



# Mallard Pass

Solar Farm

## Mallard Pass Solar Farm

### Summary of Applicant's Oral Submissions at ISH2 & Appendices

**Deadline 4 - July 2023**

EN010127  
EN010127/APP/9.31  
Revision 0

## Table of Contents

### Pages

<b>Summary of Applicant's Oral submissions at ISH2</b>	<b>4</b>
<b>Appendices</b>	<b>38</b>
<b>Appendix A Extract from BS 5228</b>	<b>39</b>
<b>Appendix B British Horse Association Guidance</b>	<b>41</b>
<b>Appendix C Updated noise prediction map with permissive paths</b>	<b>47</b>

# Summary of Applicant's Oral submissions at ISH2

## 1.0 INTRODUCTION

- 1.1 This note summarises the oral submissions made by Mallard Pass Solar Farm Ltd (the “**Applicant**”) at Issue Specific Hearing 2 – Environmental matters (“**ISH2**”) held on 12 and 13 July 2023 in relation to the Applicant’s application for development consent for the Mallard Pass Solar Farm Project (the “**Proposed Development**”).
- 1.2 Where the Examining Authority (the “**ExA**”) requested further information from the Applicant on specified matters, or the Applicant undertook to provide further information during the course of ISH2, that further information is either set out in this document or provided as part of the Applicant’s Deadline 4 submissions.
- 1.3 This note does not purport to summarise the oral submissions of other parties, and summaries of submissions made by other parties are only included where necessary to give context to the Applicant’s submissions, or where the Applicant agreed with the submission(s) made and so made no further submissions (this is noted within the document where relevant).
- 1.4 The structure of this note follows the order of the items listed in the detailed agenda published by the ExA on 4 July 2023 (the “**Agenda**”). Numbered agenda items referred to are references to the numbered items in the Agenda. The Applicant’s substantive oral submissions commenced at Item 3 of the Agenda. Therefore, this note does not address Items 1 and 2 on the Agenda as these were procedural and administrative in nature.

## 2.0 WRITTEN SUMMARY OF THE APPLICANT’S ORAL SUBMISSIONS AT ISH2

Agenda Item	Applicant’s Response
<b>3. Statements of Common Ground</b>	
<p>Summary of the latest position regarding the preparation of Statements of Common Ground</p>	<p>Mr Matt Fox, on behalf of the Applicant, provided an overview of the status of the Statements of Common Ground (“<b>SoCGs</b>”) at the time of the Hearing:</p> <ul style="list-style-type: none"> <li>• The Applicant has been engaging with all Local Authorities and intends to submit updated draft SoCGs at Deadline 4.</li> <li>• Updated draft SoCGs have been provided to the Environment Agency (“<b>EA</b>”), Historic England and Natural England. The Applicant has had ongoing engagement with those parties and intend on submitting updated draft SoCGs at Deadline 4.</li> <li>• In respect of Anglian Water, the SoCG is essentially complete subject to the resolution of a limited number of outstanding matters.</li> <li>• The Lincolnshire Wildlife Trust SoCG has been updated since Deadline 2 and the Applicant continues to have ongoing engagement with them.</li> </ul> <p>Mr Fox noted that the Applicant is working to have the various draft SoCGs submitted at Deadline 4 be more substantial compared to the Deadline 2 versions. In response to a query from the ExA regarding the nature of the SoCGs submitted by the Applicant, Mr Fox explained that all draft SoCGs submitted at the various deadlines represent a ‘work in progress’ version from both parties – it does not just represent the Applicant’s proposal.</p> <p>In response to a question from the ExA regarding progress on the SoCG with Network Rail, Mr Fox stated that the Applicant is hopeful that protective provisions (“<b>PPs</b>”) will be able to be agreed soon, with only one or two paragraphs remaining under discussion. The Applicant has been corresponding with Network Rail on these matters, and a final agreed SoCG and PPs will be submitted, if not by Deadline 4, then by Deadline 5. The ExA requested that the Applicant provide a further update on the position of the SoCG and PPs with National Rail by Deadline 4.</p> <p><b>Post-hearing note:</b> <i>Protective Provisions with Network Rail are now agreed. Other matters are discussed in the Applicant’s Summary of Oral Submissions submitted at Deadline 4. The position on SoCGs at Deadline 4 is set out in the Statement of Commonality submitted at Deadline 4.</i></p>

Agenda Item	Applicant's Response
	<p>Mrs Sue Holloway, on behalf of Mallard Pass Action Group (“MPAG”), provided an update on the status of the MPAG SoCG, noting that the Applicant provided an initial template SoCG to MPAG on 5 July 2023. Mrs Holloway explained that MPAG considers the SoCG should take account of matters discussed at the July hearings, and so would look to have a draft SoCG ready for submission at Deadline 4. Mr Fox, for the Applicant, noted his agreement with Mrs Holloway’s summary.</p>
<p><b>4. Landscape and Visual Effects</b></p>	
<p>a) Methodology</p>	<p>The ExA requested an update on discussions among the parties regarding the methodology adopted in the Landscape and Visual Impact Assessment (“LVIA”). Mr Fox explained that while there have not been specific discussions with the Local Planning Authorities (“LPAs”) relating to LVIA methodology, the LVIA was reviewed by Stantec on behalf of the LPAs [REP3-039], who concluded that the Applicant’s methodology is acceptable and did not raise any concerns. The methodology for the LVIA was submitted as part of the Preliminary Environmental Impact Report (“PEIR”), and therefore opportunity was also provided for comments from the LPA at that stage of the DCO process.</p> <p>In response to points raised by interested parties regarding the limitations of the Stantec review, in terms of it being desk-based, Mr Fox highlighted that these limitations need to be considered in the context of what the review was seeking to achieve. The Stantec review related to the LVIA methodology, not its substantive conclusions, which therefore did not require site visits. As it related to how the Landscape Institute’s and Institute of Environmental Management and Assessment ‘Guidelines for Landscape and Visual Impact Assessment’ (3<sup>rd</sup> Edition) (“GLVIA3”) was applied by the Applicant in carrying out the LVIA, a desk-based review was appropriate.</p> <p>Mr Ben Croot, on behalf of the Applicant, confirmed the Applicant’s broad agreement with the areas of agreement and disagreement identified by Ms Carly Tinkler on behalf of MPAG. In response to the points raised by Ms Tinkler regarding the relevance of landscape and visual effects to quality of life and health, Mr Croot agreed that landscape has an important role to play in health and wellbeing but emphasised that GLVIA3 is very clear that, in terms of LVIA, health and wellbeing is a separate issue that is to be dealt with elsewhere in the Environmental Impact Assessment (“EIA”).</p> <p>In response to a question from the ExA regarding the methodology used to identify visual receptor groups and whether the LPAs were consulted on these groups, Mr Croot explained that the receptor groups were considered collectively as a group of potential receptors in a particular area (such as footpaths, local roads, settlement, etc) rather than individually, in accordance with the guidelines set out in GLVIA3. Mr Croot also noted that this methodology had previously been discussed as part of the Applicant’s ongoing correspondence with the LPAs on landscape and visual matters. The LPAs</p>

Agenda Item	Applicant's Response
	<p>confirmed that this methodology was agreed. Mr Fox, on behalf of the Applicant, further highlighted that the Visual Receptor Groups (“<b>VRG’s</b>”) were referenced in the Preliminary Environmental Impact Report (“<b>PEIR</b>”) for the Proposed Development, which provided an opportunity for interested parties including the LPAs to express their views as part of the statutory consultation process.</p> <p>The ExA queried whether there is a danger that, in adopting a collective approach for VRGs, for Essendine Village in particular, there might be some points where there is a significant visual effect but, when considered in the overall balance, no significant effects would be identified on the VRG as a whole. Mr Croot clarified that while there would be variation within VRGs given their extent and coverage, the groups have been identified where effects will broadly be similar for all receptors. Importantly, if a significant impact for one receptor was identified, that would be the highest impact recorded for the relevant VRG. Whilst there are some variations in the effects across the relevant VRGs, the LVIA has recorded the highest impact for that particular group. Further, the Residential Visual Amenity Assessment [<b>APP-057</b>] also looks at specific individual properties, which will ensure that any significant visual impacts are duly identified and mitigated. Mr Fox also noted that the Amenity and Recreation Assessment [<b>APP-058</b>] also provides further assessment in respect of PRow receptors.</p> <p>In answer to a query from Mr John Hughes, a local resident, on who was responsible for selecting the receptor groups for the Proposed Development, Mr Fox stated that the groups selected were part of the Applicant’s LVIA process, as with any such assessment, but these were consulted on and interested parties had the opportunity to influence them.</p>
b) Study area	<p>In response to a query from the ExA regarding the rationale for the 2km range for the study area for the LVIA and concerns raised by interested parties, Mr Ben Croot, on behalf of the Applicant, explained that the Applicant began with a larger 3km study area, but this was reduced to 2km as agreed through the Scoping Opinion [<b>APP-050</b>] and related consultations. A 2km study area has been used for other recent solar DCO applications, including Longfield, Sunnica, Cleve Hill and Little Crow and so there is established precedent for 2km as a suitable extent for a study area to ensure any potential impacts are identified and assessed.</p> <p>Mr Croot went on to state that while there will be a number of viewpoints from which the Proposed Development will be visible, the LVIA appropriately adopts a proportionate approach focusing on the areas where significant impacts will be experienced. This is not to say that non-significant impacts should be disregarded, however, Mr Croot also noted his disagreement with the view put forward by Ms Carly Tinkler, for MPAG, that a larger study area is warranted due to the size of the Proposed Development. Mr Croot stated that there is no correlation between the size of a site and the necessary extent of the study area.</p>

Agenda Item	Applicant's Response
	<p>The ExA expressed the view that, when considering the extent of study areas for other solar DCOs, the local topography must influence the size of the study area chosen, and queried whether in choosing 2km there was risk that viewpoints may have been missed. Mr Croot, for the Applicant, explained that the study area limit for a project must be drawn somewhere, and this is done on the basis of the specific features of the project and the surrounding landscape context. In respect of the Proposed Development, the 2km study area was selected following Zone of Theoretical Visibility (ZTV) analysis and field study that showed it was proportionate and appropriate (reduced down from the precautionary 3km area chosen initially). In terms of viewpoints, Mr Croot noted that if there were sensitive receptors lying just beyond the study area, they would have been considered for inclusion, but there was nothing to suggest that those receptors needed to be incorporated just because they were located in proximity to the edge of the 2km study area.</p> <p>In terms of the viewpoints identified by MPAG during Statutory Consultation, Mr Croot highlighted that these were all located within approximately 1km of the Order limits. The ExA requested that the Applicant provide a specific response to the additional viewpoints identified by MPAG and provide clarity on its view. The Applicant's response is provided as part of the wider LVIA note produced at <b>Appendix D</b> to the Summary of the Applicant's Oral Case for ISH1.</p>
c) Definition of 'significant effects'	<p>The ExA queried why the approach taken to moderate effects in the LVIA, which classifies moderate effects as non-significant, is different to the general approach in the Environmental Statement ("<b>ES</b>"), which categories moderate effects as significant, and whether this meant there is a risk of moderate effects being accorded less weight in the LVIA.</p> <p>Mr Fox, on behalf of the Applicant, explained that Chapter 2 of the ES [<b>APP-032</b>] sets out a general approach to the assessment methodology adopted for the ES, but each individual topic chapter appropriately follows their own respective guidance and best practice conventions. Every topic looks at things differently, some assessments are more qualitative while others are more quantitative, and to an extent there will always be a value judgement made based on professional judgement and experience. Mr Fox further noted that the determination of moderate effects as non-significant in the LVIA does go to weight, but any weight placed on such effects will ultimately be determined by the ExA based on its own assessment. Paragraph 3.34 of the GLVIA3 also advises that non-significant effects should not be completely disregarded.</p> <p>Mr Ben Croot, for the Applicant, confirmed that the GLVIA3 states, at paragraph 3.32, there are "no hard and fast rules about what effects should be deemed significant but LVIA's should always distinguish clearly between what are considered significant and non-significant effects". It is a matter for the assessor to assign the level of significance. Mr Croot highlighted that the LVIA methodology has been reviewed by Stantec and found to be sound, and that various components informed the LVIA which were all carefully calibrate with the effects assessment methodology to arrive at a robust outcome.</p>



Agenda Item	Applicant's Response
	<p>In response to a query from Ms Tinkler regarding the consistency with which assessors deem effects to be moderate and non-significant, Mr Croot stated that the methodology adopted for the LVIA for the Proposed Development has been used across various DCO projects and has been tested on appeal. It is standard methodology.</p>
<p>d) Representative and illustrative viewpoints and photomontages</p>	<p>Mr Matt Fox, on behalf of the Applicant, confirmed in response to the ExA's query that the Applicant has no issue with the ExA looking at additional viewpoints to those used for the ES.</p> <p>Mr Ben Croot, for the Applicant, responded to matters raised by interested parties and the LPAs regarding the methodology used to develop the viewpoints for the Proposed Development. Mr Croot explained that these are based on ZTV analysis, fieldwork, desktop study and consultation with the LPAs. Based on these discussions, AAH (landscape consultants for Lincolnshire County Council ("<b>LCC</b>")) produced a technical memorandum (AAH TM01 dated May 2022) with additional viewpoints proposed (all within 1km of the Proposed Development), all of which were incorporated in the LVIA by the Applicant. In terms of viewpoints used in the LVIA, Mr Croot highlighted that a number of tools are used to understand site visibility, which help to inform an evidence-based judgement. It is important to note that, as confirmed in paragraph 6.2 of GLVIA3, it is not realistic to capture all possible views but the LVIA provides a representative sample to understand the visual context, focusing on where significant impacts are expected.</p> <p>In response to points raised by the ExA and interested parties in relation to the validity and appropriateness of photomontages, Mr Croot stated that illustrative viewpoints, representative viewpoints, photomontages and field study have been used to inform the assessments within the LVIA and build an understanding of the visual context and amenity of the area. These were produced in accordance with the Landscape Institute's Technical Guidance Note 06/19 Visual representation of development proposals. From the Applicant's perspective, these are a correct and accurate depiction of the illustrative location of the Proposed Development. Addressing a related query from Mr John Hughes, Mr Fox explained that the photomontages were undertaken in the winter months because this is when they represent the worst-case scenario views, i.e., where there is no foliage or leaf coverage on the existing vegetation.</p> <p>Mr Fox, responding to a supplementary query from the ExA regarding how the assessment of maximum parameters (i.e. the worst-case scenario) can be reconciled with the assessment of individual elements of the Proposed Development, emphasised that the Applicant, through the LVIA, has assessed the maximum development parameters but where there are certain known key features within those parameters, these have been drawn out and the particular effects identified and assessed where considered appropriate with the LVIA.</p> <p>The ExA requested that the Applicant provide a note responding to the substation matters discussed, including consideration of potential section line drawings showing maximum development parameters, dealing with the existing</p>

Agenda Item	Applicant's Response
	<p>topography of the substation site and also how landscape and visual effects have been assessed with reference to viewpoints/photomontages and timings of the photomontage. The Applicant provides this note as <b>Appendix D</b> to the Summary of the Applicant's Oral Case for ISH1.</p> <p>The Applicant further committed to provide a more general note on the role of viewpoints, photomontages and indicative drawings in the LVIA, in terms of assessing the maximum parameters and potential impact of the substation, inverters, solar stations, container boxes, and other structures associated with the Proposed Development. This is incorporated in the same note referred to above.</p> <p>Mr Fox addressed concerns raised by Interested Parties regarding lack of design detail as to where elements of the Proposed Development will be located and their exact size and extent, noting that these matters will be dealt with in Requirement 6 of the draft DCO relating to the detailed design approval process. This requires the detailed design to be approved by the LPAs.</p>
<p>e) Proposed mitigation/enhancement measures (including growth rates and management/monitoring of new planting)</p>	<p>The ExA asked the Applicant to clarify whether there is any detail of the plant sizes proposed to be used for initial planting, and how mitigation planting will be established and what will be achieved at Year 15. Mr Ben Croot, for the Applicant, stated that planting detail is not contained with the oLEMP, but there is an indication of the species and planting mix that could be used. The Green Infrastructure Strategy Plan [APP-173] shows the location of proposed planting.</p> <p>Mr Croot explained that the purpose of the oLEMP is to set the framework and key mitigation and design requirements for landscape and ecology matters, which will then be detailed and set in place through the Design Guidance set out in the Design and Access Statement ("DAS") [REP2-018], which will be followed. The oLEMP is not the appropriate location for detailed planting design, but importantly it sets out the principles to be followed such that the LPAs can have confidence that the proposed mitigation planting will be effective.</p> <p>In response to matters raised by interested parties and the LPAs in relation to details around the proposed mitigation planting, Mr Matt Fox, for the Applicant, re-emphasised that it is the role of the oLEMP to ensure certain outcomes are achieved and create a framework for achieving those outcomes. The detail as to planting size, species and mix will come through in the various detailed LEMPs, with Requirement 7 of the draft DCO expressly requiring that these details are brought forward, and paragraph 2 of Schedule 16 requiring that the effects must not lead to materially new or materially different effects to those assessed in the ES. Requirement 7 also provides that the detailed LEMPs must be substantially in accordance with the oLEMP. In this way, the draft DCO provides the certainty that the interested parties and LPAs are seeking in terms of mitigation planting being secured.</p>

Agenda Item	Applicant's Response
	<p>Mr Fox also responded to a concern raised by Ms Carly Tinkler on behalf of MPAG relating to the maintenance and replacement of planting, stating that Appendix 1 of the oLEMP sets out the indicative maintenance regime for mitigation planting, which would be for the duration of the operational phase of the Proposed Development and includes a requirement for annual monitoring.</p>
<p>f) Assessment of landscape and visual effects during construction</p>	<p>The ExA deferred its questions relating to this Agenda item to its second written questions.</p>
<p>g) Assessment of landscape and visual effects during operation</p>	<p>The ExA asked for clarification as to the meaning of “immediate environs”, in terms of distance, in the context of visual impact of the Proposed Development on the Rutland Plateau Clay Woodlands and South Kesteven Uplands LCAs.</p> <p>Mr Ben Croot, on behalf of the Applicant, explained that there are nuances depending on the particular locality but broadly speaking a distance of 500m from the Solar PV Site is where it would be expected to see landscape and visual impacts tail off substantially, due to distance and intervening screen planting. Mr Croot emphasised the importance of distinguishing between land within the Order limits that does not have any development and the Solar PV Site and Onsite Substation where infrastructure would be located.</p> <p>In response to a request from the ExA, Mr Croot elaborated on the compartmentalised nature of the Proposed Development, in terms of landscape and visual effects, as opposed to being a ribbon development. The key point is that there is no single location whereby the Proposed Development would be viewed in its entirety – there will be partial views of the Solar PV Site and Onsite Substation, however, due to the prevailing landform, woodland and hedgerows, the Proposed Development would not be wholly visible in a single view or location. The compartmentalised nature of the Proposed Development is a consequence of the design evolution and principles set out in the DAS [APP-204]. The Applicant has sought to integrate the Solar PV Site and Onsite Substation into the existing landscape framework to avoid or minimise impacts wherever possible.</p> <p>The ExA asked how the LVIA took into account the undulating nature of the topography, and in particular the positioning of solar PV panels on south facing slopes and their potential impacts. Mr Croot confirmed that local topography was taken into account as part of the LVIA (see Figure 6.1: Topography [APP-133]) and in the determination of where solar PV panels and Onsite Substation would potentially be seen or not. He went on to explain that the nature of solar PV panels means that their visual impact will vary depending on the distance and angle from which they are observed – i.e., there will be nuances based on where one is standing relative to the panels. The LVIA has taken a worst-case approach to its assessment of the potential visual impact of the panels to account for these potential differences, ensuring that the</p>

Agenda Item	Applicant's Response
	<p>greatest effects have been considered. Mr Matt Fox, for the Applicant, noted that some of the viewpoints used to inform the LVIA do show panels on south facing slopes.</p> <p>Responding to a query from the ExA regarding the impact of proposed screen planting on landscape character and views, Mr Croot noted that the LVIA acknowledges that there would be a change in landscape character from open arable farmland to a more enclosed corridor with wildflower meadow verges over time. As part of the Design Guidance, the Applicant has looked to work within the existing fabric of the landscape. The absence of hedgerows across the landscape is also the result of farming practices and arable intensification (i.e., the removal of hedgerows), and the Applicant has looked to reinstate these as part of the historic field patterns, taking into account responses received through consultation. The hedgerows planted as part of the Proposed Development would very much appear as similar to the existing amenity experienced today.</p> <p>Some interested parties raised concerns regarding the height of the proposed hedgerows and impacts on the open character of the landscape. Mr Fox stated that where parties have specific concerns about particular proposals and would seek amendments to the oLEMP, the Applicant would encourage those parties to submit those in writing and would respond accordingly. Acknowledging that impacts of planting on PRowS is a sensitive issue for many residents, Mr Croot pointed to Appendix B to the Applicant's Response to Interested Parties' Deadline 2 Submissions [REP3-037], which includes plans mapping PRowS within the locality and relative to the Proposed Development. Mr Fox emphasised that the Applicant has acknowledged in the LVIA what the visual impacts of the Proposed Development will be, and that while some views from PRowS will be impacted, the landscape will remain open in character. It must also be recognised that there is a difference between potential visual impacts and what this will actually mean in terms of use and experience of PRowS. Furthermore, the identification of significant visual impacts on a PRow crossing the Order Limits or a Solar PV Site is not an unusual scenario or occurrence with regards to the delivery of utility-scale solar PV development and, to some degree, would generally be anticipated for the majority of DCO applications.</p>
h) Residential Visual Amenity Assessment	<p>The ExA asked whether proposed mitigation planting would address potential impacts on specified residential properties, and also whether such planting would impact on views from those properties. Mr Ben Croot, on behalf of the Applicant, explained that the woodland planting is proposed as part of the Applicant's Green Infrastructure Strategy Plan [APP-173]. The properties in question sit on the western side of Uffington Lane while the planting would be on the eastern side. There would be a change of view in terms of it becoming slightly more enclosed, and this impact has been assessed as part of the Residential Visual Amenity Assessment [APP-057], including views from both the ground level and upper floors. Mr Matt Fox, for the Applicant, stated that the Applicant has significantly considered the owners of these properties. The design has taken a bespoke response to each property within this Assessment, providing tailored design solutions.</p>

Agenda Item	Applicant's Response
i) Other landscaping and visual matters	There was no discussion on this Agenda item.
<b>5. Ecology and biodiversity</b>	
Biodiversity Net Gain (including the level to be provided and secured)	<p>The ExA queried why Requirement 7 of the dDCO only commits to achieving a minimum biodiversity net gain (“<b>BNG</b>”) of 10% when the Applicant’s BNG Metric [<b>APP-064</b>] notes that there is a possibility of achieving approximately 70% BNG in habitat units and 40% in hedgerow units. Mr Matt Fox, on behalf of the Applicant, explained that the BNG for the Proposed Development will certainly exceed the 10% minimum, and that this figure was included in the dDCO as the anticipated statutory requirement for NSIPs (although this is not yet in force). The achievement of a significant BNG is secured through Requirement 7 of the dDCO, which requires the detailed LEMPs to be brought forward in substantial accordance with the oLEMP which includes the Green Infrastructure Strategy Plan [<b>APP-173</b>], which provides for substantial habitat creation and hedgerow planting and which forms the basis of the calculations in the BNG Metric calculations submitted. In this way it was noted that extensive BNG is secured whilst allowing for an amount of flexibility to account for detailed design.</p> <p><i><b>Post-hearing note:</b> The ExA requested that the Applicant consider the inclusion of a specific percentage of BNG to be achieved by the Proposed Development in the dDCO. Taking into account the comments from the ExA on the BNG figure for the Proposed Development, and to provide further certainty that a significant BNG number is secured, the Applicant has updated Requirement 7 of the dDCO to provide a commitment of a minimum of 65% BNG. This figure allows for a 10% contingency for any changes that may occur at the detailed design stage. It is also noted that this commitment is over six times more than the legal requirement set out in the Environment Act 2021.</i></p> <p>In response to a question from the ExA regarding the potential for river units to be included in the Applicant’s BNG metric and how that relates to works on the West Glen River by Anglian Water, Mr Fox stated that those works are not part of the Proposed Development. It is Anglian Water’s scheme, and therefore it cannot be counted towards the Applicant’s BNG. Mr John Baker, for the Applicant, noted river units are included in the Applicant’s BNG calculations but because of the way the metric works, substantial uplift is required to get to 10%. So, while the Proposed Development will result in improvements to the West Glen River in terms of BNG, because of the small area of River being considered it was difficult to capture this value increase in the metric.</p> <p><i><b>Post-hearing note:</b> Following the Hearing, the Applicant has fully considered the position in terms of whether a metric should be referred to on the face of Requirement 7, as is the case with Longfield. On reflection, the Applicant has determined that it is not appropriate to refer to a metric as:</i></p>

Agenda Item	Applicant's Response
	<ul style="list-style-type: none"> <li>• <i>the position on which metric will be in force at the time the detailed LEMPs will come to be approved is highly likely to have moved on from metric 4.0 (with Natural England indicating that it will change every 3-5 years);</i></li> <li>• <i>as has been seen in the development of the metric over recent years, the methodology for how gains are calculated may change in the intervening period, meaning that the % the Applicant has put into Requirement may not be achievable on the basis of the revised metric because, for example, it might treat grassland differently from how it is treated now;</i></li> <li>• <i>given that the Proposed Development will be required to be in compliance with the OLEMP, that may lead to a discrepancy where what would be needed to achieve 65% in the new metric may require planting proposals that will not be 'substantially in accordance with' what is currently proposed in the OLEMP, thus running the risk of a breach of the DCO; and</i></li> <li>• <i>furthermore, given that paragraph 2 of Schedule 16 requires plan discharge approvals to demonstrate that the detailed plans will not lead to materially new or materially different effects than assessed in the ES, the Applicant would wish to avoid any risk that new metric requirements may lead to that impact (e.g., requiring different types of hedging/woodland that does not perform as well in visual mitigation terms).</i></li> </ul> <p><i>As such, and in light of the fact that as discussed at the Hearing, the OLEMP and Requirement 7 ensures that BNG is secured, the Applicant considers that the imposition of such a Requirement would not meet the legal and policy tests for such drafting, being in particular imprecise, unenforceable, and given that it could achieve the opposite, certainly not necessary to make the development acceptable in planning terms.</i></p> <p><i>It therefore does not consider it appropriate to refer to any form of future metric within the Requirement.</i></p>
Shadow Habitats Regulation Assessment (Baston Fen SAC and in combination effects)	<p>In relation to the relationship between the Order limits and the Baston Fen SAC, the ExA asked the Applicant to provide justification for why a 5km study area was used for the purposes of the Shadow Habitats Regulation Assessment ("SHRA"). Mr John Baker, on behalf of the Applicant, stated that the SHRA considered this link and noted that the Baston Fen SAC is 4.4km from the Order limits. Mr Liam Nevins, for the Applicant, further explained that a 5km study area for the Hydrology assessment (ES Chapter 11: Water Resources and Ground Conditions [APP-041] has been established as appropriate over several DCO applications and based on professional judgement. The attenuation and settlement of sediment and any polluting chemicals would occur over that distance, and therefore any surface water receptor beyond 5km would not be affected should any releases occur.</p>

Agenda Item	Applicant's Response
	<p>In response to points raised by Dr James Williams, on behalf of MPAG, relating to impacts on the Baston Fen SAC from nutrient discharge into groundwater and surface water as a result of the storage of grass cuttings on-site, Mr Nevins highlighted that the Proposed Development provides for a range of measures to manage surface water runoff from within the Order limits, specifically the establishment of a vegetation swathe and other enhancement measures designed to retain water on-site through increased vegetation density. These measures are outlined in the Surface Water Drainage Strategy [APP-087]. Other measures established to manage potential surface water run-off during construction, such as swales, may also be retained during the operational phase to manage run-off from the Order limits to a greater degree than the current baseline conditions. Adding to Mr Nevins' response, Mr Baker noted that under the current baseline of arable land, nutrients are added annually and crops are cut and ploughed (also annually) before heavy rain. The establishment and management of meadows within the Order limits will not involve the addition of nutrients in this same way, meaning that any cuttings stored on-site will have lower nutrient levels than baseline conditions.</p> <p>Referring to Natural England's suggestion that further rationale may be required for the in-combination assessment provided in the SHRA, and noting the Applicant's position that updates to the SHRA would be unnecessary and disproportionate and it is for the SoS to consider this issue, the ExA asked if the Applicant can consider whether there is scope to update the SHRA in light of Natural England's advice. Mr Fox, for the Applicant, stated that the Applicant has not heard back from Natural England in response to what was submitted at Deadline 3. Mr Baker explained that a requirement to undertake a further assessment of whether the Proposed Development would have a significant effect in combination with other projects would be disproportionate because the Proposed Development is not going to result in any significant effects itself, such that it would not add any further effects that would alter the existing baseline.</p>
Ecological mitigation	<p>In response to a query from the ExA regarding potential impacts of vehicles damaging roadside verges, in particular those located within the Ryhall Pasture and Little Warren SSSIs, Mr John Baker, on behalf of the Applicant, explained that the Applicant has assessed the potential for damage to verges and has identified in the Travel Plan [APP-212] locations for the creation of passing points which sit outside these SSSIs. A small number of passing points would be located within local wildlife sites, but these areas would be reinstated following construction to establish biodiversity rich grassland. Mr Matt Fox, for the Applicant, further noted that, in terms of HGVs, the routing strategy for the Proposed Development will minimise the potential for large vehicles to be required to pass one another, as they will be required to arrive at the site from one route and leave via another – see [APP-192].</p> <p><b>Post-hearing note:</b> The ExA requested that the Applicant provide a detailed response to the points raised on the potential effects on SSSIs from all vehicle movements to and from the construction site. Figure 7.1 – Statutory and Non-Statutory Nature Conservation Designations Plan [APP-175 and APP-176] identifies the SSSIs in the vicinity of the Order limits. This includes an SSSI located within the verge of the road that links the B1176 with Holywell along the southern boundary of the</p>

Agenda Item	Applicant's Response
	<p><i>northernmost parcel of the Order limits. All HGV traffic associated with construction activity, in terms of both deliveries to and from the primary compound and the transportation of materials from the primary compound to the secondary compounds, will follow designated routes. This means that no HGV traffic associated with the Proposed Development will use this road and so none will pass the SSSI. While there are no designated routes for other vehicles (cars, LGVs, etc) associated with staff involved in the construction of the Proposed Development, the Transport Assessment [APP-074] identified that the majority of staff that drive to the site will use one of the three identified routes from the Strategic Road Network to access the Order limits, which do not include the road located adjacent to the identified SSSI. It is acknowledged that a very limited number of staff that live locally may choose to travel via this road, however given the exceptionally low number of staff that may do so such vehicle movements will not have any material impact on the SSSI.</i></p> <p>Responding to similar points raised by Dr James Williams and Mrs Sue Holloway, on behalf of MPAG, Mr Fox emphasised that the dDCO includes controls that require the Applicant to restore and reinstate roadside verges around passing points to the reasonable satisfaction of the relevant highways authority. The Applicant has assessed where passing places are needed based on predicted traffic movements to avoid the need for vehicles to stray onto verges and/or SSSI, and these locations have been agreed with the Local Authorities. Mr Fox also noted that there are large agricultural vehicles that currently use these roads and pass SSSI.</p> <p>The ExA queried the extent to which it is appropriate for the relevant farm contractor to decide on the options for creation of skylark plots. Mr Baker clarified that while the contractor makes the determination, their discretion to do so would be within tight definitions and parameters provided within the LEMP, and the RSPB guidance would need to be followed in every instance meaning that the plots would have to be of a specified size and placed certain distances away from infrastructure and structures. This means that the scope for farm contractors' decisions will be limited to the location of the plots, but again this would be within tight parameters. These plots would also be monitored in accordance with the requirements of the LEMP.</p> <p>In response to a question from the ExA regarding how impacts on ground nesting birds during grass cutting will be avoided, Mr Baker explained that grass cutting would occur in late August, at which point most ground-nesting birds have finished their nesting season meaning the number of birds present would be low. The risk to ground-nesting birds would therefore be very low.</p> <p><b><i>Post-hearing note:</i></b> <i>Dr Williams, for MPAG, raised a number of detailed points regarding the proposed ecological mitigation. These are set out below (underlined text) together with the Applicant's response to these points.</i></p>



Agenda Item	Applicant's Response
	<ul style="list-style-type: none"> <li>• <u>Full data not provided as part of the application with regard to the BNG calculation</u> – The metric used for the calculation has been submitted as part of ES Chapter 7: Ecology and Biodiversity [APP-037] and is set out in Appendix 7.6 [APP-064]. This shows how field margins were considered within the metric.</li> <li>• <u>Consideration of potential damage to off-site hedgerows and trees as a result of construction not considered in the metric</u> – Accidental damage is to be avoided with appropriate measures. This is therefore not typically considered in a BNG metric, other than where hedgerow removal or grassland removal has been identified as part of the scheme – where this is proposed for creating new or improving access points that is accounted for in the calculations for the Proposed Development.</li> <li>• <u>Woodland surrounded by order limits are excluded, creating an artificially low baseline</u> – The woodlands referred to are outside the Order limits and would not be under the control of the Applicant. They have therefore not been included in the metric.</li> <li>• <u>Effects of decommissioning on the net gain presented in the metric and release of carbon</u> – The proposed habitat creation and enhancement as measured by the metric will be secured under the DCO, so the gains will be realised and delivered. The reversion of grassland to arable farmland will not result in an immediate release of carbon.</li> <li>• <u>Doubts on what will be retained at decommissioning, such as hedgerows</u> - All scrub, woodland or hedgerow created will be retained at decommissioning and handed back to the landowners – this is secured via the oDEMP. The only habitats reverted to arable would be the grasslands.</li> <li>• <u>Nutrient levels present in arable land might preclude creation of diverse grassland</u> - The Green Infrastructure Strategy Plan [APP-173] shows the grassland being proposed outside of Solar PV Areas is diverse grassland with calcareous species, and it should be noted that the proposals are not for calcareous diverse grassland, which would require more intervention at the pre-establishment stage to reduce nutrients. The proposals were designed with the need for potential reversion to arable land in mind, so the target grassland type and condition has been purposefully not set too high so as to not need invasive measures such as soil inversion.</li> <li>• <u>Nutrient run off from the creation of wildflower grassland and storage of arisings may result in adverse effects on the Baston Fen SAC downstream</u> – The creation of grassland will be achieved in a short space of time, i.e., seeding of the grassland and subsequent management. The arisings will be cut and used to create habitat piles, but the nutrients leaching from these into the soil will be minimal compared to what is added to arable land for farming under its current use. No additional nutrients will be added, as this is critical to achieving a diverse grassland. Grasslands will provide permanent vegetation cover, resulting in far less run off from the soils as well.</li> <li>• <u>Concerns on how the passing points will be restored to grassland after the construction period and creation of appropriate conditions for the grasslands to re-establish</u> - The soil removed as part of creating these passing points will be placed to one side and stored until it is need for restoration. The CEMP has been updated at Deadline 4 to</li> </ul>

Agenda Item	Applicant's Response
	<p><i>provide that the detailed CEMP(s) will include measures to store appropriate seeds collected within the remaining areas of verges and potentially collect green hay prior to the re-establishment of the grassland verges. There will also be efforts made to translocate any orchids found within the footprint of the passing points.</i></p> <ul style="list-style-type: none"> <li><i>• <u>Impacts to verges by construction vehicles</u> - The transport strategy has been designed to minimise movements of heavy goods vehicles and the movements of light goods vehicles – this is discussed further above. Measures such as defined passing points were put in place as needed to avoid the need for vehicles to mount the verges and cause damage.</i></li> </ul> <p><b>Post-hearing note:</b> <i>The ExA requested that the Applicant clarify the process by which it will be decided if horizontal directional drilling (“HDD”) will be used underneath hedgerows rather than removal. The need for HDD underneath hedgerows will be required if the seasonal procedures for vegetation clearance as set out in the Table 3.2 of the oCEMP cannot be met within the construction timeframe. The Applicant does not anticipate that this will be the case, as the detailed design including power cables (Requirement 6 of the dDCO) will need to be submitted and approved by the relevant planning authorities in advance of the 24-month construction period. This will allow sufficient time, within the construction programme, for the seasonal vegetation measures to be implemented, if any trenched hedgerow crossings are required. It should be noted that the Design Guidance (PL1.1) is for all internal access tracks and cable route to use existing hedgerow crossings and / or gaps in the hedgerows wherever possible.</i></p>
<b>6. Land use and soils</b>	
The effect on Best and Most Versatile (BMV) land	<p>In response to a query from the ExA regarding whether impacts on BMV land can be considered temporary or reversible when there is no lifetime on the Proposed Development, Mr Matt Fox, on behalf of the Applicant, explained that there is a difference between agricultural land/BMV classification and soil as a resource and its availability for use once the Proposed Development has been decommissioned. Permanence of effect has been assumed for the purposes of the ES, in terms of assuming a worst-case scenario, but the Proposed Development will be removed at a point in the future as that is the nature of the project and this means from an agricultural land/BMV classification perspective it should be assumed that the land will not be lost permanently.</p> <p>Mr Tony Kernon, on behalf of the Applicant, highlighted that while there is not a fixed date proposed there will be a requirement in the dDCO (Requirement 18) that, when the solar PV panels are no longer required, they will be removed and the Order limits land will go back to agricultural use, pursuant to the DEMP. Importantly, the soil and land quality will remain the same and potential for future agricultural use retained – there will be no permanent loss of BMV as the resource is maintained. Mr Kernon referred to the IEMA guidance: A new perspective on Land and Soil in Environmental Impact Assessment (February 2022)], which defines “loss” as the sealing over of land or where there will be some</p>

Agenda Item	Applicant's Response
	<p>permanent downgrading, in other words agricultural land becoming unusable for agricultural purposes. This is clearly not the case for the Proposed Development.</p> <p>Mr Fox also noted the soil management measures the Applicant has proposed through the outline Soil Management Plan (“<b>oSMP</b>”) [APP-213] will operate throughout the lifetime of the Proposed Development, and the Decommissioning Environmental Management Plan (“<b>DEMP</b>”) includes additional requirements relating to soil management. This means that soil will be appropriately managed at all stages of the Proposed Development, and no matter how long the solar farm is there the soil will be able to be used for agricultural purposes as the soil will be retained and the land quality will not be diminished. The measures included in the oSMP have precedent in other recent solar DCOs and have been amended in response to feedback received from Natural England to include further commitments relating to restoration and land quality.</p> <p>Addressing comments from the Local Authorities regarding the time limited consent granted for the Longfield development, Mr Fox emphasised that even where there is no set date for decommissioning, any impact on BMV land as a result of the Proposed Development is able to be considered temporary. As to matters of food security, Mr Fox noted that this is not a planning issue – this is a matter for Government to make policy decisions on, and the Government has chosen to expressly support renewable energy (see for example Defra press release of 6 December 2022). If considered in terms of the amount of land being (temporarily) removed from use for food production, in terms of cumulative impacts, these have been carefully considered and set out in the Applicants Responses to Interested Parties’ Deadline 2 Submissions – Land Issues [REP3-027]. Even when considered together with the other solar DCOs in the area this would only represent 0.5% of all BMV land in Lincolnshire and Rutland. The Proposed Development alone will only impact 0.054% of BMV land.</p> <p><i><b>Post-hearing note:</b> In respect of the Longfield Solar Fam DCO, the ExA accepted that the applicant sought to minimise impacts on BMV agricultural land, and that where any BMV land was lost this would be limited in extent and duration and would be justified by other sustainability considerations. The ExA concluded that while it would result in some harm, the limited loss of BMV land “attracts only a small amount of weight in the overall planning balance” (see paragraph 5.7.53 of the ExA’s Report and Recommendation to the SoS). The SoS agreed with the ExA’s conclusions and ascribed the same weight to this matter in the planning balance (see paragraph 7.3 of the SoS’s Decision Letter).</i></p> <p>Mr Kernon further noted that even with solar PV panels installed there is potential for the land to continue to have a productive agricultural use through sheep grazing (although there is no planning policy or other initiative or requirement that agricultural land has to be actively managed in any particular way or intensity).</p>

Agenda Item	Applicant's Response
Soil management	<p>The ExA asked the Applicant to clarify its position that, at the time of decommissioning, the Order limits land will be restored to the same grade as the adjacent land. Mr Tony Kernon, for the Applicant, explained that the intention is for the land to return to the same quality it is at currently, with any soil that is removed to be returned. This commitment is secured through the oSMP, which has been expanded to cover an outline of the decommissioning works, but there is some debate with Natural England as to how best to measure this. Mr Kernon noted that the current classification system has been in place since 1988, and that the Applicant is keen to ensure that an appropriate and up to date methodology can be used at the end of the Proposed Development's operational life.</p>
Scope for sheep grazing and implications	<p>In response to a query from the ExA as to the economic viability of sheep grazing on the Order limits land, Mr Tony Kernon, on behalf of the Applicant, acknowledged that the density of grazing may be lower than it could be without panels, but it is generally equivalent to practices adopted for organic sheep farming. There is opportunity for existing sheep farmers in the area to utilise the Order limits land – sheep would be well secured, and there would be space to work dogs and install a handling pen.</p> <p>The ExA requested that the Applicant submit an explanation of the economic and practical viability of sheep farming within the Order limits to assist in its consideration of these matters. The Applicant has prepared a response on this issue, which is provided in the Applicant's Response to MPAG Deadline 3 Submission (submitted as part of the Applicant's Deadline 4 submissions).</p> <p>On this issue, Mr Matt Fox, for the Applicant, clarified that the Applicant is not seeking to rely on sheep farming as any form of mitigation for the Proposed Development. Rather, sheep grazing is an outcome that will be enabled by the measures set out in the oLEMP, which may be pursued if viable. The response provided in the Applicant's Response to MPAG Deadline 3 Submission is therefore provided in this context – as an economic assessment of an opportunity to make use of the Order limits land during operation, not of mitigation that is needed to address impacts. Mr John Baker, for the Applicant, further stated that the oLEMP assumes either sheep grazing or a grass cutting operation could be carried out – grazing is not something that is absolutely needed.</p>
<b>7. Water and flood risk</b>	
Surface water run-off, soil compaction and flood risk	<p>The ExA asked the Applicant whether it had any comments on the calculations by Greatford Parish Council relating to the potential for flood risk due to possible concentration of surface water runoff from solar PV panels. Mr Liam Nevins, on behalf of the Applicant, noted that solar PV arrays have regular rainwater gaps or driplines that allow rainwater to fall onto the ground.</p>

Agenda Item	Applicant's Response
	<p>In response to a query from the ExA as to the results of surface water modelling indicating a reduction in runoff, Mr Matt Fox, on behalf of the Applicant, stated that the Proposed Development will manage surface water runoff rates through the Outline Surface Water Drainage Strategy [APP-087]. Mr Fox also highlighted that neither the EA nor the Local Flood Authorities have disputed the conclusions of the Applicant's Flood Risk Assessment ("FRA") [APP-086], which was undertaken in accordance with the National Planning Policy Framework ("NPPF") and relevant National Policy Statements.</p> <p><b>Post-hearing note:</b> The ExA requested that the Applicant provide a response to the comments from Greatford Parish Council in their Deadline 2 submission [REP2-061] regarding runoff rates from solar panels. The Applicant's response is as follows:</p> <ul style="list-style-type: none"> <li>• The Applicant disagrees with the calculations regarding drip lines and rainfall in Section 1a of REP2-061. The raised nature of PV Arrays will not prevent soil from absorbing rainwater as the panels will not be placed directly on the ground and each PV Row will be separated, with the same area of soil available for infiltration as per the baseline scenario. Therefore, the calculations set out in Section 1a of REP2-061 do not represent the actual impact of the PV Arrays on surface water runoff.</li> <li>• The Outline Surface Water Drainage Strategy [APP-087] states that water will drip off each PV Module due to the small gaps between modules. This means that the surface area to drip line length ratio will be the same as for "traditional" solar array layouts which use the same modules. Once rainfall has fallen off a PV Array, the water will be able to spread and flow along the ground under the PV Arrays evenly into the rain-shadow of the row below, so as to mobilise the same percentage of the ground for infiltration as was available prior to the installation of PV Arrays.</li> <li>• The Applicant has explained how the Proposed Development is likely to lead to reduced surface water run-off rates compared to the baseline agricultural scenario in its answer to Q12.0.6 a) in the Applicant's Responses to ExA's First Written Questions [REP2-037]. Section 3.1 of Appendix 11.6: Outline Surface Water Drainage Strategy [APP-087] concludes that the introduction of planting within the Mitigation and Enhancement Areas will increase the interception potential of surface water within the Solar PV area. This is evidenced by the 2D surface water model which shows increasing the roughness of the surface cover within the Order limits, specifically under the PV Array drip lines, retains water onsite for longer i.e., reducing the surface water run-off rate compared to the baseline agricultural scenario and therefore having a beneficial impact on surface water flooding.</li> <li>• Research in the United States by Cook &amp; McCuen (2013) outlines that solar panels do not have a significant effect on runoff volumes or peak flows, however where ground beneath panels is bare there may be an increase in peak discharge. The oSWMP commits to establishing a vegetation sward, meaning there will not be bare earth under the drip lines of the PV arrays for the Proposed Development.</li> </ul>

Agenda Item	Applicant's Response
Flood prevention measures during construction	The ExA deferred its questions on this issue to its Second Written Questions due to time constraints.
<b>8. Noise</b>	
Construction noise	<p>Addressing to the ExA's question as to whether there was any detail available on indicative times when particular construction activities will take place, Mr Matt Fox, on behalf of the Applicant, stated that this level of detail cannot be provided at this stage as a construction contractor has not been appointed. However, the oCEMP and dDCO provide for construction hours and have set time limits for noisy activities and construction traffic. A requirement to obtain consent under section 61 of the Control of Pollution Act 1974 is also included in the oCEMP. There are therefore numerous controls to manage potential noise issues during construction. The hours proposed for construction activities are commonplace for infrastructure DCOs and are consistent with British Standard ("BS") 5228.</p> <p>In response to the ExA's query regarding the nature of British Standards and their application, Dr Matthew Cand, for the Applicant, explained that they set out general guidance for noise limits to be applied in respect of development projects. For example, construction hours of 7am to 7pm from Monday to Friday and 7am to 1pm on Saturdays (which are the hours proposed for noise-generating activities for the Proposed Development) are given as example working hours in BS 5228. An excerpt from the relevant section of BS 5228 is attached as <b>Appendix A</b> to this Summary. Dr Cand also considered that these working hours are also commonly applied in his experience.</p> <p>Dr Cand noted that the Applicant has proposed further reductions in working hours for piling works (if used), which will be limited to a maximum of eight hours a day rather than the standard 12 hours. Mr Fox also highlighted that the Applicant has, through the oCEMP, committed to various Community Liaison activities which will ensure local residents are provided with all relevant information regarding construction activities when the details are known.</p> <p>The ExA asked whether the Applicant could provide indicative details of the length of time and particular locations for piling activities. Mr Fox stated that not all panels are necessarily going to be pile driven, and the amount of time during which piling will occur is not known at this stage, but the Applicant has assessed the worst-case scenario in terms of the number of hours allowed for piling, and the daily limits proposed are similar to those provided under other solar DCOs.</p> <p>Dr Cand noted that the noise assessment for the Proposed Development [<b>APP-040</b>] assumed the noisiest potential activities (including percussive piling) and shortest distance to noise-sensitive receptors. Most activities were associated with negligible to minor effects (not significant) on residential receptors when accounting for noise levels and duration. In</p>

Agenda Item	Applicant's Response
	<p>relation to piling, noise levels would only exceed the 'significant' threshold of 65dB if they occurred within approximately 130-140m of residential properties for a sustained period, and as such noise levels would occur for less than one month within such proximity, this would therefore reduce the effect to minor adverse (not significant). Noise levels from piling would then decrease as the distances from receptors increased over time.</p> <p><b>Post-hearing note:</b> <i>The ExA requested that the Applicant provide further detail as to whether the panels will be pile driven or installed on concrete pads. The Applicant confirms that for the Proposed Development a standard metal piling foundation will be used for the installation of solar PV panels, using a ram piled installation system. The Applicant does not anticipate the widespread use of concrete pads. This is consistent with the industry standard approach, which is to construct the foundations for the mounting structure for solar PV panels using piles that are either driven or screwed into the ground, to which the surface structure is then affixed. The use of concrete pads or shoes is not standard in the UK solar industry as it requires a significant amount of concrete, which has an additional environmental cost that pile or screw driven solutions do not have. It is also more challenging to remove and recycle concrete pads at the end of a scheme's operational life than a piled solution. Concrete pads or shoes are therefore only used in the UK where a piling solution is not feasible, for example where rock is close to the surface such that piling is impossible or impractical, or where piling would damage buried structures such as landfill lining membranes or (as is most common) archaeological remains. For the Proposed Development, as set out in Table 3-3 of the oCEMP [REP3-017], the option of concrete pads or shoes will be employed in areas where ongoing archaeological evaluation and assessment in accordance with the final Written Scheme of Investigation identifies that a non-penetrative mounting system is necessary to protect buried archaeological remains. These areas will be set out in the detailed CEMP.</i></p> <p><b>Post-hearing note:</b> <i>The noise impact assessment presented in Chapter 10 of the ES [APP-040] was based on the assumption that piling would be used in all cases, which represents a worst-case scenario in terms of potential noise impacts, as construction of concrete pads would be associated with lower noise levels.</i></p> <p><i>Although the Applicant does not have full details of piling duration for individual fields or areas, it is expected that at least a row of panels would be able to be installed by piling in a day with the assistance of equipment such as that set out in Plate 11a of the ES [REP2-011]. It is considered therefore that the assumptions in the ES are conservative and noise impacts will be able to move away from residents quickly within the construction programme.</i></p> <p><b>Post-hearing note:</b> <i>It is possible that trenchless techniques, such as Horizontal Directional Drilling (HDD), will be used in some instances to protect high value vegetation. This may therefore occur in some cases at distances within 500 m of noise-sensitive residential properties. However, the drilling distances involved would be relatively short and it is considered</i></p>

Agenda Item	Applicant's Response
	<p><i>unlikely that the drilling would need to continue outside of the working hours. The oCEMP has been amended to clarify that any such drilling would be limited to the standard construction hours referenced above (07:00 to 19:00 on weekdays and 07:00 to 13:00 on Saturdays).</i></p>
<p>Operational noise, including from substation and invertors</p>	<p>The ExA queried why the Applicant has proposed a maximum noise limit of 55dB at PRowS and asked for an explanation as to the nature of the noise level at that limit and the relevance of the ability to reliably communicate by speech as a measure for noise impact.</p> <p>In terms of speech communication, Dr Matthew Cand, for the Applicant, explained that the noise level of a normal conversation (i.e., without raising voices) is approximately 65dB in close proximity, meaning that a noise limit of 55dB would not require users of PRowS to raise their voices while talking and walking past the source. The rationale for the 55dB noise limit was discussed in response to Q9.0.1 in ExQ1 [REP2-037]. It is based on the level typically applied for private amenity areas like gardens in BS 8233 or public amenity areas (such as parks). While there is no specific guidance as to an appropriate noise limit for PRowS, 55dB is considered to be appropriate when considering public amenity areas in other guidance referenced in Appendix 10.1 [APP-077]. Noise impacts on users of PRowS are also transient in nature, and they are only experienced while the user is moving past the noise source – they are not consistent across the entirety of the PRow. The Applicant has therefore adopted an approach that is particularly precautionary in these circumstances given the low level and transient nature of the noise that would be experienced on PRowS.</p> <p>Dr Cand highlighted that, in most cases, the worst-case scenario for noise experienced on PRowS would be 50dB due to prescribed separation distances provided for in the DAS and the Design Principles. The ExA queried why, if noise levels could be less than 50dB, a lower noise limit has not been proposed. Mr Fox explained that the noise assessment [APP-040] demonstrates there will be no significant effect based on the noise limits currently proposed, therefore there is no need to set a lower level.</p> <p><b>Post-hearing note:</b> <i>The Applicant has prepared a 'Updated noise prediction map', attached as <b>Appendix C</b> to this Summary, which includes an update of the predicted noise contour provided in Figure 7 within Appendix 10.5 of the ES [REP2-014]. This updated contour map now also includes the permissive paths associated with the Proposed Development and shows that, even under the worst-case assumptions made in the noise modelling, predicted levels at all existing and proposed paths will not exceed 50 dB (when in relative proximity to central invertors), which is clearly below the 55dB significance criterion applied, and will in fact be below 35dB in most cases. However, acknowledging the concerns raised by interested parties regarding impacts on PRowS, the Applicant has updated the oOEMP to include additional wording requiring noise levels not exceeding 50 dB <math>L_{Aeq}</math> to be achieved at all PRowS and permissive paths associated with the Proposed Development, which is 5dB below the proposed significance criterion. The final OEMP will</i></p>



Agenda Item	Applicant's Response
	<p><i>need to have regard to this oOEMP which will secure control of noise on these paths. In comparison to the Longfield Solar Farm application (PINS reference EN010118), Chapter 11 of the ES (Noise and Vibration, EN010118/APP/6.1) for that scheme predicted worst-case noise levels of 52 dB on PRoWs, which was considered to represent a minor adverse effect which was not significant. No proposed control of noise on PRoWs were proposed in the final DCO for this consented development.</i></p> <p>In response to the ExA's question regarding the potential for adverse impacts on health and wellbeing associated with noise from the Proposed Development, Mr Fox stated that the British Standards, which have been applied here, refer back to World Health Organisation standards. Any potential effects on health and wellbeing from noise impact, even if minor, would be on the lesser scale of minor, and NPS EN-1 does not provide for minor significant effects as something that should be weighed against a renewable energy scheme. The Applicant's position is that any such effects should be given very little weight in the planning balance. Mr Fox cited paragraph 5.11.9 of NPS EN-1 in support of this position, which sets out the following aims that must be achieved in order for the SoS to grant development consent:</p> <ul style="list-style-type: none"> <li>• <i>avoid significant adverse impacts on health and quality of life from noise – which the Proposed Development achieves;</i></li> <li>• <i>mitigate and minimise other adverse impacts on health and quality of life from noise – which the Applicant has achieved through embedded mitigation and various setbacks; and</i></li> <li>• <i>where possible, contribute to improvements to health and quality of life through the effective management and control of noise – which is achieved through the CEMP, OEMP and Requirement 16 of the dDCO.</i></li> </ul> <p>In relation to operational noise, Dr Cand noted that the predicted worst-case levels of noise from the plant associated with the Proposed Development at residential properties were either below or only marginally above baseline background noise levels during quiet day-time periods, when the plant is most likely to operate at full duty. At night-time, the noise from the plant is likely to be lower than predicted levels due to reduced solar and heat loads. The predicted worst-case noise levels were also low in absolute terms (35dB).</p> <p><b>Post-hearing note:</b> <i>Potential adverse noise effects associated with the Proposed Development have been minimised and mitigated through the following measures:</i></p> <ul style="list-style-type: none"> <li>• <i>Restriction of working hours for construction activities, and additional restrictions on daily duration of piling works.</i></li> <li>• <i>Specific management and mitigation measures to minimise the impact of out-of-hours HDD works required in specific instances.</i></li> </ul>

Agenda Item	Applicant's Response
	<ul style="list-style-type: none"> <li>• <i>Communication of noisy works to PRow users.</i></li> <li>• <i>Appointment of Community Liaison Officer to respond to any complaints raised by the local community (or other stakeholders) during construction.</i></li> <li>• <i>Implementation of good practice measures (Best Practical Means) in the CEMP to minimise construction noise as far as reasonably practicable. Further requirement to obtain consent under section 61 of the Control of Pollution Act 1974.</i></li> <li>• <i>The design of the site has located the Onsite Substation (Works Area 2) more than 600 m from noise-sensitive residential properties.</i></li> <li>• <i>The central inverter stations were identified as the other main potential source of operational noise; the final design of these components (if used) will include a minimum separation distance of 250m and 50m from residential properties and PRow/paths/permissive paths respectively.</i></li> <li>• <i>Selection of the final equipment and specification to achieve low noise levels at all surrounding residential receptors, as well as PRow and permissive paths.</i></li> </ul>
Mitigation and management measures	There was no discussion on this Agenda item.
<b>9. Highways and access</b>	
Access to Primary Construction Compound (including time restrictions for HGV deliveries)	<p>In response to a query from the ExA as to whether the oCTMP should extend the time restrictions on HGV deliveries to avoid any potential overlap with school drop off times, Mr Mark Kirby, on behalf of the Applicant, explained that under the oCTMP HGV deliveries would only be permitted between the hours of 9am and 3pm, times which were specifically selected to avoid the drop off and pick up times for Greater Casterton Primary School and College.</p> <p><b>Post-hearing note:</b> <i>In order to address the ExA's queries and issues raised by the Local Highway Authorities and interested parties, the Applicant has updated the oCTMP to restrict HGVs from passing through Great Casterton any time prior to 9am and any time after 3pm, to ensure that there are no HGVs passing the school or college during the drop off and/or pick up periods. An updated version of the oCTMP has been submitted at Deadline 4.</i></p> <p>The ExA asked the Applicant to expand on what measures would be put in place to avoid potential overspill of workers seeking to park at the primary construction compound, given 150 parking spaces are to be provided under the oCTMP but the daily maximum for staff is 400. Mr Kirby highlighted that the oCTMP is an outline at this stage, and details as to where staff will be travelling from are not yet known. While the detailed methodology as to how potential parking overspill could</p>

Agenda Item	Applicant's Response
	<p>be managed will come with the detailed CTMP, there is also a Travel Plan for the Proposed Development [APP-215], which identifies measures for providing more sustainable means of travel to and from the construction site.</p> <p>Mr Kirby also emphasised that the 400 limit represents the maximum possible number of staff at any one time – average daily staff numbers will be considerably less than that. Mr Fox further emphasised that the Applicant has assessed the worst-case scenario for staff travel, in terms of all staff arriving and leaving the site without use of a shuttle bus, and because those movements would be occurring outside of peak traffic times (as provided under the oCTMP), there is no significant impact in traffic terms. Provision of a shuttle bus as alternative transport for staff is therefore not necessary in terms of mitigation but the Applicant acknowledges it would be an appropriate measure to have in place provided it is feasible. Information on parking will be provided in the detailed CTMPs submitted for approval, and updates have been made to the oCTMP at Deadline 4 in this regard.</p> <p><b>Post-hearing note:</b> <i>In response to the ExA's concerns around the potential risk of demand for parking at the primary construction compound exceeding supply and potential impacts on, for example, grass verges if staff use these areas to park, the Applicant undertook to update the oCTMP to in relation to parking provision for staff during construction and setting out a zone within which contacted staff parking will not be permitted. The oCTMP has been updated to prohibit car parking outside of the primary compound on verges adjacent to the local highway network and require all vehicles to park within the extent of the Order limits.</i></p> <p>Addressing a query from Ms Helen Wooley, on behalf of MPAG, regarding whether the potential for staff parking in secondary construction compounds was considered as part of traffic surveys, Mr Kirby confirmed that the surveys considered movements to and from secondary compounds, which would include some level of parking, and no material impacts were identified. Mr Fox further noted that the Applicant carried out sensitivity testing as requested by the Local Highway Authorities, which took these matters into account, and are set out in the Transport Assessment [APP-074].</p>
<p>Access to Secondary Construction Compounds (including the review of the Local Road Network and proposed access point G at the junction with The Drift and B1176)</p> <p>Highways effects during the construction phase (including cable routing implications)</p>	<p>There was no specific discussion on these Agenda items.</p>

Agenda Item	Applicant's Response
Highways effects during the operational phase	
<b>10. Socio-economic</b>	
Permissive paths (including their effectiveness as mitigation, use and management).	<p>In response to queries from the ExA regarding the Applicant's position on whether the proposed permissive paths will be secured and maintained over the lifetime of the Proposed Development, Mr Matt Fox, on behalf the Applicant, confirmed that permissive paths are secured through Requirement 7 in the dDCO, specifically paragraph (2)(i), which provides that the "<i>final routing, specification and maintenance regime for each permissive path</i>" must be included in the detailed LEMP. The oLEMP, with which the detailed LEMP must be in substantial accordance, sets out the framework of the permissive paths that are required as part of the Proposed Development. Requirement 7(4) of the dDCO further ensures that the requirements of the oLEMP are maintained throughout the operation of the Proposed Development.</p> <p>Responding to points raised by interested parties and Rutland County Council regarding the potential for permissive paths to be deemed to be dedicated as footpaths due to the lifetime of the Proposed Development being over 20 years, Mr Fox explained that pursuant to legislation and common law, the relevant path must have been used and enjoyed uninterrupted by the public for the entire 20-year period. The dDCO and oLEMP (and future detailed LEMP) are very clear that these are private permissive paths, not ProWs, and signage can be erected, if necessary, to make it clear that they are not ProW. Mr Fox also noted that the permissive paths cannot be treated as ProW as the Proposed Development will eventually be decommissioned and removed, and it would not be appropriate to impose ProW over land that will be returned to agricultural use. Mr Ben Croot, for the Applicant, added that the proposed permissive paths are a benefit or enhancement of the Proposed Development – they are a recreational opportunity that would not exist without the Proposed Development and are not needed to mitigate impacts.</p> <p><b><i>Post-hearing note:</i></b> <i>To address concerns raised by interested parties regarding the temporary closure of permissive paths, the Applicant has updated the outline OEMP to provide that temporary closures could only occur with approval from the relevant Local Planning Authority.</i></p> <p>The ExA queried the extent to which the proposed permissive paths can be considered beneficial given some may experience effects such as noise or visual impacts. Mr Croot restated the Applicant's position in relation to noise, and highlighted in relation to visual amenity that the Proposed Development will provide an improved network for local residents to use and enjoy, including opening up access to the West Glen River, with mitigation and enhancement measures proposed that are similar to the visual characteristics of existing paths.</p>

Agenda Item	Applicant's Response
	<p>Mr Fox highlighted the 15m setbacks proposed for all permissive paths and PRoW as an example of such measures. As explained by Mr Croot, with these setbacks and proposed screen planting (see the Green Infrastructure Strategy Plan [APP-173], while there will be sections of the paths where solar infrastructure will be visible, these will only be limited areas of the 8.1km of proposed new permissive paths that are being brought forward as an enhancement measure as part of the Proposed Development. Mr Fox noted it will ultimately be up to individuals to decide whether they can accept seeing limited views of a solar farm along this enhanced network.</p> <p><b>Post-hearing note:</b> <i>Regarding noise, the Applicant has prepared a 'Updated noise prediction map' illustrating the noise levels predicted on permissive paths as a result of the Proposed Development, which is attached to this Summary as Appendix C.</i></p> <p>Mr Croot clarified that the intention of the interpretation boards that may be included in places along the permissive paths and ProW is to provide users of these paths with information on renewable energy, the ecology and/or history of the local area, and other matters that the community could provide input on.</p> <p><b>Post-hearing note:</b> <i>In response to a query from the ExA as to how community input into the content of the interpretation boards, the Applicant has updated the oLEMP to set out a process by which (through the detailed LEMP) the local community will be engaged on this detail.</i></p>
<b>11. Cultural heritage</b>	
Applicant's archaeological evaluation	<p>Responding to the position of Lincolnshire County Council regarding the adequacy of the trial trenching undertaken for the Proposed Development, Mr Rob Sutton, for the Applicant, emphasised that trial trenching is merely one aspect of a suite of methodological techniques adopted for the Proposed Development to prospect for previously unknown archaeological remains. A desk-based assessment looked at previous examples and investigations undertaken in the area to build an understanding of potential remains that may be present. This was supplemented by a review of historic aerial photographs, which provided an overview of previous uses, crop and soil marks, and LiDAR data which assists in picking up minor topographical differences. The investigations then moved into the field, with site visits undertaken to better understand the local topography. These site visits were then supported by a geophysical survey. All of these different methodological techniques come together to produce a robust set of data and test the quality of other results.</p> <p>Following these steps, and adopting best practice, a targeted programme of trail trenching was commenced with more than 200 trenches being excavated across Rutland and South Kesteven. These trenches specifically targeted areas that</p>

Agenda Item	Applicant's Response
	<p>were considered more likely to contain archaeological remains based on the results of previous studies. This included, for example, anomalies identified in the geophysical survey. In and around these areas some 'blank zones' were also targeted, in closer proximity to other areas of potential interest identified in the geophysical survey to see if there were any further remains present not picked up by the geophysical investigation. The programme of trial trenching was specifically in accordance with the applicable guidance, including that emerging in the revised draft NPS EN-3 and also best practice under the existing NPS EN-1 (which broadly replicates what was included in the NPPF as best practice).</p> <p>Proportionality of investigation is also a key consideration, as confirmed in revised draft NPS EN-3 at paragraph 3.10.106, in terms of ensuring that enough information is gathered to understand the potential for impacts on buried archaeological remains in the context of the particular development. For example, the likely ground disturbance associated with solar developments is very different (and much less) than that which can arise from other types of construction activity, which are far more disturbing of the ground, such as road, rail, residential or industrial development which typically involve wholesale earthworks across a construction site.</p> <p>Revised draft NPS EN-3 recognises that solar development has a much lesser impact in terms of ground disturbance. Specifically, EN-3 notes that below ground impacts are "generally limited" and that, "in some instances, field studies may include intrusive investigative work" (see paragraphs 3.10.100 and 3.10.105). This matter is presented within Chapter 8: Cultural Heritage [APP-038] paragraphs 8.4.2 - 8.4.6 (re impacts) and section 8.3 in relation to the proposed mitigation. The Applicant therefore considers that a targeted programme of trial trenching is appropriate in this case, as evidenced by the same approach being adopted in respect of the Longfield DCO and endorsed by the relevant Local Authorities.</p> <p>In response to a query from the ExA regarding the percentage of the solar PV area that was covered by the trial trenching evaluations, Mr Sutton confirmed it was between 0.25% and 0.5% across the entire DCO area, but between 2-5% coverage for specific land parcels where higher potential for archaeological remains was identified. Additional trial trenching was undertaken in these areas, which were identified through the geophysical survey as having features typical of archaeological remains or settlement. Mr Sutton confirmed that there is no evidence for prehistoric or medieval funerary or settlement sites within the areas of the Order limits that have not been trial trenched.</p> <p>In terms of the guidance that should be looked at by the ExA in understanding an appropriate percentage area for trial trenching, Mr Sutton emphasised the importance of any programme of trial trenching being undertaken on a site-specific basis. No single 'percentage sample' has been adopted for DCO solar schemes in England and Wales. A bespoke and informed strategy for each location, based on the results of the iterative suite of prospecting (desk-based and site based) techniques is best practice. The size of a particular development is also not relevant to determine the appropriate</p>

Agenda Item	Applicant's Response
	<p>percentage coverage – again, this should be determined on a site-by-site basis depending on the quality of techniques adopted and results produced prior to commencement of trial trenching.</p> <p><b>Post-hearing note:</b> <i>The matter of a 'standard percentage trenching sample' is critical and fundamental point of dispute between the Applicant and LCC. There is a suite of guidance and best practice documents that deal with developing an understanding of buried archaeological remains. The Chartered Institute for Archaeologists (CIfA) Standard and Guidance for Archaeological Field Evaluation (2014 and emerging revision for 2023) includes no references to a standard sample percentage, because the need to tailor the project for the specifics of the site and the type of development (impacts) is paramount. Historic England Good Practice Advice in Planning: 2, Managing Significance in Decision-Taking in the Historic Environment (2015) refers to the suite of techniques available for prospection for buried archaeological remains and again this is notably silent on a 'standard percentage for trial trenching', because it is good practice to devise bespoke strategies not uniform and uninformed approaches. Industry guidance documents such as Historic England Advice Note 12 (Statements of Heritage Significance, 2019) and Advice Note 15 (Commercial Renewable Energy Development and the Historic Environment, 2021) are just two further examples that give directions on the need and scope of field evaluation (including trial trenching), and again, as with all industry best practice documents, standard percentage samples are not referenced. Thus, for the avoidance of doubt, it is the Applicant's position, fully supported by industry best practice, that the adoption of a standard percentage trial trenching sample would in fact be poor practice contrary to guidance.</i></p> <p>On the potential for archaeological remains to be located near to the surface within the Order limits, and the potential for such remains to be disturbed, Mr Sutton highlighted that in a typical rural environment plough soil (i.e., soil that is regularly disturbed as a result of farming practices) can range up to 600mm in depth, with an average depth of around 400mm.</p> <p>The ExA asked the Applicant to explain the risk of disturbance arising from the installation of concrete 'shoes' or pads, as compared to piling, for the erection of solar PV panels. In relation to concrete shoes, Mr Sutton noted that for certain types of buried remains, deployment of ballast, concrete or otherwise can be a useful technique to avoid ground disturbance. However, this technique would only be deployed where there was confidence that compaction or disturbance was not required to install these measures and where the archaeological evidence demonstrates it would be a useful technique in that particular instance. As for piling, Mr Fox, for the Applicant, indicated that the number of piles required would be approximately 100,000. Mr Sutton explained that the impact on any potential archaeological material would be so de minimis that any damage or loss (where it to occur at all) would be insignificant, such that sufficient remains would be left undisturbed, and their significance retained.</p>

Agenda Item	Applicant's Response
	<p><b>Post-hearing note:</b> The Applicant can confirm that, based upon the panels to pile ratio as shown on 'Figure 5.2: Illustrative Elevations for Fixed South Facing and Single Axis Tracker Arrays' [APP-120], there would be approximately 100,000 to 125,000 piles. The final number of piles will be subject to detailed design and the chosen technology and configuration selected.</p> <p>In response to a query from the ExA regarding the potential for unknown remains to be located within areas that have not been subject to trial trenching, Mr Sutton stated that the Written Scheme of Investigation ("WSI") will set out a suite of mitigation measures that would specifically include additional trial trenching during the detailed design process in locations where more extensive ground disturbance would take place, such as inverter stations, construction compounds, access tracks, and so on, when the particular location and extent of these areas are known. Mr Fox emphasised that the Order limits are made up of significant areas where there will be no ground disturbance at all. He confirmed that the anticipation is that the WSI will be submitted and Requirement 10 will simply state that the authorised development must be carried out in accordance with that WSI (which would also confirm the role that stakeholders would play in the post-consent environment (if granted)).</p> <p>Mr Fox noted that, should the SoS consider further trial trenching is required, they have the power to require this as part of the DCO.</p> <p><b>Post-hearing note:</b> The ExA queried what drafting could be included in the dDCO to provide for a scenario where the SoS believed that further trial trenching was needed before construction was commenced on the Proposed Development. Emphasising the criticality of the Proposed Development, and the delivery of essential utility scale solar infrastructure, being held up by disagreements with the LPAs as to evaluation methodology and adequacy of trial trenching, the Applicant agreed to consider some alternative DCO wording on a without prejudice basis.</p> <p>The ExA requested that the Applicant provide alternative (without prejudice) drafting for Requirement 10 of dDCO, in the event that the SoS should choose to require further trial trenching and/or archaeological mitigation before detailed design. The ExA further requested that the Applicant provide indicative DCO drafting requiring updates to archaeological mitigation strategy to accord with findings of WSI before detailed design. The Applicant has considered some indicative drafting on these points and submitted an alternative (without prejudice) version of the dDCO at Deadline 4.</p> <p>As noted above, the Applicant's position in Examination will remain that sufficient trenching has been done and does not anticipate changing the wording of Requirement 10 save to account for the WSI being submitted.</p>



Agenda Item	Applicant's Response
	<p><i>In the event the SoS believe the issue of trenching needs further consideration, then without prejudice, the Applicant considers that Requirement 10 would need to have drafting similar to the following:</i></p> <p><i>(1) The authorised development must not commence until-</i></p> <ol style="list-style-type: none"> <li><i>a. a scheme for additional trial trenching has been submitted to and approved by the Secretary of State, in consultation with both relevant planning authorities, Lincolnshire County Council and Historic England;</i></li> <li><i>b. additional trial trenching has been carried out in accordance with the scheme approved under sub-paragraph (b); and</i></li> <li><i>c. updates are made to the outline written scheme of investigation to account for the results of the additional trial trenching carried out and the updated outline written scheme of investigation is submitted to and approved by both relevant planning authorities in consultation with Lincolnshire County Council and Historic England.</i></li> </ol> <p><i>(2) The authorised development must be carried out in accordance with the updated outline written scheme of investigation approved under paragraph (1)(c).</i></p> <p><i>In proposing this drafting, the Applicant notes that:</i></p> <ul style="list-style-type: none"> <li><i>• it relates to the authorised development as a whole, rather than phases, as, in this alternative scenario, the Applicant understands that all parties will want to know what the approach is to be for the development as a whole;</i></li> <li><i>• it is very important that sub-para (1)(a) is for approval by the Secretary of State, given the current impasse on trial trenching numbers which would likely continue post consent if approval was to be by the LPAs, potentially preventing this much needed infrastructure from coming forward expeditiously; and</i></li> <li><i>• if such a requirement was imposed, then Schedule 16 would also need to change too as that is currently set up to deal with LPAs only. The Applicant has not done that at this stage but would note that such drafting is well precedented in National Highways DCOs.</i></li> </ul>
Proposed archaeological mitigation	<p>In response to the ExA's query regarding the Applicant's current position on mitigation, Mr Rob Sutton, for the Applicant, stated that there is an outline WSI being developed at the moment, which sets out a suite of mitigation measures available for the Proposed Development, comprising targeted further evaluation, archaeological excavation and watching briefs in advance of and during construction, as well as flexibility in the design to avoid key locations of buried remains.</p> <p>Mr Sutton confirmed, in response to a follow up query from the ExA, that the outline WSI will be submitted as part of the examination. Mr Matt Fox, for the Applicant, stated that this will likely be by Deadline 5 once the Applicant has had the opportunity to hear and consider matters raised on archaeology at these hearings and in Deadline 4 submissions.</p>

Agenda Item	Applicant's Response
Assessment of effects upon significance of designated and non-designated heritage assets	There was no discussion on this Agenda item.
<b>12. In-combination and cumulative effects</b>	
Methodology	<p>In response to the ExA's request for the Applicant to briefly outline which effects have been considered in combination, and to confirm whether non-significant effects were considered as part of that assessment, Ms Peta Donkin, on behalf of the Applicant, confirmed that Chapter 2: Overview of Environmental Impact Assessment (EIA) Process [APP-032] and Chapter 16: Interactions of Effects and Summary of Cumulative Effects [APP-046] of the ES cover in-combination effects associated with the Proposed Development, including those that are not significant, and puts them into context. These effects are summarised in Table 16-1 in Chapter 16, including effects interactions during the construction, operation and decommissioning phases. There is also a residual significance of effect that has been assessed through the EIA for each topic, including in-combination, and no significant effects have been identified.</p> <p>Acknowledging that a specific chapter on human health and wellbeing was scoped out of the EIA, the ExA asked the Applicant where they could look to consider how various effects may combine to impact on health and wellbeing. Ms Donkin referred the ExA to the Applicant's Responses to Interested Parties' Deadline 2 Submissions – Air Quality, Noise, Vibration and Health [REP3-025] and the Applicant's Responses to Interested Parties' Deadline 2 Submissions – Other Matters [REP3-036].</p>
Effects on users of Public Rights of Way during the construction and operational phases	<p>In response to comments from interested parties and the Local Authorities on Appendix B to the Applicant's Responses to Interested Parties' Deadline 2 Submissions [REP3-037], which sets out the PRoWs and local walking routes in proximity to the Proposed Development, Mr Matt Fox, on behalf of the Applicant, noted that the context and purpose of these plans is explained in the Applicant's Responses to Interested Parties' Deadline 2 Submissions – Public Rights of Way and Permissive Paths [REP3-022]. The Applicant's Deadline 3 response on this matter also references these plans in the context of viewpoints, describing the magnitude and scale of change that would be experienced from viewpoint to viewpoint. It is clearly not the case that an individual's journey would be entirely encased by solar infrastructure.</p> <p>Addressing points raised by the Local Authorities on the nature of the proposed mitigation planting, Mr Ben Croot, for the Applicant, referred the ExA to the Applicant's Responses to Interested Parties' Deadline 2 Submissions – Public Rights of Way and Permissive Paths [REP3-022], which explains how the proposed planting accords with studies into the existing character of the area. The Applicant's Amenity and Recreation Assessment [APP-058] acknowledges there will be a change of character as a result of some of the proposed landscape planting, but any impact would not be significant beyond Year 15. The planting proposed is not incongruent with the existing recreational amenity provided by the existing</p>

Agenda Item	Applicant's Response
	<p>PROWs in the area that are currently enclosed by vegetation and opportunities for more open views from PRoW would remain both within the Order limits and wider area.</p> <p>In response to concerns raised about impacts on horse riders using PRoWs, Mr Croot highlighted that the 15m offset requirement will provide PRoWs that are well in exceedance of the minimum 4m (preferably 5m) width set out in the British Horse Society's 'Advice on Solar farms near routes used by equestrians'.</p> <p><b>Post-hearing note:</b> As requested by the ExA, the Applicant has attached a copy of the British Horse Society's advice as <b>Appendix B</b> to this Summary.</p> <p>The ExA queried whether the Applicant considers that it would be helpful to pull together relevant information into a PRoW management plan. Mr Fox confirmed that the matters that would be included in such a plan are set out in a single table in the oCEMP, such that the management of PRoWs will be secured through the CEMP without the need for a separate document. The Local Authorities confirmed that they are comfortable with this information being included in the CEMP, as proposed by the Applicant.</p> <p><b>Post-hearing note:</b> The ExA requested that the Applicant review the wording in the oCEMP and oCTMP in relation to the management of closures of PRoWs and consider whether additional wording is required to ensure they appropriately dovetail and provide a consistent approach. The Applicant has added drafting to the oCEMP provide for this, which is included in the updated versions of these plans submitted at Deadline 4.</p>
Health and well-being	<p>In response to points raised by the ExA regarding references to health and wellbeing in EN-1 and EN-3, Mr Matt Fox, on behalf of the Applicant, confirmed the Applicant's agreement that potential impacts on these matters is a relevant consideration in the context of energy infrastructure consenting.</p> <p>Responding to the ExA's query regarding the likelihood of the Proposed Development resulting in significant effects on mental health outcomes, Ms Ellie Evans, for the Applicant, acknowledged that access to the environment and PRoWs is an important determinant of mental and physical health, but emphasised that there are a number of different determinants of health. In terms of impacts on landscape and visual matters, the significance of these effects must be considered in proportion to the trip being made and the extent to which the presence of solar infrastructure would have a lasting impact. In this context, Ms Evans concluded that while there are some significant adverse effects they are relatively minimal in the context of wider determinants of health, such that it is unlikely that there will be significant adverse effects on human health as a result of the Proposed Development. This is not to say that no one will experience negative impacts on enjoyment, but</p>

Agenda Item	Applicant's Response
	<p>when considered at the reasonable population level, which is appropriate when determining health effects, there will not be a negative health outcome.</p> <p>Addressing a concern raised by Mr David Kentish, on behalf of Braceborough and Wilsthorpe Parish Council, regarding light pollution, Mr Fox confirmed that there will not be constant lighting as part of the Proposed Development – security lights will be sensor activated. In terms of noise impacts, Mr Fox highlighted that the predicted noise levels at residential receptors will be low, as set out in Appendix 10.5: Noise and Vibration – Noise Modelling [APP-081]. Noise levels will be even lower at night as plant will not be in full operation (due to the absence of sunlight). Mr Fox further emphasised that the Proposed Development is not limiting people's access to green infrastructure, it is in fact enhancing it through the creation of new permissive paths. The Applicant recognises the anxiety members of the community have in relation to the Proposed Development but considers that once it is developed and in operation, the impacts will not be significant.</p>
Other projects and developments	The ExA deferred its questions relating to this Agenda item to its second written questions.
<b>13. Accompanied ExA site inspection arrangements</b>	
Comments on Applicant's draft itinerary for site inspection [REP2-039]	Mr Matt Fox, on behalf of the Applicant, confirmed the following arrangements with the ExA in relation to the draft itinerary for the Accompanied Site Inspection ("ASI"):
Site visit arrangements	<ul style="list-style-type: none"> <li>• In respect of private properties, numbers of visitors should be kept as low as possible, with only the ExA and a representative of the Applicant and a nominated representative of the interested parties attending.</li> <li>• The Applicant will share the updated list of residential properties with interested parties and seek their views.</li> <li>• The ExA will make a procedural decision confirming the arrangements for the ASI.</li> </ul> <p><i>Post-hearing note: Further to the discussion at the Hearings, the Applicant can confirm that it is in the process of considering how and if visual aids would be able to provided to assist ASI attendees in understanding the Proposed Development during the ASI. As requested by the ExA, a further draft itinerary has been submitted at Deadline 4.</i></p>

# Appendices

## Mallard Pass Solar Farm

9.31 Summary of Applicant's Oral Submissions at ISH2 & Appendices – Appendices A - C

### **Appendix A    Extract from BS 5228**

### E.3.2 Example method 1 – The ABC method

<sup>(A)</sup> Table E.1 shows an example of the threshold of potential significant effect at dwellings when the site noise level, rounded to the nearest decibel, exceeds the listed value. The table can be used as follows: for the appropriate period (night, evening/weekends or day), the ambient noise level is determined and rounded to the nearest 5 dB. This is then compared with the site noise level. If the site noise level exceeds the appropriate category value, then a potential significant effect is indicated. The assessor then needs to consider other project-specific factors, such as the number of receptors affected and the duration and character of the impact, to determine if there is a significant effect. <sup>(A)</sup>

Table E.1 Example threshold of <sup>(A)</sup> potential significant <sup>(A)</sup> effect at dwellings

Assessment category and threshold value period	Threshold value, in decibels (dB) <sup>(A)</sup> ( $L_{Aeq,T}$ ) <sup>(A)</sup>		
	Category A <sup>(A)</sup>	Category B <sup>(B)</sup>	Category C <sup>(C)</sup>
Night-time (23.00–07.00)	45	50	55
Evenings and weekends <sup>(D)</sup>	55	60	65
Daytime (07.00–19.00) and Saturdays (07.00–13.00)	65	70	75

<sup>(A)</sup> NOTE 1 A potential significant effect is indicated if the  $L_{Aeq,T}$  noise level arising from the site exceeds the threshold level for the category appropriate to the ambient noise level.

NOTE 2 If the ambient noise level exceeds the Category C threshold values given in the table (i.e. the ambient noise level is higher than the above values), then a potential significant effect is indicated if the total  $L_{Aeq,T}$  noise level for the period increases by more than 3 dB due to site noise. <sup>(A)</sup>

NOTE 3 Applied to residential receptors only.

<sup>(A)</sup> Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.

<sup>(B)</sup> Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.

<sup>(C)</sup> Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.

<sup>(D)</sup> 19.00–23.00 weekdays, 13.00–23.00 Saturdays and 07.00–23.00 Sundays.

## **Appendix B   British Horse Association Guidance**



# Advice on Solar farms near routes used by equestrians

**The law and management of public access rights vary widely between the four countries of the United Kingdom. Practical elements of the following advice apply in all countries but the legal requirements in Scotland and Northern Ireland may differ from those in England and Wales.**

More advice is available on [bhs.org.uk/accessadvice](https://bhs.org.uk/accessadvice).

**IMPORTANT** This guidance is general and does not aim to cover every variation in circumstances. Where it is being relied upon, The Society recommends seeking advice specific to the site.

Where solar farms are proposed, the potential impact on horses should be considered on any route used by them — including byways, bridleways, roads and permissive routes — which may be affected, and on equestrian businesses where horses are kept or trained.

Solar electricity is generated by daylight rather than direct sunlight and, with the improvement in solar panel technology, the intensity of the daylight in much of the UK is capable of producing levels of electricity for solar farms to be viable.

A solar farm involves the installation of solar photovoltaic panels on open land that is usually relatively even across the site, to avoid having to compensate for undulations. Flat land is more likely to be used than a hillside for ease of installation, maintenance and to reduce visual impact. Some levelling may occur during construction but if much is needed the site is unlikely to be financially viable as earth movement is expensive.

Standard photovoltaic panels are around 1.6m high and 1m wide which are mounted on frames. Their height above ground is usually up to 2.75m. They are designed to absorb rather than reflect light for efficiency (reflected light is wasted energy) and although the amount of reflection varies with the component materials and the angle, the incidence of glare or dazzle is usually significantly less than from glass and will not be uniform throughout a period of sunlight, assuming that the panel is static. Any reflection is unlikely to be a direct problem to horses, riders or carriage-drivers because of the angles and distances involved. The panels will also not reflect heat, because this too would be wasted energy.

Lines of linked panels, called arrays, are aligned for optimum exposure to sunlight by their orientation and angle to the sun. Small developments may track the sun to optimise solar gain but this is not cost-effective in large commercial developments so, in England or Wales, panels will normally be fixed facing south and tilted at approximately 45 degrees. The arrays will be spaced at two to three times their height to avoid shading at any time of year. The whole site is likely to be fenced for security and may also be hedged for screening if required by planning conditions.

The panels do not make any noise or movement and require very little maintenance, just occasional cleaning, inspection and vegetation control. Rain hitting the panels will make a gentle sound which is likely to be lost in the general ambient noise in those conditions. There are no moving parts or machines except for inverters which produce a low humming sound and are housed in small buildings, which can be constructed to minimise transfer of sound. Depending on the previous use of the land and its quality, it may become grassland that can be used to graze sheep or poultry to reduce the need for vegetation cutting.

Solar farms are relatively straightforward to build involving erecting the frames which hold the panels, trenches for cabling and small buildings to house inverters. Tracks may be built to facilitate vehicle movements around the site during construction or for subsequent maintenance.

The frames to support the photovoltaic panels are piled into the ground and can be easily removed when the farm is decommissioned. The piling operation is generally the most intrusive part of the build project but, as a steady and predictable sound, while unpleasant, is unlikely to be particularly distressing to horses although provision of an alternative route when piling is close to an equestrian route may be needed.

In some circumstances, such as presence of archaeological interest, the frames may be mounted on concrete blocks on the surface but the cost may make the project unviable so is rare.

Trenches run between the arrays and carry cabling to an inverter building where the direct current produced by the panels is converted to alternating current and fed to the National Grid.

As part of the planning process, the developer will conduct a range of studies, typically to find out about the existing ecology and other aspects of the site. The effect on public rights of way should be included in these studies. The results and the design for the solar farm will make up the planning application so you can see at that stage whether rights of way have been correctly considered.

The life of a solar farm is usually 25 years, often with an option to renew for a further period, although some planning permission will specify a return to original use without extension.

The construction phase of a 40-acre site is likely to be around 16 weeks. Over this period there would be up to 100 lorry deliveries to the site. There will be some construction noise, but less than for many other types of developments. Components are not large so abnormal load vehicles should not be required.

Solar farms are usually secured by fencing which may include hedge screening. The most common type of fencing in use is open mesh 1.8 to 2m high, which is the least intrusive and this can be stipulated in the planning permission.

After construction, traffic to the solar farm will be minimal, with occasional maintenance visits and ground maintenance (mowing or grazing). If the site is currently farmed, usually it is maintained so that it can revert to agriculture after the life of the solar farm.

Planning authorities will normally require that a proposal will minimise disturbance to agricultural land and be mindful of visual impact on any brownfield or agricultural site. As even large solar farms are considered temporary, all the structures and any works (such as tracks) must be capable of removal or reversible.

Vehicular access to the arrays will be controlled to prevent criminal removal of panels. Security lighting and cameras are also likely to be installed; however, such measures usually use infrared to avoid visible light and light pollution.

Factors which could affect equestrians and should be considered during the planning phase are:

## Construction

Construction traffic will create many vehicle movements, relative to the size of the site, but is likely to be much greater on some days than others. A traffic effect plan should be produced during the planning application which should take into account the safety of users of rights of way both on and adjacent to the site and on roads used in the locality. Traffic can be restricted by planning conditions to normal working hours, avoiding the early mornings, evenings and weekends when equestrians are most likely to be out.

Bridleways, byways and unsurfaced roads **should not** be used for site access. If it is unavoidable, every effort should be made to ensure that the surface will be maintained and restored to a surface material suitable for horses after construction of the solar farm. An alternative route for equestrians should be provided during construction to minimise disruption and to ensure users' safety, which includes not forcing them to use roads as the only alternative.

Closures without alternative routes should be avoided and, if necessary, construction traffic managed to reduce the length of closures, rather than an automatic blanket closure throughout the period of construction.

Trenches for cables should not cross or be laid along rights of way. If it is unavoidable, authorisation will be required from the Highway Authority to disturb the surface of the right of way. The surface must be reinstated to a firm and safe condition within a set period, which should be as short as possible to minimise inconvenience to users. If the surface is not reinstated, the Authority can restore it and charge the cost to the landholder. The finish must be one that is suitable for horse use.

When responding to a planning application for a solar farm, always consider the cable routing and its impact on bridleways and byways, it is often missed and the damage to surfaces can be very disadvantageous to equestrians, especially where not reinstated or where replaced by a sealed surface.

There will be noise during construction, particularly from pile driving, which is unpleasant but its temporary nature means it is not usually a material planning consideration requiring control.

## Drainage

Drainage provision for the radically changed surface of a solar farm compared with greenfield land must be taken into account to prevent potentially serious detrimental effects on equestrian routes on and immediately adjacent to the site and for some distance away, depending on drainage patterns, outflow and the terrain.

Hard surfaces create a very different drainage situation from an open field as run-off is immediate and much higher in volume. The extensive surface area of the panels could significantly change the nature of the drainage. Existing drainage may not be adequate to cope with the changed run-off and a holding pond may be required. New drainage to protect equestrian routes is essential to ensure they are not affected. This must be considered well beyond the site itself so that flash flood damage does not occur.

The effect of the construction process and vehicular access should also be considered. Levelling a site, soil stripping, trenching for cables, compaction and creating access tracks will all affect the drainage of the site and should be carefully provided for in the construction phase so that there is no adverse effect on equestrian routes.

Hard surfacing routes which currently have an adequate natural surface should not be the automatic answer; it is usually better to preserve the existing surface by attention to drainage. However, the existing surface and potential future use should be taken into account and the opportunity for upgrading the surface with a finish suitable for horse use should be taken if appropriate.

## Fencing

Solar farms are valuable investments with material that is vulnerable to crime. They are usually fenced to above head height for security. If bridleways or byways are alongside or through sites, care must be taken not to create a narrow corridor. Fencing can be intimidating, especially at this height, and create a need for vegetation control.

It is not safe to fence users into too narrow a corridor, particularly for a length more than a few metres. The need to maintain adjacent hedges and surface vegetation so as not to further reduce the available width should also be considered, as well as vehicular access for maintenance if appropriate.

A minimum width of 4m is required (preferably 5m), irrespective of any recorded width of the right of way, with vegetation cut through the full width.

Where a bridleway or byway has been previously unfenced, it is likely that the used width has been at least 4m as users do not risk passing each other more closely than necessary, particularly on multi-use routes where horses, bicycles, pedestrians and dogs may be involved.

Use of open mesh fencing is preferable to close boarding or metal palisade-type fencing with sharp points on top. The latter two are much more intrusive in the landscape so should not be permitted in a rural location; they also create unpleasant and intimidating alleys, even if relatively wide, in any location. Metal palisade fencing with spikes on top should be avoided as its rigidity and sharp edges are very dangerous and have safety implications for riders. While it may be above head height for a pedestrian, its top is likely to be below chest height for a rider and very serious injury is likely should a rider be thrown onto or against such a fence.

## Security

There may be a wish to restrict vehicle access to the site to minimise theft or vandalism. Anti-vehicle barriers cannot be authorised on bridleways or byways for the purpose of security, only to control livestock or to safeguard users of the right of way. The site must therefore only be permitted if it can be secured without affecting bridleways, byways or roads. On permissive paths, barriers should conform to BHS Advice on gaps, gates and vehicle barriers to ensure safety of users.

## Alternative or additional access

Large developments are opportunities for increasing access, particularly those which contribute to community funds. There may be chance to upgrade a footpath to bridleway or to gain an additional route. Even very short links can have important effects by enabling greater or safer use of existing routes in an area.

It should not be necessary to divert a bridleway or restricted byway (a byway open to all traffic cannot be diverted under normal circumstances) as arrays can be arranged around the route. However, this could significantly reduce the number of panels that can be accommodated and there may be a proposal to divert a route to the edge of the site. In some cases, this may be acceptable if it provides a more advantageous route, but not if it is less convenient or commodious. Diversions should be avoided, unless the proposal is more desirable than the existing route as the solar farm is a temporary structure. If it is essential to divert a convenient route, consideration should be given to it reverting to the original line on expiry of the planning permission for the solar farm.

---

If this is a saved or printed copy, please check [bhs.org.uk/accessadvice](https://www.bhs.org.uk/accessadvice) for the latest version (date top of page 2).

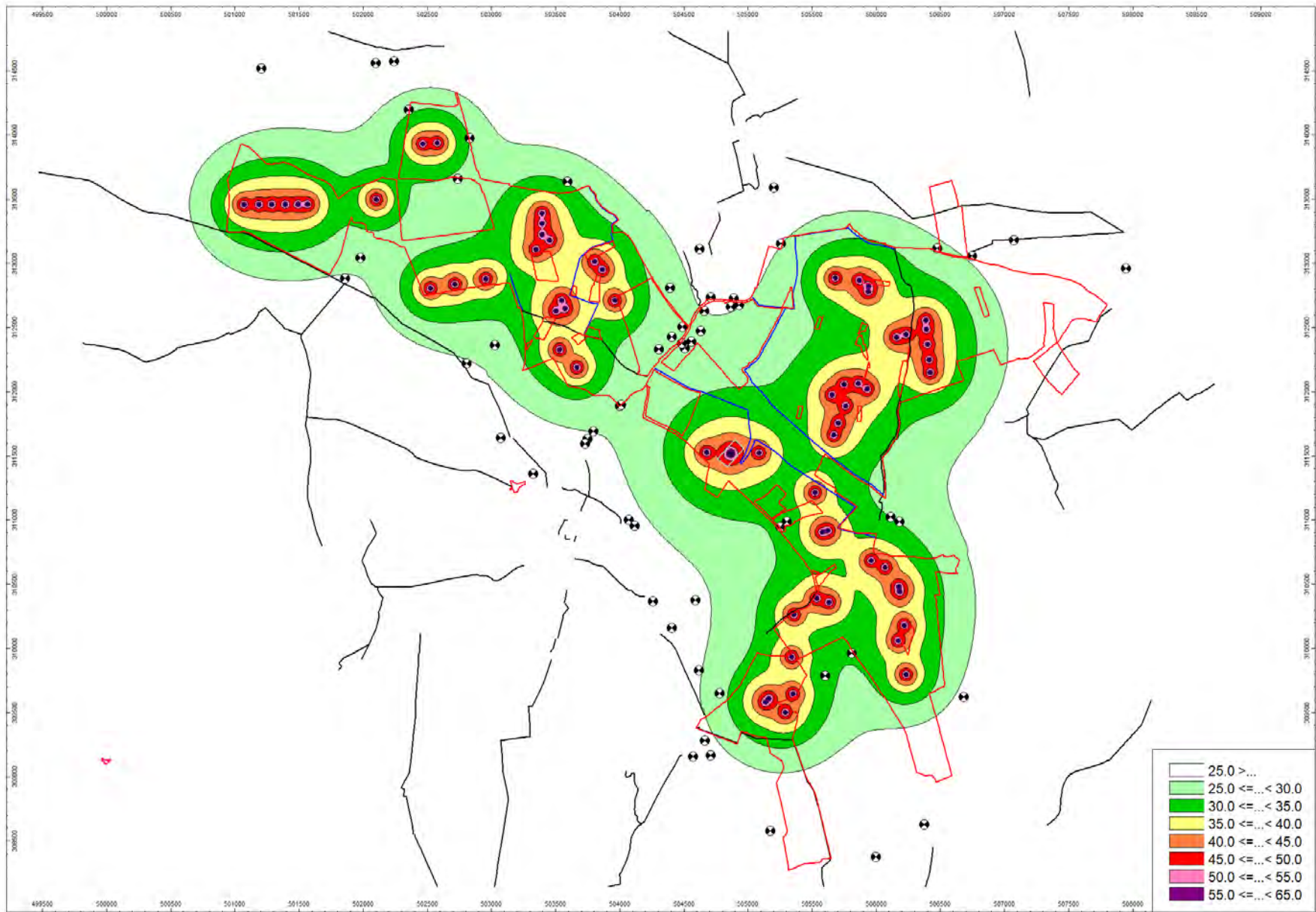
## **Appendix C Updated noise prediction map with permissive paths**

## Appendix D – Permissive Path Noise Modelling Figure

The figure on the following page represents an update of the noise prediction contour included as Figure 7 in Appendix 10.5 of the ES [REP2-014]. This figure shows predicted  $L_{Aeq}$  operational noise levels (in decibels) based on the worst-case assumptions described in the same document. The updated contour plan now also shows the permissive paths proposed as part of the Proposed Development, to provide clarity on the predicted noise levels that will be experienced at these locations. This prediction map illustrates that a large majority of both the PRowWs and permissive paths will be exposed to low operational noise levels below 35 dB (green or white contours).

In some instances, short portions of some PRowWs or permissive paths are located in closer proximity to potential inverter locations (Solar Stations) or the Onsite Substation. However, even in these instances, predicted worst-case noise levels will not exceed 50 dB  $L_{Aeq}$ , which is below the 55 dB threshold of significance derived (on a precautionary basis) in Appendix 10.2 [APP-078] of the ES. These noise levels, which are not considered significant in EIA terms, would be experienced by users of the path on a transient basis, in a similar way as portions of the paths also experience higher noise levels when in proximity to certain roads or agricultural activities.





Operational noise predictions ( $L_{Aeq}$ , dB) including residential receptors (black/white dots), PRoWs (black lines) and permissive paths (blue lines).



