of CO2 would be produced. The Proposed Development would be carbon positive by 250,000 equivalent tonnes of CO2.

1.4.3 The above data was based on a time 'unlimited 'operational lifespan and likely calculations were made against a 40 year period assuming no replacement panels in that time which is highly unlikely scenario. As explained earlier in this submission now the time limit has been set at 60 years, the baseline assumption would have to take account of the embodied carbon costs for full replacement of all the panels not just the initial construction, other infrastructure and recycling twice over. The data would need to clearly lay down the assumptions used for those calculations.

1.5 Grid connection

The Applicant has focussed heavily on the grid connection being the determining factor for initial site selection. Yet there are 2 NSIPs (maybe more) that MPAG are aware of that have NO grid connection identified, yet are moving forward with their pre application work. These developments are Fosse Green Energy (a Windel/Recurrent Energy-Canadian Solar company) and Springwell Solar. This demonstrates that it is possible to do site selection work without relying on a grid connection, especially considering a new National Grid substation would have to be built in these 2 instances.

1.6 Reviewing of other appeal cases

MPAG is concerned there is a real danger of not comparing like with like when looking for some kind of precedent or direction on an issue. The 2 appeals the Applicant mentions in Q1.0.12 are on a scale at roughly 30 times smaller in terms of rated capacity, namely 12MW and 27Ha for Shropshire appeal (ref.3314982) and 10MW for the North Lincolnshire appeal (3317097). That means the amount of land required is an absolute fraction of that to the proposed development. Scale impacts of developments like Mallard Pass means that many of the impacts are compounded due to the sheer size. Also none of the issues can be looked at in isolation as it is the combination of benefits and harms, and weight applied in the planning balance that matters. In that respect it is important that all these issues are given proper context.

1.6 Energy calculations

The Applicant has provided detailed calculations regarding the output of MPSF for a 40 year period. This shows that the average number of homes that could be served by the Proposed Development is between 58,000 and 85,000 depending upon its final configuration, a 350MWp scheme with overplanting or 240MWp with no overplanting. What their figures do not take account of is the curtailment effect from the National Grid which could have been avoided with a BESS. The Applicant also does not take account of the increase in electricity required into the future.

In any event the Applicant's calculations, having been made on a 40 year plant life basis, are no longer relevant given the change made by the Applicant to a 60 year plant life. Both those calculations and those regarding carbon savings have to be re-worked in order for any reliable claims to be made.

2. Biodiversity and Ecology

2.1 This question is in relation to protecting the SSSi verges along Holywell Road in answer to Q3.0.3. However the Applicant seems unfamiliar with the 'village' of Holywell. Whilst there is an area named Holywell, there is no village just a handful of houses spread out (less than 10) and the probability of residents from those properties being employed in the construction process is almost zero. Therefore providing assurance that employed residents from Holywell will be told not to use Holywell Road is not of any material help.

2.2 It is apparent the Applicant does not realise that both the Castle Bytham and Clipsham junctions off the A1 both allow a cross country route going east along Holywell road. It is a cut through at rush hour which people very quickly learn avoids any traffic at Great Casterton. Therefore there is considerable risk to the SSSi verges being damaged.

2.3 It should be noted that Great Casterton junction is limited as you can only exit the A1 South and enter the A1 north from that junction. Hence why any construction transport or staff travelling North up the A1 will have to go up to the Pickworth junction, turn around and come back down the A1 South to come off at Great Casterton. That is why alternative routes are often sought.

2.4 As the locals know what happens in practice, MPAG would ask the Applicant to note all the issues we raise on transport.

3. Draft Development Consent Order

3.1 Q5.2.8 on decommissioning requirement 18. MPAG is not entirely clear whether the DCO fully spells out the requirements. Even though there is more detail provided in the oOEMP, that could change post consent. It is understood the Applicant has to notify the LPAs immediately if any part of the site stops generating electricity and consequently they have to commence decommissioning within 12 months of that stoppage. What is does not say is what the maximum time for the decommissioning should be; also whether some kind of best practice is applied to the decommissioning across the site so it is not piecemeal and fragmented.

3.2 Other utility providers. Noting Q5.4.3 regarding Protective Provisions, MPAG was wondering whether the Applicant had considered whether Gigaclear should be added to the undertakers list and discussions should be entered into with respect to Protective Provisions. Gigaclear is the main broadband cable provider in Essendine with cabling newly routed to every property. Any cable routing activity which takes place through Essendine could therefore be liable to affecting the supply of broadband to the village, something the village are understandably concerned about.

4. Historic Environment

4.1 With reference Q6.0.9 MPAG still has concern the Applicant has ruled out inter-visibility between heritage assets and the solar farm.

4.2 On a recent visit to the grounds of Burghley House, it was clear whilst walking on higher ground in the parkland that there was a direct line of vision through the parkland, down across Burghley House and to fields housing the pylons in the distance, most likely fields 50 and 52. Without further built structures to

reference and only harvested fields, it is the distinctive pathway of the pylons that helps determine the location and line of sight. MPAG would therefore not rule out there is potential intervisibility between Burghley House and its grounds and the edge of the solar PV area. Certainly the sequential experience of moving from one location to the other will have a negative effect on this heritage asset.

4.3 Also with respect to Banthorpe Lodge MPAG can also say there is intervisibility between the heritage asset and solar PV area across to fields 49/53.

5. Land use & Soils

5.1 Food security.

5.1.1 The Applicant's appendix (REP5-013) in response to the ExA2 questions only looks at current production figures from the Food Security Report 2021, it does look at future concerns and considerations raised in the report e.g. the effects of climate change (arising from different weather patterns and rising sea levels) on BMV land, rising populations, ever competing demands on agricultural land, the effects of hostile nations.

5.1.2 MPAG went into some detail ref Q7.0.5 about food security in their D5 submission (REP5-031). It is crucial that the decision made for this application is done having taken full account of the long term implications on food production and food security, and the consequent impact on productive agricultural land and also whether it will be able to return to arable practices after 60 years.

5.1.3 The UK government not only has a responsibility for its own citizens, but also its contribution to wider world affairs. Whilst we may physically be an island and the proposed development would just preside over an area of Rutland and Lincolnshire, we have a responsibility to consider the knock on effects of any decisions elsewhere. The more we import to compensate for lost production here (and the added carbon footprint of that), the more other poorer nations around the world will be affected. To make a decision lasting 60 years could have significant irreversible unintended consequences, particularly if precedent is applied to one scheme and rolled out across many more with the subsequent cumulative effect on productive farmland. The government has recently made moves in the Energy Bill reading this month to unlock the potential and ease planning restrictions for on-shore wind and no doubt will continue to seek investment for off-shore wind.

5.1.4 The government is clear they want to 'maintain food production' and the importance of protecting BMV land. Consent for the proposed development takes 613Ha (852Ha – 239Ha) out of arable production, at least 41% of that being BMV land.

5.1.5 The PM, responding to a question from Greg Hand MP, talked about the importance of food security in a recent PMQs on 6th September.

> Greg Hands asked *"I was delighted when the Prime Minister said last year that, on his watch, we would "not lose swathes" of farmland to solar applications, instead rightly arguing for solar to be installed on rooftops, yet my constituency sees a constant flow of planning applications for solar farms and battery storage plants on food-producing land. Can I ask my right hon. Friend: when will his pledge become a reality?*

The Prime Minister replied *"My hon. Friend makes an excellent point. Solar is one of the cheapest forms of electricity generation, so it is right that we try and see more of it across the country, but we do need to protect our most valuable agricultural land so that it can produce food for the nation and increase our food security. That is why, thanks to our changes, the planning system now sets this out explicitly with a clear preference for brownfield sites. Of course, we want to do more to encourage barn-top solar, and the Department for Environment, Food and Rural Affairs will be updating the House with further information on that policy in due course."*

5.2 Soil Health

5.2.1 Natural England's response in Q7.07 (REP5-037) highlighted the importance of a time limit recognising the impact on agricultural land and BMV would be lessened. When they talked about a time limit it seems unlikely they were thinking of 60 years, probably the more typical 40 years, albeit MPAG would argue that is still too long given agricultural land is under so many competing pressures and there are potential impacts out of its control, notably climate change.

5.2.2 They are clear that "*although arable reversion to grassland has been shown to benefit soil quality (through increased Soil Organic Matter (SOM)), it is unclear what impact solar arrays will have on soil properties such as carbon storage, structure and biodiversity. For example, as a result of changes in shading; temperature changes; preferential flow pathways; micro-climate; and vegetation growth caused by the panels. Therefore, it is currently unknown what the overall impact of a temporary Solar development will have on soil health. In the absence of this information, we suggest that the developer could commit to a programme of soil health monitoring for the lifetime of the project to support development of the evidence base around long-term impacts to soil health from solar."* Whilst soil monitoring of course would be useful, ultimately having a more manageable time period would significantly reduce the risks to the quality of the soil and returning it back to arable farming as before.

5.2.3 *Natural England make a hugely pertinent point by going on to say "Use of a time limit would ensure the BMV land remains open for future generations to decide what is the best use and management of that land when planning consent or other requirements cease."*

5.3 Soil Management Plan (SMP)

The Applicant's response to Q7.0.1 reflects the fact that the outline SMP now deals with the operational phase. However Q5.2.6 says SMP is only intended to be used for the construction phase. Can the Applicant clarify the exact roles of the different management plans and also how the various different monitoring specialists will interact to have a joined up approach, not just to monitoring but to management and over the 60 year period?

5.4 Organic system.

In response to Q7.0.9 concerning the economic viability of sheep grazing the Applicant alludes to using an organic system. The implication is that the land is to be converted to organic agriculture. However to do that the land has to be in conversion for 2 years and during that time the land is generally sown with a grass/clover mix to build fertility ahead of organic cropping. The management of the land prevents the use of synthetic input. This statement opens up a whole new raft of questions.

5.5. Soil water metrics

Can the Applicant explain why in response to Q7.0.11 they are not prepared to consider developing soil water metrics until post the DCO consent. It is important they are determined and outlined in the oSMP and oCEMP and be a condition of the DCO to ensure soils are not trafficked and compacted at any stage of the construction process.

6.0 Landscape & Visual

The following response to the Applicant's response to ExA2 is supplied by Carly Tinkler, MPAG's expert landscape & visual specialist.

Q8.0.1 (temporary vs permanent)

i) The Applicant proposes to change its description of the proposed development from 'permanent' (the 'worst-case scenario', as assessed in the EIA), to 'semi-permanent' (60 years' duration).

ii) I agree that there is a difference between developments such as housing, the removal of which is unlikely in the foreseeable future, and solar, the future removal of which is more likely.

iii) However, as explained previously, if the solar development is in place for up to 60 years, the effects will certainly be experienced permanently by very large numbers of people. Indeed, this is being recognised by decision-makers. In a recent decision letter relating to an appeal by Kronos Solar Projects Gmbh against the decision by Amber Valley District Council to refuse permission for a 40 year, 49.9MW solar development, the Inspector said, 'I consider that 40 years is a very significant period in people's lives during which the development would seriously detract from landscape character and visual amenity'.

iv) Given the above, in my opinion, effects should be assessed on the basis that they are permanent, and therefore the levels of effects reported in the LVIA should not be reduced.

*v) Furthermore, **I would like to know whether the proposed substation would remain in place post-decommissioning, and if so, whether the effects of that scheme element would be assessed as 'fully' permanent**.*

1. *Q8.0.5 b) (design):*

The ExA's question: "are the Councils and MPAG satisfied that the Design Guidance as suitably drafted to minimise harm to the landscape?

i) *In early September 2023, MPAG submitted a response to PINS based on a note[3] I had written in response to Q8.0.5 (part a) was directed to the Applicant). For ease of reference, the note is included below, but in essence, I was concerned that there could potentially be some confusion between 'landscape' and 'views'.*

ii) *Having reviewed the Applicant's response to this question, the opinions expressed in the note below remain unchanged: in response to **Q8.0.5 b)**, **MPAG is not satisfied** that the Design Guidance is suitably drafted to minimise harm to the landscape.*

[3] The details within the 'note' were incorporated into our deadline 5 response at Q8.0.5.

Carly Tinkler's note to inform MPAG's response to ExA's Questions at deadline 5 Q8.0.5 (REP5-031)

1) *Paragraph 5.10.36 of the draft NPS EN-1 is specifically referring to effects on landscape character, not on views, or 'appearance'.*

2) ***Q8.0.5 a)**, which is directed to the Applicant, asks whether the 'final appearance' of the proposed development has been designed in such a way that it would minimise 'harm to the landscape'.*

1) *Clarification of this question would be helpful, as it appears to conflate 'landscape' and 'views'. GLVIA3 explains (see for example paras. 2.18 – 2.22) that 'landscape' must be dealt with 'as a resource in its own right', and effects upon it assessed separately from effects on views and visual amenity. That is because change will almost always affect the character of the landscape in some way, for better or worse, even if there is nowhere from which anyone can see (or experience) the change.*

2) *If people are likely to see and / or experience changes in the landscape resulting from development, then an assessment of effects on visual (and other) amenity should be carried out separately (albeit the assessment relies heavily on the findings of the landscape studies).*

3) *Unfortunately, as GLVIA3 para. 2.22 points out, 'The distinction between these two aspects [landscape and visual effects] is very important but often misunderstood, even by professionals'. The Applicant's LVIA demonstrates this lack of understanding, as explained in my May 2023 review report: see for example paras. 5.1.45 – 52.*

4) *Furthermore, in a consultation response to PINS, I drew attention to the error appearing in the March 2023 draft of **EN-3 para. 3.10.22**, which states: 'Applicants should consider the potential to mitigate landscape and visual impacts through, for example, screening with native hedges, trees and woodlands'.*

5) *Clearly – given that judgements about effects on character do not factor in visibility – **it is not possible to mitigate adverse effects on character by screening views**. In fact, it is not possible to avoid adverse effects on character at all where they result from, say, the replacement of a green field with built form. However, as stated in GLVIA paras. 4.25 and 4.26, it is possible to reduce levels of adverse effects on character through mitigation in the form of 'careful planning, siting and design'.*

6) *Broadly speaking, through mitigation, it is much easier to reduce levels of adverse effects on appearance than effects on character. This can be through measures which result in the development being either camouflaged or exceptionally well visually-integrated, and / or through full or partial screening.*

7) *However, GLVIA para. 4.26 explains that whilst 'sympathetic treatment of external areas can, in some circumstances, help the [visual] integration of a new development into the surrounding landscape… **measures that are simply added on to a scheme as 'cosmetic' landscape works, such as screen planting designed to reduce the negative effects of an otherwise fixed scheme design, are the least desirable**' (my emphasis).*

8) *Furthermore, GLVIA3 para. 4.29 notes that 'Mitigation measures can sometimes themselves have adverse effects on landscape or on visual amenity' as is the case here.*

9) *For example, as set out in MPAG's various responses and in my May 2023 review report, the proposed planting may screen views of the development from certain viewpoints; as such, the LVIA therefore assumed that levels of visual effects would be reduced accordingly. However, the LVIA failed to acknowledge that this would in fact result in the total loss of an existing open rural view, and – based on the LVIA's criteria – this would actually result in high levels of adverse visual effects.*

10) *Incidentally, and of relevance here since it occurs in the Applicant's LVIA, in my consultation response to PINS, I also pointed out an error in the March 2023 draft of* ***EN-1 para. 5.10.5****, which states: 'Virtually all nationally significant energy infrastructure projects will have adverse effects on the landscape, but there may also be beneficial landscape character impacts[4] arising from mitigation'. However,* ***landscape (and / or visual) mitigation measures cannot be double-counted as landscape (and / or visual) enhancements / scheme benefits*** *(see GLVIA3 para. 3.39). They may, however, be counted as benefits in relation to other topics, such as ecology.*

11) *In response to* ***Q8.0.5 b)****,* ***MPAG is not satisfied*** *that the Design Guidance is suitably drafted to minimise harm to the landscape, since, as set out above,* ***it is not possible to avoid, or reduce levels of, adverse effects on character where they result from the replacement of a green field with built form****.*

12) *GLVIA3 para. 5.37 explains that landscape effects assessments should consider i) 'the degree to which the proposal fits with existing character': in my opinion, the Applicant's LVIA does not, especially because within the contextual landscapes, there is* ***no existing reference to the type or scale of development proposed****; and ii) 'the contribution to the landscape that the development may make in its own right, usually by virtue of good design, even if it is in contrast to existing character': unfortunately, no amount of good design can reduce the levels of effects arising from the change from rural farmland to intensive and extensive industrialisation.*

13) *Indeed, the Applicant's LVIA concluded that* ***the proposed development would give rise to significant adverse effects on the landscape character of the site, and on the landscapes within 500m of the main site boundary****.*

14) *The parties simply disagree about levels of adverse landscape effects beyond 500m from the site boundary.*

15) *The LVIA concludes that at 500m from the site boundary, levels of effects on character would reduce from Major to Slight. My assessment concluded that from the 500m point, levels of effects on landscape character would decrease gradually with distance, ie from Major, to Major - Moderate, to Moderate, to Slight, to Minimal / No Change.*

7. Water

7.1 Climate change

There seems to be no mention of climate change in response to the ExA2 questions. The mitigations seemed to be based on the present, not on future scenarios. How will the Applicant ensure in the final designs and

[4] In addition, I advised PINS that the terms 'impact' and 'effect' aren't interchangeable: the 'impact' is the car crash; the 'effects' are what happens as a result of the impact, which depend on a whole range of factors. Effects would be the correct term in this context.

management plans that full climate change modelling has been built into the mitigation design for the now proposed 60 year period?

What assurances would be given to local residents that in the event of future flood events the Applicant would proactively contribute to applying further mitigations over the 60 year period?

7.2 Soil characteristics.

In reference to Q12.0.3 the oSWDS seems to characterise tilled or stubble fields as being analogous with bare ground and saying that represents the baseline position, effectively a worst case scenario for infiltration and water run-off. However that is not the case. Over wintered stubble is not bare ground, the stubble still has a full root system in place, and soil structure will be in reasonable condition. For the most part the soil has **not** been compacted as it will have received limited traffic (combines, tractor and trailer on low ground pressure tyres), mostly during very dry soil conditions which will limit soil damage. Bare, possibly compacted earth post construction is not the same as stubble.

7.3 Drainage scheme

Ref q12.0.3b Para 2.5.4 of oWMP outlines the construction contractor would be responsible for the management of all surface water run-off, including the design and management of drainage schemes. How will these areas be identified and when? If surface water is already running off and causing issues this will be a remedial action rather than preventative. In this case run-off is occurring and the risk of flooding, sedimentation etc is becoming a reality. The drainage scheme needs to be designed based on data modelling and well in advance of any construction, and in conjunction with a soil specialist. It is not acceptable to rely on the contractor to put into place remedial measures after an incident has occurred.

7.4 Vegetation cover

Ref Q12.0.3d the Applicant states “The general premise of the modelling is that if vegetation cover is changed to increase the roughness of the surface, then the friction change will retain surface water for longer, regardless of slope. Furthermore, the majority of modelled area has slopes of less than 2 % meaning it is representative of the wider PV array area within the Order Limits and does not require additional areas to be modelled.”

If the general premise is to change the vegetation cover to increase its roughness then this should be observed and the vegetation established prior to construction to achieve this.

END