

# Heckington Fen Solar Park

EN010123

## Applicant Response to the Examining Authority's First Written Questions

Applicant: Ecotricity (Heck Fen Solar) Limited

Document Reference: ExA.ResponseFWQ-D2.V1

Pursuant to: APFP Regulation 5(2)(q)

Deadline 2: 7th November 2023

Document Revision: 1

November 2023



## APPLICANT RESPONSE TO THE EXAMINING AUTHORITY'S FIRST WRITTEN QUESTIONS

<b>Document Properties</b>		
<b>Regulation Reference</b>	Regulation 5(2)(q)	
<b>Planning Inspectorate Scheme Reference</b>	EN010123	
<b>Application Document Reference</b>	ExA.ResponseFWQ-D2.V1	
<b>Title</b>	Applicant Response to the Examining Authority's First Written Questions	
<b>Prepared By</b>	Heckington Fen Energy Park Project Team (Pegasus)	
<b>Version History</b>		
<b>Version</b>	<b>Date</b>	<b>Version Status</b>
Rev 1	November 2023	Deadline 2



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# 1. Purpose of this Document

- i) This document is submitted on behalf of Ecotricity (Heck Fen Solar) Ltd (“the Applicant”) and contains the Applicant's response to the Examining Authority's First Written Questions issued on the 17<sup>th</sup> October 2023.
- ii) Details of the Applicant's responses are set out within this document in the subsequent sections below, presented in a tabulated format.
- iii) The Applicant has not responded to questions posed to specific Interested Parties but will review those responses once available and may comment on those at Deadline 3. Questions to Interested Parties are included for completeness, but 'greyed' out in the tables.

**Table 1: General, Miscellaneous and Cross- Topic Questions**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
GEN 1.1	The Applicant	<p>Sheets 5, 6, 12 and 13 of the Works Plans [PS-014] show numerous overlapping Works No's around the on-site substation and the Bicker Fen substation. Due to the scale of the plans and the overlapping colours/patterns the exact boundaries of many of the Work No's in these areas of the Proposed Development are ambiguous.</p> <p>Provide individual plans to clearly show the extent of each of the Work No's in these areas. These should not supersede the Works Plans but would be supplementary to them.</p>	<p>The Applicant has prepared a supplementary plan with individual sheets for each of the work layers shown on sheets 5, 6, 12, and 13 of the Works Plan. The Applicant has included this standalone document with the Deadline 2 submissions- <b>Supplementary Plan: Individual sheets showing isolated work areas for sheets 5, 6, 12, and 13 of the Works Plans</b> (document reference: ExA.SP-D2.V1).</p> <p>In respect of the <b>Works Plans</b> (document reference 2.2/PS-014), the Applicant has reviewed its approach to showing an illustrative layout of the substation and energy storage within the pink area on sheet 5 of the Works Plans. The Applicant previously considered that it may be helpful for stakeholders to see an indicative layout of how the infrastructure may be configured at the Energy Park. However, following further review (including alongside other DCO projects such as the recently consented Longfield Solar Farm Order), the Applicant has decided to remove the indicative infrastructure from sheet 5. This is because each numbered work must be situated within the corresponding numbered area shown on the works plan (pursuant to Article 3(2) of the DCO) and, as the Applicant outlines in paragraph 2.1.22 - 2.1.26 of the <b>Explanatory Memorandum</b> (document reference 3.3), the Applicant has adopted a Rochdale Envelope approach and assessed worst case parameters across this area. This means that the energy storage and onsite substation could be anywhere within this pink area on sheet 5. It could therefore be confusing or misleading to include an indicative layout at this stage of the process. Accordingly, the Applicant has removed this indicative infrastructure 'layering' from the Works Plans and updated accordingly in Revision 4 of the Works Plan submitted at Deadline 2. However, the indicative drawings remain, for reference, within the Environmental Statement at <b>Figure 4.1g- Indicative Energy Storage Arrangement</b> (document reference 6.2.4 / APP-108).</p>
GEN 1.2	The Applicant	Paragraph 3.4.1 of Environmental Statement (ES) Chapter 3 [PS-053] states that the layout	In response the Applicant has identified the environmental policy objectives and design objectives referred to in the <b>Statement of Need and Planning</b>

		<p>of the Proposed Development has evolved taking into account “planning and environmental policy objectives”.</p> <p>Could the Applicant provide further detail for each of the relevant “environmental policy objectives” and design objectives set out within the Statement of Need and Planning Statement [PS-142], and how these have been taken into account within the iterative design process described within the ES.</p>	<p><b>Statement</b> (SNPS, document reference 7.3/PS-142). Reference has also been made to the <b>Design and Access Statement</b> (document referenece7.4/PS-144) and the and the <b>ES Chapter 3 – Site Description, Site Selection and Iterative Design Process</b> (document reference 6.1.3/PS-053).</p> <p>The environmental policy objectives and design objectives identified are listed below, followed by an explanation of how each objective has been taken into account in the design process undertaken.</p> <p><b><u>Objective - to ensure the UK’s supply of energy always remains secure, reliable, affordable and consistent with meeting our target to cut greenhouse gas emissions to net zero by 2050 (SNPS para 4.27, 4.34, 4.38 and 4.52)</u></b></p> <p>This objective aligns to the three important national policy aims of:</p> <ul style="list-style-type: none"> <li>• Decarbonisation (Net Zero and the importance of developing at-scale zero-carbon generation assets);</li> <li>• Security of supply (geographically and technologically diverse supplies); and</li> <li>• Affordability (SNPS para 5.7).</li> </ul> <p>The iterative design process undertaken included consideration of alternatives, as set out from paragraph 3.4.5 of <b>Chapter 3 – Site Description, Site Selection and Iterative Design</b> of the ES (document reference 6.1.3). This process (described at para 3.4.11 of Chapter 3 of the ES) included consideration of:</p> <ul style="list-style-type: none"> <li>• The ‘No Development’ Alternative;</li> <li>• Alternative Designs/layouts;</li> <li>• Alternative Sites;</li> <li>• Alternative Offsite Cable Route Corridors; and</li> <li>• Alternative Technologies.</li> </ul> <p>The “No development” alternative was dismissed in light of the objective to deliver secure, reliable and affordable renewable energy to meet the net zero target. It was concluded that the “no development” alternative would not deliver the additional electricity generation and electricity storage proposed (paragraph 3.4.16 of Chapter 3 of the ES).</p> <p>In regard to alternative energy technologies, <b>Chapter 3- Site Description, Site Selection and Iterative Design</b> of the ES (document reference 6.1.3/PS-053)</p>
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			<p>describes the consideration of Onshore Wind (paragraphs 3.4.17 to 3.4.18), alternative design options for Ground Mounted Solar - fixed panel and tracking panel systems (paragraphs 3.4.19 to 3.4.25), Agrivoltaics (paragraphs 3.4.26 to 3.4.28) and other technologies including tidal power, offshore wind, hydroelectric storage and nuclear power (paragraphs 3.4.29 to 3.4.30). For the reasons set out in sections of the ES referred to, the alternatives considered were dismissed. The proposed application was concluded as the optimum option for meeting the objective of delivering secure, low carbon, affordable renewable energy.</p> <p>In regard to alternative sites, it is explained at paragraphs 3.4.31 to 3.4.35 of <b>Chapter 3– Site Description, Site Selection and Iterative Design</b> of the ES (document reference 6.1.3/PS-053) that any alternative sites would fail to comply with the alternatives policy in NPS EN-1 of having a realistic prospect of being delivered within the same timescale as the Heckington Fen Energy Park. This process is further explained within the description of the ‘Back Check and Review’ process set out at paragraphs 3.4.40 to 3.4.115. It is concluded that this would fail to align with the objectives of delivering secure, low carbon, affordable renewable energy.</p> <p><b><u>Objective - To contribute towards the achievement of sustainable development – SNPS 4.35, 6.12 and achieve high quality sustainable design SNPS 4.19, 4.61, 7.22 DAS 2.1</u></b></p> <p>This objective also aligns with the NPPF Environmental objective - protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy (NPPF paragraph 8, SNPS para 4.41).</p> <p>The conclusions of the “Backcheck and Review Process” set out as part of the iterative design process (Paragraph 3.4.115 of Chapter 3 of the ES) confirms that the site was chosen as suitable for reasons relating to a number of the criteria mentioned in this objective, including the suitable orientation of the land for efficient energy generation, the lack of ecological designations and acceptable ecological impacts, the lack of landscape designations and acceptable landscape impacts, minimising the use of highest quality agricultural land and limited impact on neighbouring properties.</p>
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			<p>Other aspects of sustainable development are considered in greater detail in respect of the objectives set out below.</p> <p><b><u>Objective - Respect landscape and visual amenity and mitigate impacts - SNPS para 4.21, 6.30, D&amp;A 2.6 and 2.7</u></b></p> <p>Landscape constraints are set out in the description of the site (ES Chapter 3 paragraphs 3.2.25 to 3.2.31) and these were considered in the design process. It is confirmed that there are no landscape designations affecting the site of the Energy Park and visibility of the Energy Park from the wider landscape is limited (ES Chapter 3 paragraphs 3.4.115.)</p> <p>The Landscape and Visual Assessment of the scheme is set out at <b>Chapter 6- Landscape and Visual</b> of the ES (document reference 6.1.6/PS-059). Section 6.6 of the LVIA sets out the mitigation by design introduced to the scheme as part of the design process. These mitigations include:</p> <ul style="list-style-type: none"> <li>• refinements to the layout to provide physical separation from the nearby residential and commercial properties, and public highways (ES Chapter 6 paragraph 6.6.1)</li> <li>• height of the solar modules to be reduced from 4.5m to 3.5m (ES Chapter 6 paragraph 6.6.2)</li> <li>• Onsite Substation and Energy Storage System are now located centrally within the Energy Park, increasing the distance to nearest residential receptors and the settlement of East Heckington (ES Chapter 6 paragraph 6.6.2)</li> <li>• Other mitigation measures are shown in the LVIA (Chapter 6 paragraph 6.6.5) to have been introduced during the design process, including increased offsets from boundaries and properties, removal of the proposed 132kV substations and change to a centralised Substation, removal of the proposed 132 kV overhead cable route, utilising the existing built form and tree vegetation to assimilate this part of the Proposed Development into the landscape and views, use of metal mesh perimeter fencing instead of palisade fencing</li> <li>• Additional planting (ES Chapter 6, paragraphs 6.6.6 to 6.6.9)</li> <li>• Habitat enhancement (ES Chapter 6, paragraphs 6.6.10 to 6.6.13)</li> <li>• Public Right of Way enhancements (ES Chapter 6, paragraph 6.6.14)</li> </ul>
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			<p><b><u>Objective - Protect Best and Most Versatile (BMV) Agricultural Land - SNPS para 6.22</u></b></p> <p>The site description within <b>Chapter 3– Site Description, Site Selection and Iterative Design</b> of the ES (document reference 6.1.3/PS-053) describes the consideration of the classification of the site in terms of the agricultural land quality. The process of Agricultural Land Classification Assessment (ALC) (see Appendix 16.3 - document reference 6.3.16.3 / APP-222) was undertaken in two stages. Of the over 524ha of agricultural land proposed for the solar panel arrays 50.6% of is Grade 3b land and therefore considered to be poorer quality land, 49.4% of the area is a combination of Grade 3a (30.5%), Grade 2 (7.4%), Grade 1 (11.1%), and Non-Agricultural land (0.4%).</p> <p>Table 3.1 of the ES Chapter 3 summarises aspects of the design iteration process and confirms that in light of comments from Lincolnshire County Council and North Kesteven District Council an alternative design has considered the removal of the high-grade agricultural land to the south and west of Energy Park site. A total of 62 ha has been removed from the order limits. This land has been removed from the BNG calculations and will be retained as agricultural land.</p> <p>The extent of BMV agricultural land in the search area was a factor in the consideration of alternative sites in the “Back Check and Review” process undertaken as part of the iterative design process. The summary provided (ES Chapter 3, paragraph 3.4.115) confirms that less area of BMV land of categories Grade 1 and 2 is used within the site when compared to the sites identified in the ‘back check and review’ process.</p> <p><b><u>Objective – Conserve and enhance biodiversity, promote green and blue infrastructure (SNPS para 4.56 and 6.36, D&amp;A para 2.7)</u></b></p> <p>The design process has given consideration to the existing biodiversity and nature conservation interest on the site. There are no non-statutory designations within the Energy Park site and the most frequently encountered habitat at the Energy Park site consists of open arable farmland. The arable fields are generally cultivated right up to the field margins resulting in very few areas of botanical or ecological importance. The Offsite Cable Route</p>
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			<p>Corridor passes across farmland. The Energy Park site includes one pond surrounded by bankside trees and scrub. The additional land in which the National Grid Bicker Fen Substation extension includes a section of plantation woodland (approximately 0.4ha), rough grassland/scrub (approximately 0.13ha) and roadside ditch (approximately 0.1ha) (ES Chapter 3, paragraph 3.2.41 to 3.2.47).</p> <p>A range of ecological mitigation has been included through the design process. This included stand-off distances of at least 9m from IDB watercourses and 8m from other ditches to enhance water vole habitats and allow long-term ditch management to assist soil quality. 8.5km of new hedgerow planting has been included in the proposal, offering screening and new habitat and feeding areas for wildlife. 2.15ha will be planted for a new community orchard. The design also provides approximately 66 ha of species rich grassland and 0.4ha of mixed woodland, which will be managed to encourage various species, including birds, bees, butterfly and invertebrates. The offsite grid connection is to be provided underground to ensure minimal landscape impacts -ES <b>Chapter 8 Ecology and Ornithology</b> (document reference 6.1.8), paragraphs 8.7.1 to 8.7.3 and 8.9.8)</p> <p><b><u>Objective - Secure biodiversity net gains – SNPS para 4.59, 4.60, 6.39</u></b></p> <p>Securing biodiversity net gain is a policy objective set out in NPSs, NPPF and Local Plan policy, in addition to the requirements of the Environment Act which will be brought into force in the near future. The provision of a net gain calculation in accordance with the Natural England metric is outlined in <b>Chapter 8 Ecology and Ornithology</b> (document reference 6.1.8/PS-063). Table 8.5 summarised the specific matters raised in the scoping consultation on the ES in respect of ecology matters and this includes consideration of the net gain calculation. An <b>outline Landscape and Ecological Management Plan</b> is provided as a supporting document to the application (Document Reference 7.8).</p> <p>It is confirmed in the Application that the proposals will deliver in excess of the policy requirement for 10% biodiversity net gains (ES Chapter 8 paragraph 8.9.12, Document Reference 6.1.8/PS-063).</p>
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			<p><b><u>Objective - Protect the historic Environment – SNPS para 4.68, 6.42 to 6.47</u></b></p> <p>The Cultural Heritage baseline is described in <b>Chapter 3 – Site Description, Site Selection and Iterative Design</b> of the ES (document reference 6.1.3/PS-053) and <b>Chapter 10 - Cultural Heritage</b> (document reference 6.1.10), confirming that there are no designated archaeological remains, e.g., Scheduled Monuments, are located within the Energy Park site. One Scheduled Monument to the west and four Grade II Listed Buildings lie within a 2km radius of the Energy Park site. A range of known and potential non-designated built and archaeological remains located within the Energy Park site are identified. (ES Chapter 3, paragraphs 3.2.48 to 3.2.52. These factors were taken into account in the design iteration process (ES Chapter 3, paragraphs 3.3.27 to 3.3.28)</p> <p>Mitigation of Heritage impacts by design of the scheme are set out within the <b>Chapter 10- Cultural Heritage</b>(document reference 6.1.10). This confirms that the proposals retain the upstanding buildings of Six Hundreds Farm, the boundary wall to the west of Elm Grange, and the drainage pump at Head Dike. These assets are to be protected by fencing during the construction phase, as detailed in the outline Construction Environmental Management Plan. Planting has been included along the northern boundary of the Energy Park to partially screen the Proposed Development in designed views from the non-Listed Mill Green Farmhouse. No mitigation by design is required with regard to the setting of any other heritage asset. (ES Chapter 10, Paragraph 10.6.1 and 10.6.2).</p> <p><b><u>Objective - Protect against flood risk and manage surface water – SNPS para 4.35, 6.50 to 6.52</u></b></p> <p><b>Chapter 3– Site Description, Site Selection and Iterative Design</b> of the ES (document reference 6.1.3/PS-053) confirms in the site description that the site of the Energy Park falls primarily within flood zone 3, with some sections of the Energy Park site falling within Flood Zone 2 and 1. In accordance with policy a flood risk assessment, including a sequential test has been prepared and forms part of the ES (Chapter 3 paragraphs 3.3.23 to 3.3.26 and Chapter 6.1.9) and is located in the <b>Flood Risk Assessment</b> (document reference 6.3.9.1).</p>
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			<p>In terms of the alternatives considered in the design iteration, the requirement for the solar park to continue to operate in the event of a flood event requires that panels should remain above flood levels. As a consequence, the design parameter of a tracker panel system with a typical height of around 1.5m would result in panels being partially submerged in a flood at a 1 in 1000 year event + 20% allowance for climate change. This technical constraint was a determining factor in the selection of the relevant solar technology (ES Chapter 3, paragraphs 3.4.23 to 3.4.25).</p> <p>Consideration of flood resilience dictated a design evolution to accommodate a maximum panel height split into 2 different heights (3m max and 3.5m max). The two zones are needed as the detailed flood modelling has shown that to ensure flood waters do not touch the lower- leading edge of the panels in the north-eastern section of the site, they have to be raised by 0.5m higher off the ground (ES Chapter 3, Table 3.2).</p> <p>Mitigation by design measures arising from flood and surface water considerations include:</p> <ul style="list-style-type: none"> <li>• Provision of drainage/SuDS measures to capture run-off from solar panels.</li> <li>• No Panels or equipment planned to be within 9m of IDB drains and 8m of other drainage ditches on Energy Park Site.</li> <li>• Lower leading edge of solar panels to be elevated above 1 in 1,000 year plus climate change flood level.</li> </ul> <p>The above measures are identified in the <b>Chapter 9- Hydrology, Hydrogeology, Flood Risk and Drainage</b>, Table 9.12 (document reference 6.1.9/PS-064).</p> <p><b><u>Objective - Need for flexibility in design – SNPS para 3.4</u></b></p> <p>It is recognised that current and future uncertainties and rapidly evolving technology dictate that there is a need for flexibility in design, layout and technology for solar and energy storage proposals. The design has therefore been undertaken reflecting the Rochdale Envelope approach which allows for the ES to assess a worst case scenario. Accordingly, the project has been</p>
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			<p>framed within a number of set parameters, as described within the <b>Outline Design Principles</b> (document reference 7.1).</p> <p>The purpose of the Outline Design Principles is to provide the guiding principles for the detailed design of the Proposed Development and is secured by a requirement in the draft DCO. Securing detailed design post consent will ensure construction of the Proposed Development can take advantage of innovation, safety improvements and cost-efficiencies (paragraph 1.1.2 and 1.1.3, document reference 7.1).</p>
GEN 1.3	The Applicant	<p>Paragraph 4.3.1 of ES Chapter 4 [PS-055] states that the construction phase is currently anticipated to be 30 months based on the assumption that the Proposed Development would be constructed in a single continuous build; this is noted to represent the worst-case in terms of higher peak traffic volumes and a greater number of concurrent construction activities.</p> <p>i) It is stated in paragraph 4.7.1 that this anticipated duration is dependent on the final design and findings of the access and traffic assessment. Since the submission of the application, can the Applicant confirm whether there has been an update regarding the likely duration of the construction phase.</p> <p>ii) It is indicated that the 30-month construction period represents a worst-case scenario in terms of traffic, noise, and dust emissions. Can the Applicant comment on how this represents a worst-case scenario for all environmental aspects of the ES.</p> <p>iii) Should the construction phase extend beyond 30 months, can the Applicant comment on the potential implications of this</p>	<p>i) The Applicant confirms there is no update to the duration of the construction period since the submission of the DCO application. The construction phase remains as 30 months to represent a worst-case scenario.</p> <p>ii) The construction phase for the Proposed Development in the Preliminary Environmental Information Report (PEIR) prepared for Statutory Consultation in June 2022 was assessed for an 18 month timeframe. Subsequent to the PEIR being published, the timescale of the construction phase was increased for the final ES submission due to preliminary contractor advice. The advice was that a longer timeframe was required to complete all necessary construction works on a site the size of Heckington Fen. Additionally, the Applicant is bound to an accepted grid connection offer from NGET which has a connection timeframe of 2027. Therefore a 30-month construction timeframe balanced the expected needs of a construction contractor with the needs of the grid connection agreement. The effects of this necessary construction window have therefore been assessed by the technical teams within the Environmental Statement. Therefore, applying a potential 'minimum-maximum' construction phase range was determined to not be the most accurate representation of the construction phases for the Proposed Development by the Applicant. Therefore, all ES chapters have assessed the 30- month construction period parameter, and each technical chapter has defined the worst-case scenario for their respective chapter and assesses it for this timeframe. The grid connection date and the advice from</p>

		<p>for the assessment of likely significant effects during the construction phase.</p>	<p>construction contractors has determined the 30 month period as the fixed worst case scenario parameter for all environmental disciplines in regard to assessments of the construction phase, and a different construction timeframe cannot be applied to the assessments.</p> <p>iii) Should the construction phase extend past 30 months the effects considered are likely to be extended. Therefore, this could extend the continuation of effects identified in the construction phase. This would include an extension in effects on identified receptors in <b>Chapter 6- Landscape and Visual</b> (document reference 6.16/PS-059), <b>Chapter 7 – Residential Visual Amenity</b> (6.1.7/PS-061), <b>Chapter 8 -Ecology and Ornithology</b> (document reference 6.1.8/PS-063), <b>Chapter 9: Hydrology, Hydrogeology, Flood Risk and Drainage</b> (document reference 6.1.9/PS-065), <b>Chapter 10- Cultural Heritage</b> (document reference 6.1.10), <b>Chapter 13- Climate Change</b> (document reference 6.1.13/PS-071), <b>Chapter 16- Land Use</b> (document reference 6.1.16), <b>Chapter 17- Glint and Glare</b> (document reference 6.1.17/APP-070) and <b>Chapter 18: Miscellaneous Issues</b> (document reference 6.1.18/ PS-077). In some instances, effects could be reduced, for example within <b>Chapter 14: Transport and Access</b> (document reference 6.1.14/PS-073) vehicle movements and trip generation would be expanded over a longer time period, but the number of trips each day would be reduced which would lead to a reduction of the impact from traffic volumes on the local highway network. This could positively affect <b>Chapter 12: Noise and Vibration</b> (document reference 6.1.12/PS-069) assessment in regard to construction traffic noise as a reduction in traffic volumes would decrease traffic noise potential. <b>Chapter 15: Air Quality</b> (document reference 6.1.15/075) would also be positively impacted in the assessment as a reduction in traffic volume would decrease associated emissions. Equally, a longer timeframe would have potential benefits on accommodation demand assessed in <b>Chapter 11- Socio Economics</b> (document reference 6.1.11) as although job generation would remain the</p>
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			<p>same, the longer timeframe would allow for a decrease in accommodation demand.</p> <p>For the purpose of the ES assessment, a worst-case timeline has been adopted based on the availability of information known thus far (including contractor advice on construction phase timeframes), and therefore an extension over the 30-month timeframe is considered unlikely.</p>
GEN 1.4	The Applicant	<p>Work No. 7 includes provision for temporary laydown areas associated with the construction of the Cable Route Corridor (Work No.5) and Bicker Fen Substation extension works (Work No. 6). Paragraph 4.7.4 of ES Chapter 4 [PS-055] states that these construction compounds will not remain once the Proposed Development is operational, however no further detail is provided regarding what would happen to these areas following completion of the construction phase. It is also unclear whether these areas would be required during decommissioning.</p> <p>Could the Applicant explain what is proposed to be done with these areas following completion of the construction phase and, should restoration of these areas be proposed, the mechanism by which this is secured.</p>	<p>Following construction of the grid connection, the temporary laydown area near Royalty Farm will be reinstated, and the land use will revert to its previous use (farmland). The temporary laydown area at Bicker Fen Substation could be reinstated, however it may be used before and after the construction of the Heckington Fen generation bay for other works at Bicker Fen Substation.</p> <p>It is worth noting that the laydown area identified within National Grid’s Bicker Fen Substation is already used for storage and laydown of electrical and associated apparatus and therefore it is not expected to be reinstated beyond site clearance of the Applicant’s equipment.</p> <p>On the basis that the underground cables forming the grid connection will not be removed following decommissioning of the Energy Park, it is unlikely that the laydown areas outside of the Bicker Fen Substation will be required at the decommissioning stage.</p>
GEN 1.5	The Applicant	<p>The accepted Change Application includes optionality regarding the switchgear types to be used at Bicker Fen Substation. It is noted within ES Chapter 4 [PS-055] that should a gas insulated switchgear (GIS) option be used, National Grid will avoid the use of sulphur hexafluoride (SF6) in line with the draft National Policy Statement (NPS) EN-5. However, it is noted within footnote 7 (p.24) of ES Chapter 4 that although the GIS will avoid</p>	<p>i) The Applicant has carefully considered avoiding the need to incorporate SF6 reliant assets in the Proposed Development but notes that the detailed design of the Heckington Fen electrical distribution system has not yet been completed.</p> <p>The current commitment is therefore only related to the use of SF6 within the GIS (if incorporated) at Bicker Fen Substation. A</p>

		<p>the use of SF6, SF6-type circuit breakers would be used within the Energy Park.</p> <p>Can the Applicant:</p> <p>i) Explain the mechanism by which the avoidance of the use of SF6 within the GIS is secured within the draft Development Consent Order (dDCO).</p> <p>ii) Justify the use of SF6-type circuit breakers in line with the requirements of the draft NPS EN-5, explaining how alternative technology types have been considered or by providing reasoning why SF6-type circuit breakers cannot be avoided.</p> <p>iii) In line with the requirements of draft NPS EN-5, explain any plans for monitoring and control of fugitive SF6 emissions and the mechanism by which these are secured through the dDCO and/or relevant control documents.</p>	<p>GIS system may contain tens or hundreds of kg of SF6<sup>1</sup> and is therefore clearly best avoided as recognised in Draft NPS EN5.</p> <p>Requirement 5 in Schedule 2 of the dDCO provides that the approved plans and details or schemes submitted under the Requirements must not give rise to any materially new or materially different environmental effects from those assessed in the Environmental Statement (ES). The ES is a certified document under Schedule 11 of the DCO. The SF6 commitment is contained within Chapter 4 of the ES (document reference PS-055). Notwithstanding this, the Applicant has also secured the commitment within the Outline Design Principles (document reference 7.1) at Work No. 6B to make clear that should a gas insulated switchgear (GIS) option be used at the Bicker Fen Substation, National Grid will avoid the use of SF6.</p> <p>ii) The volume of SF6 gas used in a circuit breaker interrupter is significantly smaller than when used as a bus-bar insulating medium in GIS equipment. Medium Voltage switchgear contains less than 5kg<sup>2</sup> of SF6.</p> <p>For the avoidance of doubt, the potential use of SF6 as an interrupting medium within a circuit breaker applies both within the energy park and the extension of the 400kV substation at Bicker Fen. Although non-SF6 technologies are preferred, indeed the Applicant has a central mission to reducing greenhouse gas emissions, it is not possible to fully rule-out the need for SF6 should other technologies, including alternatives to SF6 gas that are still in development, not meet the operational requirements.</p> <p>Circuit breakers perform a critical safety function in the operation of electrical transmission and distribution systems</p>
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<sup>1</sup> EU F-Gas Regulation Guidance, Information Sheet 11: High Voltage Switchgear, Version 2.1, December 2014.

<sup>2</sup> DEFRA Guidance: How to operate or service high voltage switchgear containing SF6.





			<p>that protects both people and equipment. SF6 is commonly used in circuit breakers as it has a very high dielectric strength and is an effective gas at quenching and extinguishing the high currents that occur during a fault. Circuit breakers which have SF6 as the interrupting medium tend to have better breaking capacities at high voltage applications at and above 33kV compared with alternatives such as vacuum circuit breakers.</p> <p>SF6 alternatives will be considered at detailed design, however the Applicant is unable to fully commit to alternatives until the distribution voltage at the Energy Park is determined and a detailed understanding of the prospective short circuit currents in the transmission and distribution systems is obtained. At this stage the distribution voltage and prospective fault levels could exceed the capacity of alternative technology and as a result, the breaking technology for the circuit breakers may require an SF6 interrupter.</p> <p>Any use of SF6 in circuit breakers would be continuously monitored. Although leakage from SF6 circuit breakers is extremely uncommon (they are classed as 'maintenance free'), any loss of gas would result in an alarm system activating and a complete replacement of the leaking equipment.</p> <p>The Applicant considers that if the use of SF6 circuit breakers cannot be avoided for the reason stated above, then adequate monitoring and the limited quantity used where alternatives are not a viable option justifies their use.</p> <p>iii) Any use of SF6 would require monitoring. Both the internal gas pressure and detection of leaks around the equipment would be monitored, given dual redundant capability to detect loss of SF6 to the atmosphere. Any leakage in circuit breaker interrupters would result in activation of an alarm a complete replacement of the defective equipment.</p>
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			<p>The Applicant has included means for monitoring SF6 within the <b>outline Operational Environmental Management Plan</b> (document reference: ExA.oOEMP-D2.V1) submitted with Deadline 2.</p>																					
<p>GEN 1.6</p>	<p>The Applicant</p>	<p>ES Chapter 18 [PS-077] explains the anticipated waste streams during construction, operation, and decommissioning however specific quantities of waste are not provided. Although it is stated (in paragraph 18.4.30) that exact quantities and types during construction are unknown at this stage, it is also stated (in paragraph 18.4.27) that significant quantities of waste are not anticipated during construction.</p> <p>Could the Applicant:</p> <p>i) Clarify what calculations have been made to inform this conclusion.</p> <p>ii) In line with the requirements of the NPS (EN-1) can the Applicant confirm the anticipated volumes of waste from the Proposed Development, the proposed waste management strategy on-site, and the impact of waste generation from the Proposed Development on the capacity of waste management facilities, particularly when considering other waste arising in the area.</p>	<p>i) The Applicant’s experience of building solar parks and other renewable projects informed this calculation.</p> <p>ii) The Applicant notes in the Examining Authority’s questions, the volumes are estimates, but anticipated volumes during construction could be:</p> <table border="1" data-bbox="1128 555 1939 1182"> <thead> <tr> <th>Waste stream</th> <th>Destination</th> <th>Estimated volumes</th> </tr> </thead> <tbody> <tr> <td>Cardboard</td> <td>Authorised recycling, worse case landfill</td> <td>From packaging – could be a moderate volume</td> </tr> <tr> <td>Wood</td> <td>Authorised recycling, worse case landfill</td> <td>From packaging – could be a moderate volume</td> </tr> <tr> <td>Plastic</td> <td>Authorised recycling, worse case landfill</td> <td>From packaging – could be a moderate volume</td> </tr> <tr> <td>Metal</td> <td>Authorised recycling</td> <td>Limited</td> </tr> <tr> <td>Paint and solvents</td> <td>Authorised recycling, worse case landfill</td> <td>Limited</td> </tr> <tr> <td>Chemical containers</td> <td>Authorised recycling, worse case landfill</td> <td>Limited</td> </tr> </tbody> </table> <p>During the operational phase, minimal amount of waste will be produced and is likely to be limited to welfare facility waste; equipment that has been replaced, waste associated with maintenance and general waste – such as paper, cardboard and wood. This waste will be managed by appropriately permitted waste carriers who will visit the Energy Park site frequently for general waste removal; and infrequently for larger items, such as equipment.</p>	Waste stream	Destination	Estimated volumes	Cardboard	Authorised recycling, worse case landfill	From packaging – could be a moderate volume	Wood	Authorised recycling, worse case landfill	From packaging – could be a moderate volume	Plastic	Authorised recycling, worse case landfill	From packaging – could be a moderate volume	Metal	Authorised recycling	Limited	Paint and solvents	Authorised recycling, worse case landfill	Limited	Chemical containers	Authorised recycling, worse case landfill	Limited
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			<p>During the decommissioning phase, the waste will be associated with removing the Proposed Development; anticipated volumes during decommissioning could be:</p> <table border="1" data-bbox="1128 309 1939 1099"> <thead> <tr> <th data-bbox="1128 309 1323 376">Waste stream</th> <th data-bbox="1323 309 1608 376">Destination</th> <th data-bbox="1608 309 1939 376">Estimated volumes</th> </tr> </thead> <tbody> <tr> <td data-bbox="1128 376 1323 475">Solar panels</td> <td data-bbox="1323 376 1608 475">Authorised recycling, worse case landfill</td> <td data-bbox="1608 376 1939 475">Significant volume</td> </tr> <tr> <td data-bbox="1128 475 1323 703">Concrete or foundation structures – could be covered by Metal also</td> <td data-bbox="1323 475 1608 703">Authorised recycling, worse case landfill</td> <td data-bbox="1608 475 1939 703">Significant volume</td> </tr> <tr> <td data-bbox="1128 703 1323 836">Hardcore or material used for tracks</td> <td data-bbox="1323 703 1608 836">Authorised recycling, worse case landfill</td> <td data-bbox="1608 703 1939 836">Moderate volume</td> </tr> <tr> <td data-bbox="1128 836 1323 935">Electrical equipment</td> <td data-bbox="1323 836 1608 935">Authorised recycling</td> <td data-bbox="1608 836 1939 935">Significant volume</td> </tr> <tr> <td data-bbox="1128 935 1323 1002">Metal</td> <td data-bbox="1323 935 1608 1002">Authorised recycling</td> <td data-bbox="1608 935 1939 1002">Significant volume</td> </tr> <tr> <td data-bbox="1128 1002 1323 1099">Welfare facility waste</td> <td data-bbox="1323 1002 1608 1099">Authorised recycling, worse case landfill</td> <td data-bbox="1608 1002 1939 1099">Limited</td> </tr> </tbody> </table> <p>The management of the construction, operational and decommissioning waste will be in line with the core waste management principles of prevention, reuse, recycle, recover and disposal as defined in the ‘Waste Hierarchy’ set out in <b>Chapter 18: Miscellaneous Issues</b> (document reference 6.1.18/PS-077). Additionally, construction waste management measures are further set out in the <b>Outline Construction Environmental Management Plan</b> (document reference 7.7/PS-146), operational waste management is set out in the <b>Outline Operational Environmental Management Plan</b> (document reference ExA.oOEMP-D2.V1), and decommissioning waste management is</p>	Waste stream	Destination	Estimated volumes	Solar panels	Authorised recycling, worse case landfill	Significant volume	Concrete or foundation structures – could be covered by Metal also	Authorised recycling, worse case landfill	Significant volume	Hardcore or material used for tracks	Authorised recycling, worse case landfill	Moderate volume	Electrical equipment	Authorised recycling	Significant volume	Metal	Authorised recycling	Significant volume	Welfare facility waste	Authorised recycling, worse case landfill	Limited
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			<p>set out in the <b>Outline Decommissioning and Restoration Plan</b> (document reference 7.9/PS-150). More specifically <b>Appendix K: Outline Site Waste &amp; Materials Management Plan</b> of the <b>Outline Construction Environmental Management Plan</b> (document reference 7.7/PS-146) provides greater detail on these phases for on-site for waste. The final Site Waste &amp; Materials Management Plan will be substantially in accordance with the Outline Site Waste &amp; Materials Management Plan and confirmed details of waste type and quantities will be available.</p> <p>The Proposed Development will feed into the Lincolnshire County Council waste output stream, as it is the waste local authority covering the Order Limits for the Proposed Development. The Lincolnshire Minerals and Waste Local Plan<sup>3</sup> included an evidence base document, Lincolnshire Waste Needs Assessment 2021 - Report 3 Lincolnshire Management Requirements for Construction, Demolition and Excavation (C,D&amp;E) Waste<sup>4</sup>. An estimated 901,000 tonnes per annum of C,D&amp;E baseline waste is expected from 2020-2045 based on 2019 base year modelling. The report identifies at Table 17 for future C, D&amp;E waste management targets that for the year 2025<sup>5</sup> a combined recycling, reuse, transfer, and treatment rate for C,D&amp;E waste of 75% (equating to 675,750 tonnes per annum) is predicted. The remainder (225,000 tonnes per annum) will be directed to non-inert landfill. Table 20 shows there is 833,500m<sup>3</sup> of built capacity for recyclable and recovery sites in Lincolnshire County. The Lincolnshire Waste Needs Assessment 2021 denotes that there is <i>“sufficient existing capacity in Lincolnshire to meet the equivalent of all future predicted management requirements for C, D &amp; E waste arising in Lincolnshire and so net self-sufficiency is predicted to be achieved for this stream throughout the forecast period.”</i></p> <p>No appreciable quantities of construction and operational waste are anticipated for the Proposed Development. Decommissioning waste is expected to be minimised to landfill as predominant waste streams in this phase will be the recycling of solar PV infrastructure. At present, RecycleSolar</p>
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<sup>3</sup> Lincolnshire County Council (2016). Lincolnshire Minerals and Waste Local Plan: Core Strategy & Development Management Policies.

<sup>4</sup> Lincolnshire County Council (2021). Lincolnshire Waste Needs Assessment 2021 – Report 3: Lincolnshire Management Requirements for Construction, Demolition and Excavation Waste.

<sup>5</sup> Table 20 has five-year gap analysis figures from 2020. Year 2025 chosen as it falls during potential start of construction.



			<p>is the only UK based solar panel recycling service, but more companies are expected to setup in the next decade as the current solar farms begin to be decommissioned. Technology removed prior to the end of the Proposed Development’s operational life will also be recycled as far as possible and will undergo the same process as outlined above. The overall recovery rate and landfill diversion is expected to be at least 60% (see GEN 1.7 Applicant Response for further details on methodology). Therefore, waste handling facilities within Lincolnshire are expected to have availability capacity to accommodate waste produced by the Proposed Development, and from other waste arising in the area (i.e. the potential other NSIP solar projects within Lincolnshire).</p>
GEN 1.7	The Applicant	<p>No methodology for assessing likely significant effects is provided within ES Chapter 18 [PS-077]. Although it is recognised that this chapter has been compiled “due to the brevity of the assessment or the limited impact associated with the Proposed Development”, as stated in paragraph 18.1.2, conclusions of no significant effects have been reached within this chapter and it is unclear how these conclusions have been reached.</p> <p>The Applicant is asked to provide a methodology for establishing significant effects for each of the aspects within ES Chapter 18.</p>	<p>Where possible, methodologies for assessing likely significant effects within ES chapters will defer to the process outlined in Section 2.10 Determining Significance of Effects of <b>Chapter 2 – EIA Methodology and Consultation</b> (document reference 6.1.2/PS-051). This uses a matrix-based approach to determine significance through assessing the relationship between magnitude of an effect and sensitivity, importance or value of the resource and receptor. Defining the degree of magnitude of effect and sensitivity can be derived from a variety of sources including legislative requirements, topic-specific guidance, standards and codes of practice, the EIA Regulations, advice from statutory consultees and other stakeholders and the expert judgement of the team undertaking the EIA. Generally, where definitive quality standards do not exist, significance will be based on the: a. Local, district, regional or national scale or value of the resource affected; b. Number of receptors affected; c. Sensitivity of these receptors; and d. Duration of the effect.</p> <p>In regard to Major Accidents and Disasters, topic specific guidance ‘Major Accidents and Disasters in EIA: A Primer (IEMA, 2020)’ is relied upon. No set matrix approach scale is provided in the guidance, instead, factors are set out to be considered in the determination of significance through the expert judgement of the team. The guiding factors to determine significance of effect include: the geographic extent of effects (effects beyond the development boundaries are more likely to be considered significant), duration of effects (effects which are permanent (i.e. irreversible) or long-lasting are more likely to be considered significant), severity of effects in terms of numbers, degree of harm to those affected and the response effort required, sensitivity of the</p>

			<p>identified receptors, and the effort required to restore the affected environment (effects requiring substantial clean-up or restoration efforts are more likely to be considered significant). A further example is provided in the guidance that the “<i>significance threshold could be set at anything that causes the loss of life or permanent injury, and/or permanent or long-lasting damage to an environmental receptor.</i>” This significance assessment approach has been adopted and any identified major accidents and disaster risks deemed requiring further assessment in <b>Chapter 18: Miscellaneous Issues</b> (document reference 6.1.18/PS-077) are assessed as significant if there is a high likelihood of loss of life or permanent injury, and/or permanent or long-lasting damage to an environmental receptor based upon professional judgement. No identified major accidents and disaster risks assessed were deemed to cause the aforementioned effects, and therefore are considered not significant.</p> <p>In regard to Waste, topic specific guidance ‘IEMA Guide to: Materials and Waste in Environmental Impact Assessment- Guidance for a Proportionate Approach (IEMA, 2020)’ is relied upon. There are two approaches to assess effects of waste, ‘Void Capacity’ and ‘Landfill Diversion’. Void Capacity assesses the percentage of the remaining "space or void" within landfill capacity that will be used by waste produced during the construction and/or operation phases of the development. Decommissioning waste is not assessed in the guidance. Appreciable quantities of waste are not expected to be generated unless major replacement works are required. It is likely that these would occur in the latter stages of the operational life of the Proposed Development (i.e., over 20 years) and therefore the ‘Void Capacity’ approach was not applicable to adopt. There is no realistic way of anticipating what waste management capacity will be available in 20+ years’ time, particularly, for some specialist waste that may be generated by the Proposed Development.</p> <p>An alternative approach under the IEMA guidance is to compare the expected landfill diversion rate against the following criteria.</p> <table border="1" data-bbox="1128 1305 1825 1420"> <thead> <tr> <th data-bbox="1128 1305 1373 1362">Effect</th> <th data-bbox="1373 1305 1825 1362">Landfill Diversion Rate</th> </tr> </thead> <tbody> <tr> <td data-bbox="1128 1362 1373 1420">No change</td> <td data-bbox="1373 1362 1825 1420">100% landfill diversion</td> </tr> </tbody> </table>	Effect	Landfill Diversion Rate	No change	100% landfill diversion
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			<table border="1"> <tr> <td>Negligible</td> <td>90-99% landfill diversion</td> </tr> <tr> <td>Minor</td> <td>60-89% landfill diversion</td> </tr> <tr> <td>Moderate</td> <td>30-59% landfill diversion</td> </tr> <tr> <td>Major</td> <td>&lt;30% land fill diversion</td> </tr> </table>	Negligible	90-99% landfill diversion	Minor	60-89% landfill diversion	Moderate	30-59% landfill diversion	Major	<30% land fill diversion	<p>The main elements of the Proposed Development (solar PV modules, PV module mounting structure, onsite cabling, energy storage systems, inverters, transformers, switchgear and on-site substation) are all capable of being recycled, with recycling routes generally available for the materials. Therefore, the overall recovery rate and landfill diversion is expected to be at least 60% (minor), following a conservative approach, and therefore not significant.</p> <p>In regard, to Electric, Magnetic and Electromagnetic fields, there is no topic specific EIA related guidance on the matter. Therefore, the UK Government adopted guidelines by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) that set public and occupational exposure thresholds for electric and magnetic fields has been used to assess significance of effect. Breaching the ICNIRP exposure guidelines was determined through professional judgement to be a significant effect. If the ICNIRP exposure guidelines were not breached, this was determined through professional judgement to be not a significant effect. Only magnetic fields of the underground 400kV cabling system were considered in the assessment as other types of equipment in the Proposed Development are not capable of exceeding the ICNIRP exposure guidelines (i.e., not significant). Calculations of the magnetic field of the underground 400kV cabling system for the Proposed Development identified no breach of exceeding the ICNIRP exposure guidelines (i.e., not significant).</p> <p>In regard to Telecommunications, Television Reception and Utilities, as outlined at paragraph 18.6.3 of <b>Chapter 18: Miscellaneous Issues</b> (document reference 6.1.18/PS-077), effects relating to existing infrastructure are not environmental effects and there is no requirement to include an assessment of these effects under the EIA Regulations. There is neither any topic-specific</p>
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			<p>guidance or standards and codes of practice that can be relied upon for a significance of effect methodology. Therefore, a qualitative approach has been undertaken and the assessments are based upon professional judgement to determine the likelihoods of significance of effect (see paragraph 18.6.8 of <b>Chapter 18: Miscellaneous Issues</b> (document reference 6.1.18/PS-077)).</p>
GEN 1.8	The Applicant	<p>Limitations to the assessments are described within each of the aspect chapters of the ES apart from ES Chapter 9 (Hydrology, Hydrogeology, Flood Risk and Drainage) [PS-065] and ES Chapter 18 (Miscellaneous Issues) [PS-077].</p> <p>Can the Applicant clarify whether there are any limitations to these assessments.</p>	<p><b>Chapter 9 - Hydrology, Hydrogeology, Flood Risk and Drainage</b> (document reference 6.1.9/PS-065) sets out the limitations to the assessment at paragraphs 9.3.34-9.3.35 of the chapter. These relate to (i) the fact that the hydraulic model is uncalibrated, which potentially introduces a degree of uncertainty (although the analysis has been undertaken in accordance with EA guidance and reviewed/approved by the EA) and (ii) ground investigation data has been used in combination with British Geological Surveys mapping.</p> <p>The Applicant confirms the limitations to assessments within <b>Chapter 18: Miscellaneous Issues</b> (document reference 6.1.18/PS-077) is set out against Section 2.14.1 General Assumptions and Limitations of <b>Chapter 2: EIA Methodology and Consultation</b> (document reference 6.1.2/PS-051). Additionally, the following limitations are listed below in regard to the sub-topics set out in <b>Chapter 18: Miscellaneous Issues</b> (document reference 6.1.18/PS-077).</p> <p>In regard to Major Accidents and Disasters, Electric, Magnetic and Electromagnetic fields and Telecommunications, Television Reception and Utilities sections of <b>Chapter 18: Miscellaneous Issues</b> (document reference 6.1.18/PS-077), the assessments are based on the currently available information and in line with the set parameters for the Proposed Development bound by the 'Rochdale Envelope' approach. It is assumed the design, installation, commissioning, operation and maintenance of the Proposed Development, drainage systems, equipment and machinery, including associated systems, will take into account Good Engineering Practice, and measures set out in the <b>Outline Construction Environmental Management Plan</b> (document reference 7.7/PS-146), <b>Outline Operational Environmental Management Plan</b> (document reference ExA.oOEMP-D2.V1), <b>Outline Decommissioning and Restoration Plan</b> (document reference 7.9/PS-150) and <b>Outline Energy Storage Safety Management Plan</b> (document reference 7.11/APP-242) will be implemented and followed.</p>



			<p>In regard to Waste, due to uncertainties relating to future waste facilities at the time of decommissioning, or during the latter half of the operational phase (20+ years) where larger quantities of infrastructure may need to be replaced, the assessment is unable to quantitatively determine waste facility capacity. However, as noted in paragraph 18.4.66 of <b>Chapter 18: Miscellaneous Issues</b> (document reference 6.1.18/PS-077), with the increase in approved solar farm applications in the UK since 2010, it is likely an emerging industry for recycling and re-selling of operational infrastructure will be available for waste to be adequately managed.</p>
GEN 1.9	The Applicant	<p>Provide an updated version (or addendum) of the cumulative and in-combination effects assessment for each chapter of the ES and associated figures [APP-173, PS-084, PS-085], so that the additional proposals included in the report on the Interrelationship with Other NSIPs [REP1-021] and the findings are consistent with it.</p>	<p>The Applicant has prepared an updated cumulative effects assessment for each chapter of the ES as an addendum in the following document, <b>ES Technical Note- Updated Information on Cumulative Projects</b> (applicant document reference ExA.ESTN-Cumulative-D2.V1) submitted at Deadline 2. This document includes a revision of <b>Appendix 2.3- Cumulative Sites Long List and Shortlist</b> (document reference 6.3.2.3), whereby a reassessment of the long list and shortlist of potential cumulative projects has been undertaken. The shortlisted projects are visually presented in a Revision 3 of <b>Figure 2.2a Cumulative Sites - Shortlisted (Regional Context)</b> (document reference 6.2.2) and <b>Figure 2.2b Cumulative Sites - Shortlisted (Local Context)</b> (document reference 6.2.2), appended to the <b>ES Technical Note- Updated Information on Cumulative Projects</b>.</p> <p>The <b>ES Technical Note- Updated Information on Cumulative Projects</b> is consistent with the findings of the <b>Interrelationship with other Nationally Significant Infrastructure Projects</b> (document reference ExA.IRRReport-D1.V1). It should be noted however, that the <b>Interrelationship with other Nationally Significant Infrastructure Projects</b> report's purpose is to assess local DCO schemes, predominantly solar energy in nature, in context with the Proposed Development, and not TCPA applications. Therefore, the list of projects in the <b>Interrelationship with other Nationally Significant Infrastructure Projects</b> report is aligned but the <b>ES Technical Note- Updated Information on Cumulative Projects</b>, is further developed to consider TCPA applications in addition.</p>
GEN 1.10	Boston Borough Council	<p>Could the relevant planning authorities (RPAs) confirm if you are in agreement with and provide any other comments regarding the</p>	

	Lincolnshire County Council North Kesteven District Council	overall approach to the cumulative impact assessment, including the developments considered, and the conclusions therein as set out in both ES Appendix 2.3 [APP-175] and the Interrelationship with other NSIPs [REP1-021].	
GEN 1.11	The Applicant	<p>Paragraph 1.5.2 of the Outline Decommissioning and Restoration Plan (DRP) [PS-150] states that the final DRP will monitor the effectiveness of mitigation measures. Paragraph 1.18.2 states that the Applicant will be informed of any deviations from the measures set out within the DRP. It is not clear from the information provided how or whether, in the event that monitoring were to identify that mitigation measures were not effective, action would be taken to rectify this position, and how such a process is to be secured.</p> <p>Could the Applicant:</p> <ul style="list-style-type: none"> <li>i) Comment on what would occur should monitoring reveal that mitigation measures are not being adhered to, or that the mitigation implemented is not achieving the predicted and desired outcomes.</li> <li>ii) Explain what assurances can be provided that any deviations from the outlined mitigation measures or their effectiveness will be addressed.</li> <li>iii) Explain how such a process would be secured through the DCO.</li> </ul>	<ul style="list-style-type: none"> <li>i) The Applicant considers that the Decommissioning and Restoration Plan (DRP) should operate so that environmental controls are put in place prior to decommissioning to minimise any impacts of works to remove the solar panels and associated infrastructure and restore the land to its former use. During works a brief report will be produced and submitted to the relevant local authorities on a quarterly basis. In the event that monitoring identifies a failure to adequately mitigate impacts or that that mitigation is not being effective the Environmental Manager or Project Manager will detail these factors in the report and submit details to the relevant local authorities of the actions being taken to remedy the failures. A final report will be produced and submitted to the relevant local authorities following completion of decommissioning. This will summarise the monitoring process, observed deviations from the DRP(s) and the corrective actions taken. Compliance with the DRP is a Requirement (as noted in (iii) below). The <b>Outline Decommissioning and Restoration Plan</b> (document reference 7.9) will be updated to clarify this procedure at Deadline 3.</li> <li>ii) The quarterly reporting and agreement of actions as noted above will provide sufficient assurances that the mitigation will be addressed effectively.</li> <li>iii) Paragraph (4) of Requirement 18 in Schedule 2 of the dCO (document reference 3.1/PS-024) provides that the final Decommissioning and Restoration Plan (DRP) must be substantially in accordance with the <b>Outline Decommissioning and Restoration Plan</b> (document reference 7.9/PS-150). Accordingly, the management and monitoring measures are secured through Requirement 18 and, particularly, paragraph (4).</li> </ul>

			<p>The relevant planning authorities will have the ability to consider whether the final DRP is in accordance with the outline plan before agreeing to approve the DRP. The measures in the approved plan will then need to be adhered to as with any other plan, scheme, or document approved under the DCO.</p>
GEN 1.12	Boston Borough Council	<p>The shortlisted cumulative sites [APP-175, PS-084, PS-085] and the Interrelationship with other NSIPs report [REP1-021] include planning applications at Vicarage Drove and Land West of Cowbridge Road.</p> <p>Could Boston Borough Council (BBC):</p> <p>i) Provide a copy of site location and layout plans, officer report and decision notice for both applications.</p> <p>ii) Confirm if development has commenced.</p>	
GEN1.13	The Applicant	<p>An Equality Impact Assessment has been submitted in relation to pre-application consultation only [APP-031]. Could the Applicant submit an Equality Impact Assessment which includes consideration of persons or groups with a protected characteristic in order to inform the ExA how the proposal would accord with the requirements of the Public Sector Equality Duty by Deadline 3. In doing so, also refer to question NV.1.2</p>	<p>The Public Sector Equality Duty applies to those bodies listed in Schedule 19 of the Equality Act 2010. An Equality Impact Assessment was undertaken at the request of Lincolnshire County Council in advance of the statutory consultation for the Proposed Development to ensure that proposals and means of communications were inclusive. The general equality duty also applies to others who are not listed but exercise public functions, examples include: significant reliance on public funding; exercising powers of a public nature; providing a public service; acting in the public interest and supervised by a State regulatory body, amongst others. It is not expressly clear that the Proposed Development should fall into this category as a privately funded project; however, an Equality Impact Assessment will be produced for the proposal and will be provided by Deadline 3.</p> <p>In so doing, all relevant Protected Groups will be identified and considered in respect of the assessment undertaken. Cross-reference will be made to documentation prepared in relation to the DCO application which has identified potential effects, as well as mitigation for any adverse effects and enhancement of any beneficial effects, on relevant Protected Groups. This includes, but is not limited to, appropriate engagement with the Build-A-Future East Heckington school based at Elm Grange in respect of timings of</p>



			the proposed piling works, through provisions made within the final detailed CEMP to be submitted prior to commencement of the Proposed Development (as is requested to be included in question NV 1.2).
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**Table 2: Biodiversity, Ecology and the Natural Environment**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
BIO 1.1	The Applicant	ES Appendix 8.8 (Bat Survey Report) [APP-197] states that the survey data is only valid for 18 months from 2 August 2022. Given the Proposed Development is anticipated to commence beyond this, can the Applicant clarify whether updated ecology surveys, for bats and other species, will be conducted prior to construction to ensure the baselines and any proposed mitigation measures remain valid.	<p>In order to ensure species and habitat survey baselines remain current and any proposed avoidance, mitigation and/or compensation measures remain valid the following survey schedule is proposed:</p> <p><u>Species Surveys pre-commencement:</u></p> <ul style="list-style-type: none"> <li>• Breeding bird surveys (including specific survey methods to determine the presence/probable absence of quail in 2024)</li> <li>• Badger Survey</li> <li>• Bat Survey (Activity and Roost)</li> <li>• Water vole and Otter</li> <li>• eDNA sampling of the onsite pond</li> </ul> <p><u>Habitat Survey pre-commencement:</u></p> <ul style="list-style-type: none"> <li>• Ditch surveys to establish ongoing maintenance and enhancement cycles for those ditches outside of IDB management.</li> </ul> <p><u>Habitat Creation and Restoration preparatory / surveys pre-commencement:</u></p> <ul style="list-style-type: none"> <li>• Soil Sampling: Soil P, K, Mg, pH, soil organic matter, soil mineralizable nitrogen and soil plant-available phosphorus (Olsen-P) concentration (mg P L-1)</li> <li>• Soil Carbon: Soil bulk density (g cm-3), soil carbon stock (t C ha-1) and Soil C/N ratio</li> </ul> <p>Furthermore, the Applicant has engaged with Natural England through their Discretionary Advice Service to develop a “Letter of No Impediment” in terms of the potential need to apply for protected species licences, this approach will be reflected within the relevant (licences document) and Statement of Common Ground.</p>

<p>BIO 1.2</p>	<p>The Applicant and National Grid Electricity Transmission Plc</p>	<p>The Landscape Strategy Plan [PS-091] details landscaping proposals for the energy park site only and not the Bicker Fen substation. The accepted Change Application shows an area of mixed species plantation is proposed to be removed to enable additional substation infrastructure. This is further considered in the Change Application documents [PS-003 onward] which state that ‘replacement tree planting has not been possible at Bicker Fen substation due to technical constraints and limited land availability’. At Issue Specific Hearing 2 (ISH2) [REP1-020] it was indicated that there are numerous constraints to planting including location of cables.</p> <p>Could the Applicant and National Grid Electricity Transmission Plc (NGET):</p> <p>Grid i) Provide further details/plans on the extent of loss of mixed species plantation woodland to be removed to the south-west corner of Bicker Fen substation, with an indication of minimum and maximum area of loss for a) a GIS system and b) an Air Insulated Switchgear (AIS) system.</p> <p>ii) Provide a more detailed explanation as to why planting around the Bicker Fen substation is not appropriate and has not been included in the plans.</p> <p>iii) Give further consideration as to whether off-site planting in the vicinity of the substation (or a contribution to third party planting) has been considered, which potentially could be secured via legal agreement.</p>	<p>i) <b>Appendix 8.13- Further Extended Phase 1 Habitat Survey Report- Bicker Fen Substation</b> (document reference Pre-ExA.ChangeApp.ESAPP8.13.V1/ PS-153) contains details of the mixed species plantation and the percentage loss of each type of tree. It is not possible at this stage, and prior to detailed design being undertaken, to indicate a minimum area of loss but as a comparison we have indicated the areas of loss for a GIS system and an AIS system as requested.</p> <p>A maximum footprint for the Gas Insulated Switchgear will be approximately 5,625m<sup>2</sup> (e.g., 75m by 75m). Some Switchgear apparatus will be housed indoors in a building 30m by 20m, and 15m in height. All of the infrastructure for the Gas Insulated Switchgear option will be in the footprint of Work No.6A and Work No.6B as shown on the <b>Works Plan</b> (document reference 2.2 / PS-014).</p> <p>The Air Insulation Switchgear will be approximately 14112m<sup>2</sup>, and 15m in height. All of the infrastructure for the Air Insulated Switchgear option will be in the footprint of Work No.6A and Work No.6B as shown on the <b>Works Plan</b> (document reference 2.2 / PS-014).</p> <p>ii) Consideration has been given to providing additional planting within NGET land. However, the substation site already has a planting plan imposed as part of a landscape condition for the original substation (Boston Borough Council application reference 05/0046). This accounts for woodland and tree planting to the north and western boundaries, and a wetland area to the south eastern corner. The remaining land is either constrained by existing infrastructure (e.g. pylons, cables) or is required for further development in the future and therefore should not be further constrained limiting the ability for other customers to connect to this site in the future. This statement is supplemented with a plan at <b>Appendix 4</b> of this document.</p> <p>iii) The Applicant confirms consideration continues to be given to a number of options to satisfy Boston Borough Council’s concerns</p>
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			<p>that the replacement tree planting being provided on the Energy Park is not adequate because it is not within BBC's area.</p> <p>These include planting along the southern boundary of National Grid Bicker Fen Substation in the highway verge. This would need to be agreed with Lincolnshire County Council highways. This area is not large enough to replicate the total area of planting loss at National Grid Bicker Fen Substation and has not been progressed to date although this remains possible if agreement can be reached that it would satisfy BBC (which to date they have indicated it would not).</p> <p>The land noted by Black Sluice Internal Drainage Board at Issue Specific Hearing 2 on the 20<sup>th</sup> September 2023 for potential plantation is already underway and the trees will be funded by a grant, as such this cannot be progressed and a contribution to help maintain the new woodland is not likely satisfy BBC's requirements.</p> <p>A further option is a designated tree planting charity, for example Boston Woods Trust. The Trust confirms they only plant trees close to Boston, and when they have sufficient land available to them. BBC consider that this location is too far away to be associated with the loss of trees at National Grid Bicker Fen Substation.</p> <p>The Applicant continues to explore options to satisfy the request of Boston Borough Council but would reiterate that planting is included in the Energy Park within a separate woodland parcel and within hedgerows on the northern boundary which will replace the tree loss at the Bicker Fen Substation when considering the project as a whole.</p>
BIO 1.3	Forestry Commission	The Forestry Commission in their Relevant Representation (RR) [RR-010] note that there are no plans to remove any trees within the site, however since then the accepted Change Application [PS-003 to PS-153] includes an area of woodland removal at Bicker Fen	

		<p>Substation as shown on the Landscape Strategy Plan [PS-091].</p> <p>The Change Consultation Report [PS-004] submitted with the Change Application includes at Table 5.3 comments from the Forestry Commission with recommendations for additional compensation planting as well as management of the existing plantation. The Applicant has provided comments in response within the Table 5.3.</p> <p>Do the Forestry Commission have any further comments to make in relation to this matter?</p>	
BIO 1.4	The Applicant	<p>A community orchard is shown on the Landscape Strategy Plan [PS-091] to the south west of the energy park, alongside Elm Grange.</p> <p>The Applicant is asked:</p> <ul style="list-style-type: none"> <li>i) How the community orchard would be secured in the long term.</li> <li>ii) Who would use the orchard, and how would it be accessed by the community – access and parking arrangements etc.</li> </ul>	<ul style="list-style-type: none"> <li>i) The Community Orchard is secured through new Requirement 21 which provides as follows: <ul style="list-style-type: none"> <li><b>Requirement 21.</b>—(1) <i>Prior to the construction of the community orchard, the undertaker must submit the community orchard details to North Kesteven District Council for approval, such details to cover—</i> <ul style="list-style-type: none"> <li>i. <i>location and layout, the number, species, size and planting density of any proposed planting including details of any proposed tree planting and the proposed times of such planting of the community orchard, to be substantially in accordance with the plans contained within the outline landscape ecological management plan; and</i></li> <li>ii. <i>the maintenance regime for the community orchard.</i></li> </ul> </li> <li>b. <i>The community orchard must be provided within six months of the date of final commissioning of the last phase of Work No. 1.</i></li> <li>c. <i>The community orchard must be provided and maintained in accordance with the approved maintenance regime.</i></li> </ul> </li> </ul>



			<p>This Requirement 21 is reflected in the updated <b>Draft Development Consent Order</b> submitted at Deadline 2. The community orchard will not be decommissioned at the end of the life of the proposed development as confirmed by Requirement 18 (as updated at Deadline 2).</p> <p>ii) The community orchard is located in close proximity to Build-A-Future East Heckington, located at Elm Grange. The pupils would be able to access the community orchard for outdoor learning. Furthermore, the community orchard would be accessible from the permissive path, which connects to the public rights of way network. A fence around the community orchard is likely, which will include gates at appropriate locations. A car park is not proposed so to not encourage vehicle use for recreational activities and so access to the retained barns and farming equipment is secure. However, a small area of hardstanding is available and in agreement from the landowner this can be used should vehicles need to visit the community orchard, examples could be working groups tending to the trees, or students from further afield. To access the community orchard from the south a gate is in place, and this will remain due to the barns and agricultural land outside of the Order Limits. To ensure security of these elements a combination lock will be utilised and shared with visitors who are agreed in advance.</p>
BIO 1.5	The Applicant	<p>Table 6.10 of ES Chapter 6 (Landscape and Visual) [PS-059] and Table 19.1 within ES Chapter 19 (Summary) [PS-079] report a major beneficial effect on tree and hedgerow resource within the Energy Park site for the construction phase. However, paragraph 6.5.19 of ES Chapter 6 [PS-059] states that additional planting within the Energy Park site would offset woodland removal within the Bicker Fen Substation site and lead to a moderate beneficial effect. There is therefore discrepancy between the significance of the effect reported.</p>	<p>i) Table 6.10 of ES <b>Chapter 6 - Landscape and Visual</b> (document reference 6.1.6/ PS-059) refers only to the hedgerow resource within the Energy Park. The degree of effects has been assessed as Major Beneficial thus Significant, during the construction phase. The significance of effects has been determined based on the quantity of the new hedgerow resource being proposed in the context of the existing hedgerow resource within the Energy Park site and the extent of the Energy Park site. Pegasus' LVIA Methodology Appendix 6.1 (document reference 6.3.6.1/APP-177) Table 5 states that a high magnitude of change equals "Total (...)/gain of a landscape element." It is noted that GLVIA3 does not provide any advice in terms of how to assess the degree of change or significance in relation to landscape</p>

		<p>Could the Applicant:</p> <p>i) Clarify the significance of the residual effect on tree and hedgerow resource at the Energy Park site and how this has been determined.</p> <p>ii) If the effect on tree and hedgerow resource is not a major beneficial effect, the Applicant is asked to update paragraph 6.5.19 and Tables 6.10 and 19.1 accordingly.</p> <p>iii) Confirm whether the proposed tree and hedgerow planting heights within the Landscape Strategy Plan [PS-091] are the heights at which they would be planted during construction.</p> <p>iv) Considering this beneficial effect is reported for the construction phase, provide comment on the assumptions which have been made regarding the maturation of the vegetation within the 30-month construction period.</p>	<p>elements. For that reason, there is a degree of professional opinion and subjective assessment that comes into play. Table 6.10 does not refer to the tree resource during the construction phase. The quantum of the removed woodland at Bicker Fen Substation (approx. 4,000 sq m) has been judged against the quantum of the trees proposed elsewhere within the Order Limits, i.e., within the Energy Park (approx. 4,200 sq m and 55no of additional hedgerow trees) - Paragraph 6.5.19 of ES <b>Chapter 6 - Landscape and Visual</b> (document reference 6.1.6/ PS-059). On balance, this has been judged to result in moderate beneficial, yet not significant effects.</p> <p>ii) The Applicant confirms Table 6.10 of ES <b>Chapter 6 - Landscape and Visual</b> (document reference 6.1.6/PS-059) is correct and the effect on hedgerow resource is Major Beneficial, accordingly paragraph 6.5.19 and Tables 6.10 and 19.1 remain accurate and unchanged. Table 6.10 does not refer to the tree resource during the construction phase, as the effects were not deemed to be significant</p> <p>iii) Yes, correct. The Applicant confirms, the schedule provided in the tabular form on Sheet No: 2 of 2 of the <b>Landscape Strategy Plan</b> (document reference 6.2.6) indicates the specification and height of the proposed vegetation at the time of planting, in the first suitable planting season after the construction phase has been completed. In comparison, the description in the key indicates the anticipated management and height of the implemented vegetation when mature, to inform the assessment of residual visual effects.</p> <p>iv) The beneficial effects, including the residual beneficial effects, during the construction phase have been solely determined based on the quantum of the proposed vegetation, and not their maturity. The assumption is that the proposed planting would be implemented at the end of the 30-month construction period to allow for the worst case scenario. Assumptions consider that newly planted hedgerows, when managed and monitored correctly, will achieve maturity between 5 and 7 years after planting. DEFRA's BNG Metric applies a 'time to target condition'</p>
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			multiplier of 5 years for the creation of species rich native hedgerows in 'moderate' condition.
BIO 1.6	The Applicant and Natural England	<p>Natural England's (NE) RR [RR-019] refers to further information being required regarding potential protected species licences and the Applicant's response [REP1-022] and section 7 of the draft Statement of Common Ground (SoCG) [REP1-016] indicates that they are working with NE to obtain a Letter of No Impediment.</p> <p>Could the Applicant and NE provide an update with timescales for submission and any further comments that they wish to make on this matter.</p>	The Applicant confirms a preliminary meeting with Natural England has been held and a contract drawn up. The Applicant is awaiting a revised contract from Natural England for them to assist in undertaking this work. The licences typically take 30 working days to complete, it is expected this will be completed prior to the end of the examination.
BIO1.7	Natural England	<p>An update to the shadow Habitats Regulations Assessment [PS-041] was provided to reflect the Change Application.</p> <p>NE is asked to confirm if they agree with the Applicants' conclusions regarding the effects of the Change Application on European sites from all phases of the development, including in-combination effects.</p>	

**Table 3: Compulsory Acquisition and Temporary Possession**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
CA1.1	All Affected Persons	<p>APs are asked to provide comments on the following:</p> <p>i) If they are aware of any inaccuracies in the Book of Reference (BoR) [PS-034], Statement of Reasons (SoR) [PS-030] or Land Plans [PS-013]? If so, please set out what these are and provide the correct details.</p> <p>ii) Consideration of if there are any reasonable alternatives to any Compulsory Acquisition (CA) or Temporary Possession (TP) sought by the Applicant.</p> <p>iii) Confirmation if there are any areas of land or rights that the Applicant is seeking the powers to acquire that you consider are not needed.</p> <p>iv) Detail any other concerns which regard the legitimacy, proportionality or necessity of the CA or TP powers sought by the Applicant that would affect land that you own or have an interest in.</p>	
CA1.2	The Applicant	<p>Part 2 of the BoR [PS-034] lists 'Category 3' persons.</p> <p>The Applicants are asked to:</p>	<p>i) The Applicant has undertaken an exercise to review any persons who would or might be entitled to make a "relevant claim" as defined in Section 57(6) Planning Act 2008. The Applicant considered the likely impacts of the scheme and cross referred this assessment with the likely effects caused by the physical factors (noise, vibration, smell, fumes, smoke and artificial lighting and the discharge on to land of any solid or liquid substance) identified in the Environmental</p>

		<p>i) provide further detail/ justification of how you have identified such Category 3 parties for the purposes of the BoR.</p> <p>ii) detail efforts made to identify unknown parties.</p> <p>iii) clarify if there are any other persons who might be entitled to make a relevant claim if the DCO were to be made and fully implemented and should therefore be added as Category 3 parties to the BoR?</p> <p>This could include, but not be limited to, those that have provided representations on, or have interests in:</p> <ul style="list-style-type: none"> <li>• noise, vibration, smell, fumes, smoke or artificial lighting;</li> <li>• the effect of construction or operation of the Proposed Development on property values or rental incomes;</li> <li>• concerns about subsidence or settlement;</li> <li>• claims that someone would need to be temporarily or permanently relocated;</li> <li>• impacts on a business;</li> <li>• loss of rights, eg to a parking space or access to a private property;</li> <li>• concerns about project financing;</li> <li>• claims that there are viable alternatives; or</li> <li>• blight.</li> </ul>	<p>Statement and further in respect of the <b>Statement in Respect of Statutory Nuisance</b> (document reference 5.3/APP-050), together with any likely claims for injurious affection not related to potential claims from Category 1 and Category 2 persons.</p> <p>ii) There are a number of potential Category 3 interests in the land that are referred to on Land Registry titles where the parties are not listed. These are generally in relation historic rights granted by conveyances from pre 1990. Where they are available, the Applicant has obtained copies of such conveyances from the Land Registry and tried to identify unknown parties. Where the Applicant has managed to identify such parties, the process outlined in i) above has been continued. In a lot of cases, the Land Registry do not hold copies of these historic conveyances and the Applicant has been unable to establish the beneficiaries or the nature of the rights reserved, hence why they remain in the <b>Book of Reference</b> (document reference 4.3/PS-034). as potential Category 3 interests. Where interests in the land could not be identified through the diligent enquiry process, site notices were erected on the land requesting anyone with an interest in the parcel of land get in touch with the project team via the signposted contact details provided. These notices were left in place for a minimum of five weeks, unless the land interest was confirmed. A total of 11 site notices were erected in July 2022, with a further 17 notices erected in January 2023 following the identification of further small plots of land with unknown ownership, primarily due to the plotting of the full extent of the adopted highway. A further 14 unknown interest site notices were erected in April 2023. No responses were received to any of the site notices erected.</p> <p>iii) Having undertaken the review process noted above, the Applicant does not believe that there are any Category 3 persons that are not otherwise noted in the <b>Book of Reference</b> (document reference 4.3/PS-034).</p>
CA1.3	Lincolnshire County Council	Are Lincolnshire County Council (LCC) in their role as the Highway Authority aware of:	

		<p>i) any reasonable alternatives to CA or TP sought by the Applicant; and</p> <p>ii) any areas of land or rights that the Applicant is seeking the powers to acquire that they consider would not be needed?</p>	
CA1.4	The Applicant	<p>The SoR [PS-030] states at paragraph 6.1.25 that the Applicant is now not seeking CA powers to secure any freehold rights over the solar park.</p> <p>Could the Applicant provide further explanation as to why this has changed since the initial submission of the BoR and Land Plans, and confirm that only CA of rights are sought for the Proposed Development.</p>	<p>To clarify, the Applicant has not changed its position in respect of rights over the solar park. The <b>Statement of Reasons</b> (document reference 4.1/PS-030) confirms the position extant at the date of submission, which is that an option agreement is in place to secure the rights to construct and maintain the Proposed Development. The only rights sought over the solar park are the rights to extinguish any third party rights that interfere with the right to construct and operate the solar park.</p> <p>The change in rights sought relate to the rights over Bicker Fen Substation. At submission the Applicant sought freehold rights over a parcel of land at the existing substation to construct the extension to the Bicker Fen Substation. Following engagement with National Grid and agreement on the changes needed at Bicker Fen Substation (subject to the now accepted Change Request) the Applicant is no longer seeking to secure freehold rights over the Bicker Fen Substation.</p>
CA1.5	The Applicant	<p>The Applicant is asked to confirm if any land or rights acquisitions would be required in addition to those sought through the dDCO before the Proposed Development could become operational.</p>	<p>With the exception of the rights over the Energy Park which are held under an option for lease and the rights agreed with National Grid in respect of Bicker Fen Substation noted above, there are no other land or rights acquisitions are required before the development could become operational that are not detailed in the <b>Book of Reference</b> (document reference 4.3/PS-034) and sought through the DCO.</p>
CA1.6	Environment Agency	<p>The draft SoCG with the Environment Agency (EA) [REP1-004] notes that the parties are negotiating Heads of Terms with a view to entering into an option for an Easement agreement.</p> <p>The Schedule of Negotiations with Statutory Undertakers and Landowners v3 [PS-036] states that the Applicant is hopeful that the</p>	

		<p>necessary rights can be acquired by voluntary agreement, and that concerns relating to plots 63A, 63B and 72 have been addressed by the agreement of protective provisions.</p> <p>Could the EA provide an update regarding this matter and set out any further comments relating to CA and TP of rights.</p>	
CA1.7	The Applicant	<p>Revision 3 of the Schedule of Negotiations with Undertakers and Landowners [REP1-004] now includes ‘next steps’ and an estimated timescale for agreements. The majority of entries state ‘Estimated completion January 2024’.</p> <p>Could the Applicant:</p> <p>i) Confirm if this timescale is realistic and if there is a likelihood of any agreements being reached earlier than January, given that the final deadline for submission of the final Schedule and related documents into the Examination is set in the timetable as 13 February 2024?</p> <p>ii) Specify if any agreements likely to slip beyond this date.</p>	<p>i) The Applicant is aware of its obligation when seeking compulsory purchase powers to provide evidence that meaningful attempts at negotiation have been pursued or at least genuinely attempted. The Applicant has sought to engage with all interested parties and considers that the timescale is realistic at the time of writing (October 2023) and that some agreements will be completed prior to January 2023 where commercial terms can be agreed expeditiously. The examination timetable has been made clear to all interested parties that the Applicant is in negotiation with.</p> <p>ii) The timescale is dependent on third parties agreeing commercial terms and therefore cannot be guaranteed. The Applicant considers that some parties may elect to wait until CPO powers are authorised in the DCO before instructing solicitors in the legal process, but the Applicant will continue to use all reasonable endeavours to secure the majority of agreements before the end of the examination period.</p>
CA1.8	The Applicant	<p>Numerous landowner entries in the BoR [PS-034] are noted as belonging to a ‘Land Interest Group’ with the intention on producing a consistent set of heads of terms for the Option for Easements required and agreeing terms of entry for ongoing surveys within the Order Limits. Could the Applicant summarise who makes up this group and their land interests, and whether agreements would be consistently submitted to the Examination?</p>	<p>The “Land Interest Group” (LIG) is made up of landowners, their land agents, some of the tenants, occupiers and their land agents. There are sixteen land titles along the cable route, covering 108 different interests within the <b>Book of Reference</b> (document reference 4.3/PS-034) that are within the LIG. These include all private landowners with which the Applicant is seeking option for easement rights and some (but not all) of the tenants / occupiers. These private landowners are represented by six different land agents from three different firms of chartered surveyors. The specific plots / interests covered by the LIG are:</p>



			<p>60A, 60B, 60C, 285 (subsoil), 333 (riparian), 124, 248 (riparian), 269 (riparian), 293A (subsoil), 109A, 109B, 347 (subsoil), 104A, 104B, 104C, 104D, 104E, 295 (subsoil), 347 (subsoil), 348 (subsoil), 322 (riparian), 324 (riparian), 323 (riparian), 329 (riparian), 346 (riparian), 107A, 107B, 173 (riparian), 325 (riparian), 326 (riparian), 265 (riparian), 348 (subsoil), 108A (tenant), 108B (tenant), 108C (tenant), 100A, 100B, 266A (riparian), 266B (riparian), 329 (riparian), 89, 90 (In respect of a right of way), 76B, 304, 334, 284 (subsoil and adopted highway), 288 (subsoil and adopted highway), 285 (subsoil and adopted highway), 64 (In respect of any rights reserved by a Transfer dated 29.01.2021), 76A, 307, 101A, 101B, 101C, 99D (In respect of a right of way), 99E (In respect of a right of way), 255 (riparian), 266B (riparian), 266A (riparian), 346 (riparian), 108A, 108B, 108C, 265 (riparian), 295 (riparian), 94, 312, 316 (riparian), 97 (In respect of rights reserved by transfer dated 03.12.2019), 293B (subsoil), 345 (riparian), 75A, 75B, 75C, 75E, 75F, 75G, 75H, 75J, 274, 75D, 75I, 269 (riparian), 345 (riparian), 273 (In respect of rights and an option to purchase contained within transfer dated 26.08.2020), 301 (riparian), 184, 293A (subsoil), 293B (subsoil), 66A, 68A, 68B, 68D, 68E, 68F, 12, 66B, 68C, 67A &amp; 67B &amp; 67C &amp; 67D (In respect of rights reserved by transfer of land dated 08.06.2018), 69 (In respect of rights and a right of way), 284 (subsoil), 288 (subsoil), 302A (riparian), 303 (riparian), 302B (riparian).</p> <p>It is understood that the LIG was formed to ensure there was parity between all landowners and occupiers along the cable route and it is on that basis that the Applicant has been working with the LIG, negotiating a uniform set of commercial terms that apply to all parties represented by the LIG.</p> <p>The parties not represented by the LIG are those commercial landowners to which protective provisions and statements of common ground will apply.</p> <p>The Applicant will update the Examining Authority during Examination, as and when it reaches a formal written agreement with each land interest within the Land Interest Group. The Applicant expects to do this through each update to the Schedule of Negotiations at the relevant deadlines.</p>
CA1.9	The Applicant and Crown Estate	The ExA notes that revision 3 of the Schedule of Negotiations with Undertakers and Landowners [REP1-004] states that a verbal agreement to grant a lease covering the mineral rights is subject to the Crown Estate's	Section 135 Planning Act 2008 governs Crown Estate land and compulsory acquisition of interest in such land. Paragraph 2 of Annex B in the Planning Act 2008: Guidance related to Procedures for the Compulsory Acquisition of Land, in relation to Crown Estate interests, and states that the Secretary of State is unable to include in the DCO powers of compulsory purchase of an interest in





		<p>final approval. The document estimates completion by January 2024.</p> <p>Could the Applicant provide details of action to be taken in the event that Crown consent is not received before the close of the Examination.</p>	<p>Crown Land until such time as the Applicant has the written approval of the relevant Crown authority.</p> <p>There are two separate Crown bodies that hold interest in land affected by the Proposed Development. The Crown Estate own minerals interests within the solar park and a freehold interest in land adjacent to the South Forty Foot Drain.</p> <p>The Applicant is seeking agreement with the Crown Estate to acquire such interests over Crown Estate land as are necessary to carry out the Proposed Development. The Guidance (noted above) states that Crown authorities are expected to do all they reasonably can to ensure an early resolution of any Crown consent needed and that the Crown authority should also provide an early view on any issues that will need to be resolved if their consent is to be granted. The Applicant has not been given any indication by the Crown authorities that agreement will not be reached and remains confident that agreement will be reached in time for close of the inquiry but also highlights below that engagement to date from the Crown Estate has not been satisfactory.</p> <p>The second Crown interest is held by the Duchy of Lancaster (per Section 135(4)(a) Planning Act 2008) (plots 184, 293A and 293B) who are part of the LIG noted above and agreement should be reached in good time before the close of the Examination.</p> <p>The current absence of written Crown Estate consent is not due to any specific issues that we are not able to resolve. The current absence is due to the Applicant not receiving any response at all for a very long time in response to its contact.</p> <p>The Applicant has been in contact with the Crown Estate, since 2021 and more recently, have been in contact with the Crowns agents (Carter Jonas) every week chasing an update on the Crowns response to the issued Heads of Terms. Currently, the Applicant is still waiting for a response from the Crown's legal team on the Heads of Terms for both the Option for Easement and Mineral Rights Lease.</p> <p>The Applicant is hopeful that progress will be made during the Examination period as it will keep up its weekly chasers of the Crown Estate agents and also increase its frequency of contact to a few times a week where necessary.</p>
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			<p>The Lands Team within the Pegasus Group has a dedicated individual who is tasked with this specific action.</p> <p>Carter Jonas is appointed as the agents for the Crown Estate, and the consistent update provided by them each time the Applicant chases for action, is that they are still waiting for instructions from the Crown Estate. No further explanation is provided or alternative suggestion is offered as to how this can be expedited.</p> <p>As a response from the Crown Estate is out of the Applicant's control, the Applicant would invite the Examining Authority to please raise a direct question please to the Crown Estate in her next round of Written Questions, to ask them to explain the delay and what actions they will take to engage more with the Applicant.</p> <p>In the event that written Crown consent is not received before the close of the Examination, the action the Applicant plans to take is to increase the frequency of its chasers into multiple daily chasers of Carter Jonas by phone and email. Other than this, there will be nothing more the Applicant is realistically able to do in the face of complete non-response.</p>
CA1.10	The Applicant	<p>Paragraph 2.1.11 of the Funding Statement [PS-032] refers to a 'turnkey full EPC contract'.</p> <p>Could the Applicant provide an explanation of what is meant by this.</p>	<p>The Applicant confirms the paragraph in the Funding Statement (document reference 4.2/PS-032) should read: "<i>The Ecotricity Group would look to construct, operate and decommission the proposed development under a turnkey <u>or</u> full EPC contract. The Ecotricity Group would also provide the appropriate guarantees to any external investors and would retain control of the construction, operation and decommissioning stages of the proposed development's lifecycle and would be involved in the long term.</i>"</p> <p>The terms 'turnkey' and 'EPC' are similar but not the same, and differences relate to the level of involvement the Applicant has in the engineering, procurement and construction of a project. Since the <b>Funding Statement</b> (document reference 4.2/PS-032) was written the procurement element of the project has progressed with pre-qualification questionnaires being received from parties who may build the site. An EPC contract which covers the Engineering, Procurement and Construction of the project, with the client providing some basic design information is looking like a preference at this time. The turnkey scenario would see a contractor start-up and take over the project, handing 'over the key' at the end.</p>



			The Applicant has updated the <b>Funding Statement</b> (document reference 4.2/PS-032) in line with the above and submitted this document at Deadline2.
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**Table 4: Design, Landscape and Visual**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
DLV 1.1	The Applicant	<p>Section 2 of the Design and Access Statement (DAS) [PS-144] refers to the policy context in terms of good design. Has the Applicant considered:</p> <p>i) the National Model Design Code January 2021;</p> <p>ii) the National Infrastructure Commission Design Principles for National Infrastructure NIC design; and</p> <p>iii) Use of a design approach statement, design champion and/or design review panel</p> <p>The Applicants are subsequently asked to:</p> <p>iv) confirm the relevance of the above to the Proposed Development; and</p> <p>v) demonstrate how these principles have been taken into account in design work to date and how they will be used in future detailed design of the Proposed Development, specifically the:</p> <ul style="list-style-type: none"> <li>- Solar panels and associated equipment</li> <li>- On-site substations and associated equipment and structures</li> <li>- Extension to Bicker Fen substation</li> <li>- Energy storage facility</li> <li>- Boundary treatments</li> </ul>	<p>i) Whilst not expressly referred to within the <b>Design and Access Statement</b> (document reference 7.4/PS-144) the Principles within the Guidance Note of the National Model Design Code have been applied, where relevant, within the development of the design of the Site as presented within the application. It should be noted that there is an updated version of the National Model Design Code, dated June 2021. This later version (June 2021) has been used as the reference for drafting this response to the ExA. The design principles of the Proposed Development are within the <b>Outline Design Principles</b> (document reference 7.1) The National Model Design Code breaks the design principles of a site down into 11No. key topic areas. Of these 11No. key topic areas, most have a focus towards design of new residential developments rather than National Infrastructure Sites. For a solar and energy storage site technical/engineering requirements of the site will need to be considered within the design to ensure that its energy generation and storage capacities are maximised. These design constraints include items such as levels of solar irradiation and shading, topography and distance to the Grid Point of Connection (POC). These design constraints are discussed in the Environmental Statement (ES) <b>Chapter 3: Site Description, Site Selection and Iterative Design Process</b> section 3.3 (document reference 6.1.3/PS-053). Key Topic areas of the National Model Design Code which have limited relevance to the design of Heckington Fen include Movement, Built Form, Identity, Homes and Buildings and Lifespan.</p> <p>Within the first section of the Guidance Note of the National Model Design Code seeks consideration of the Context of the Site. The Code checklist summarises the Context to two main topics, that of Character and Cultural Heritage. The matrix tools suggested within the Code have not been followed as they are not applicable in the context that the Code suggests. However, both Character and</p>

		<p>- Hard and soft landscaping</p>	<p>Cultural Heritage have been considered within the design. The current Character of the area of land within the Order Limits was considered at the start of the design process and has remained a key pillar within the iterative design process for the Proposed Development. Each of the ES chapters outlines the key characteristics of the Proposed Development within the baseline sections of their chapters. These chapters also state any survey assessment work that has been undertaken to develop this baseline. The same principles have been considered for Cultural Heritage which considered known heritage assets and Conservation Areas in the local area. For Cultural Heritage this can be seen in Sections 10.3 and 10.4 of <b>Chapter 10: Cultural Heritage</b> (document reference 6.1.10/APP-063).</p> <p>The Code's third topic to be considered within design is Nature. The Code seeks to ensure that design of a site considers Green Infrastructure, Water and Drainage and Biodiversity. All three of these elements have been considered in the design and assessment process for this Site. For Green Infrastructure the Code talks about Open Space, children's play areas and green corridors, none of which are relevant for an infrastructure development. However, where possible within this infrastructure project enhancements to the green infrastructure have been made. For example, the planting of new hedges within the Energy Park Site, the creation of the Community Orchard and the new tree enhancement planting in the northern section of the Energy Park to replace the felling of the plantation woodland at Bicker Fen National Grid Substation. All of these Green Infrastructure enhancements can be seen on Landscape Strategy Plan within the <b>oLEMP</b> (document reference 7.7/PS-148).</p> <p>Water and Drainage has been considered through the design of the Site. The Site sits within Flood Zone 2/3 land and therefore to enable progression of this development a Sequential Test was completed. This can be found as Appendix D to the <b>Flood Risk Assessment</b> (document reference APP-203-204). Detailed hydrological modelling of the Energy Park site was undertaken, with the methodology for this work being agreed with the Environment Agency. The Drainage Strategy of the Site was developed from this hydrological modelling and again is included within the appendices of the Flood Risk</p>
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			<p>Assessment (document reference: APP-203-204). The Site has many existing drainage ditches which cross it. These are managed by both Black Sluice Internal Drainage Board and the Landowner on behalf of the Lead Local Flood Authority (LCC). Early consultation with these bodies ensured that the necessary offsets from these ditches were applied to the design of the Energy Park.</p> <p>Biodiversity has also been considered with Biological Net Gain (BNG) Government Policy. The Guide seeks the implementation of this policy. The Applicant can confirm that this Policy of 10% BNG has been achieved by this Proposed Development. The BNG assessment has been updated to use Metric 4.0 at Deadline 2. This is confirming that the design presented in the Landscape Strategy Plan within the oLEMP (document reference 7.7/PS-148) offers over 100% BNG with the draft DCO confirming 60% BNG in habitat units. The design has also worked to retain the natural features within the Site. The only area of existing tree/hedge/scrub planting which is confirmed to be removed is at the land at Bicker Fen National Grid Substation. The extent of the removal of these natural features is outlined in section 4.5.51 onwards of <b>Chapter 4- Proposed Development</b> (document reference PS-055). The removal of the plantation woodland and scrub at Bicker Fen is replaced with enhancement planting within the Energy Site. The extent of the removal and the enhancement planting is stated within paragraphs 2.1-2.18 of the oLEMP (document reference 7.7/PS-148).</p> <p>The relevance of the Code's section on Public Space for the Proposed Development is limited to check list point P.3 only. This section wishes design to consider people's feeling of safety and reduction of incidents of crime and consideration of guidance on proportionate security measures. The Energy Park includes security fencing and CCTV. Paragraph 4.5.4 within <b>Chapter 4: Proposed Development</b> (document reference PS-055) outlines the need and extent of CCTV cameras and the security fence. The length of the fence will be approximately 44.5km, with approximately 620 CCTV camera located just inside it. Any lighting for the operation of these CCTV cameras at night will be infra-red. It is not proposed to have any lighting along the route of the permissive path or within the Community Orchard. The permissive path will be operated as most</p>
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			<p>PROW within the UK which are not lit. The management of the Community Orchard will have controlled access, which will serve to stop access at night time, hence no lighting to the community orchard is proposed.</p> <p>The Code's section on 'Use' has limited relevance to the design of an infrastructure project. Section U.3 which seeks consideration of the design and location of community facilities has been considered in the design of the Energy Park. Early consultation with the Local Authorities on the Proposed Development showed that there was a general wish for an increase in the opportunities for the public to access and roam the countryside within the County. The location of the permissive path links to the existing HECK/15/1 path and acts as an extension, for the lifetime of the Proposed Development, to this PROW. The location of the Community Orchard was chosen due to its proximity to the educational facility called 'Build-A-Future East Heckington' which is located close to the southwestern boundary of the Site. As stated within paragraph 4.8.2 <b>Chapter 4: Proposed Development</b> (document reference: PS-055) it is hoped that students at this educational facility will utilise this orchard within their education, and so proximity to the facility was an important consideration.</p> <p>The Code's section of Resources focuses on how development can achieve energy standards, use renewable energy and the whole life carbon targets of the development. As the Proposed Development is for the generation of renewable energy and storage of energy many of these design considerations are not relevant. However, <b>Chapter 13: Climate Change</b> (document reference PS-071) assesses the whole life cycle of GHG emissions for the Proposed Development. Table 13.12 of the Climate Change Chapter states the whole life cycle of the GHG emissions of the Proposed Development, and the assessment concludes in paragraph 13.3.101 that over the lifetime of the Proposed Development there would be a total saving of 1,317,000tCO<sub>2</sub>e.</p> <p>ii) The Principles of National Infrastructure Commission Design Principles for National Infrastructure NIC design have been considered in the design process for this Site. This document breaks</p>
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			<p>down the design principles for national infrastructure into 4No. categories. These are Climate, People, Places and Value. For each of these categories the design principles seeks the applicant to ‘appreciate the wider context’, ‘engage meaningfully’ and ‘continually measure and improve’. As an example, all three of these design principles have been achieved by the Proposed Development and has assessed the whole life cycle of emissions for its full lifespan.</p> <p>iii) During the pre-submission design process an internal design review panel was used to consider design changes are key milestones of the project. The panel consisted of experts from each of the technical fields within the Environmental Statement, DCO legal experts, land agents and the public relations team who were involved in the engagement with the local community. Within the review panel proposed alterations to the design of the Energy Park or extent of the Order Limits were considered ‘in the round’ with the aim to progress a Site Design that could be implemented and lead to minimal significant environmental effects.</p> <p>iv) The National Design Code June 2021, holds limited relevance to this Proposed Development as the focus of that design code is on new residential development rather than infrastructure. The NIC Design Principles hold greater relevance to the design of the Proposed Development and have been used when considering the design of the Proposed Development from its conception and ongoing through the Examination process. A design review panel was a relevant tool in the pre-submission stages of the DCO consent. Now that the DCO application is within the Examination stage the relevance of a formal design panel is less. The time constraints within the Examination process restrict the ability to formally meet and communally review all evidence and considerations as one singular group. All members of the design review panel are still asked to consider and assess design changes as the DCO application moves through the Examination, however all feedback is now formally opined upon by a Design Committee which is comprised of the EIA co-ordinators, the DCO legal experts and the Applicant.</p> <p>v) With regard to how these principles have been taken into account in design work to date, in general, the indicative design for the Energy</p>
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			<p>Park is shown in <b>Figure 2.1 Indicative Site Layout</b> (APP-078). This has been developed through a series of design iterations which are outlined within the same document at Table 3.2: Main Design Iterations for the Energy Park Site, which can be found within Chapter 3: Site Description (PS-053). These design iterations were considered by the internal design review panel as well as being consulted upon during the statutory and non-statutory consultation processes. The indicative design within Figure 2.1 (APP-078) uses the design parameters assessed within the EIA. A whole life cycle assessment for the Energy Park and associated equipment has been completed and is included within <b>Chapter 13: Climate Change</b> (PS-071). This assessment was also completed at the PEIR stage and presented in the statutory consultation in summer 2022.</p> <p>In terms of the solar panels and associated equipment, this iterative design process shows how detailed hydrological modelling of the Energy Park site and the Environment Agency's requirement for an operational Energy Park in a 1 in 1,000 year + 20% flood event has determined the height of the fixed solar panel design. This operational requirement was a limitation for using a solar tracker panel system as this was not possible due to engineering limitations. The solar tracker system was assessed and formally consulted upon. The onsite substation design is a single 400kV option. Previous design iterations considered 5No. 132kV substations in various locations around the Site. Electrical engineering advice showed that that a single 400kV substation was the optimal design for minimising electrical losses generated by the solar panels. Energy Storage options also considered various locations within the southeastern sections of the Site as shown in Figure 3.2 (APP-083) and Figure 3.3 (APP-084).</p> <p>In terms of the onsite substations and associated equipment and structures, and the energy storage facility the findings from the noise assessment for the layout within Figure 3.3 (APP-084) showed the possibility of operational noise exceedances for some nearby residential receptors. To mitigate this possible operational effect, the energy storage system was relocated to the location shown within Works No.2. Due to existing screening from trees/scrubs and derelict buildings the decision was made to combine the energy</p>
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			<p>storage and onsite substation into one area on the Energy Park site. Thereby reducing the visual effects of these elements of the Energy Park. During the statutory consultation in summer 2022 the Applicant also engaged with the Local Fire Authority to seek their views on the energy storage design as concern had been raised by the LPA's over the risk of battery fires. As a result of this consultation a plume assessment was completed and submitted in the <b>Outline Energy Storage Safety Management Plan</b> (document reference APP-242) to consider the directional implications of fumes if a fire occurred. There was also the addition of 10 water tanks (8 clean water, 2 foul water) and a lagoon. The details of these items are explained within <b>Chapter 4: Proposed Development</b> (PS-055) (paragraphs 4.5.21-4.5.25) and assessed within <b>Chapter 18: Miscellaneous Issues</b> (PS-077).</p> <p>With regard to the extension of the Bicker Fen Substation, NGET have determined the location of the Point of Connection (POC) for the Proposed Development at Bicker Fen. NGET have completed their own inhouse assessments to determine which bay should be allocated to this development. The bay which NGET determined is in the southwestern location of the existing infrastructure at Bicker Fen. The scope of the electrical equipment needed at Bicker Fen is set by NGET. They have defined the maximum extents of equipment needed. To date NGET have not completed their final detailed design for the extension at Bicker Fen this will not occur until post the SoS decision on this DCO consent.</p> <p><b>Chapter 3: Site Description, Site Selection and Iterative Design Process</b> (PS-053) (paragraph 3.2.10-3.2.15) outlines how the Order Limit area around Bicker Fen was reduced following statutory consultation on the advice on NGET. Following submission of the application a Change Application was needed to increase the Order Limits area again to include land that had previously been assessed in the PEIR and considered during statutory consultation. The Change Application also outlined two technology options (AIS and GIS) within Bicker Fen Substation. NGET will determine which they wish to progress. Both have been assessed within the EIA. The removal of the plantation woodland, which is needed for the extension of Bicker Fen, is being replaced with planting onsite within</p>
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			<p>the Energy Park. This has been assessed within the Change Application and its proposed location can be seen within the Landscape Strategy Plan of the <b>OLEMP</b> (PS-147).</p> <p>In terms of the boundary treatments, and hard and soft landscaping, the design of the Site has minimised the removal of any existing trees and hedgerows. The design of the Energy Park has placed internal access tracks through existing gaps in the hedges so that none needs to be removed. Mitigation to the visual effects of the Energy Park has been to allow existing vegetation to grow taller and plant considerable new lengths of hedge as boundary treatments. Following statutory consultation, the southern section of the Site was removed from the Order Limits to remove BMV land from being used for BNG. This resulted in further new boundary planting being proposed along the southern boundary. This proposed planting can be seen within the Landscape Framework Plan within the OLEMP. Boundary treatments have required security fencing. Both a metal mesh fence and deer fencing have been considered by the technical assessments in the EIA to ensure that a worst-case scenario was assessed. CCTV is close to the boundary fence, but cameras will face along the fence line to ensure that the impact of their operation is minimised. They will also use infrared light for night filming so that no bright security lighting is needed along the boundary.</p> <p>The design of the Energy Park site has strived to utilise existing farm tracks and so new hard landscaping is limited. The proposed access tracks are made up of a combination of new and existing farm tracks that will total 19km in length. Utilising the existing access tracks ensures that less new crushed stone is needed as well as ensuring that as much land as possible can remain within agricultural use for the lifetime of the development. Only the new primary access tracks will be of stone construction, temporary matting will be used for other internal access tracks. There will be a new permissive path which is designed as loop walk, which joins up with the existing PROW of HECK /15/1. This loop walk is 4km in length. There will be the reinstatement of 2No. footbridges along PROW HECK/15/1 as shown on <b>Figure 4.1f</b> (6.2.4/APP-107) which will enable users of the PROW to gain access to the permissive path. It is proposed that 2No. new culverts will be required within the Energy Park and 3No.</p>
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			<p>extensions to existing culverts. The locations of these culverts can be seen on the Appendix I Water Course Method Statement within the <b>oCEMP</b> (7.7/PS-146). These are needed to ensure the crossing can carry the load and accommodate the length and width of the construction vehicles. The community orchard is proposed within Works No. 9C the fruit tree density and species mix are within the outline LEMP.</p> <p>With regard to how these principles will be used in future detailed design, as can be seen from the Applicant's response to the ExA's First Written Question (DLV.1.1 iv) both of these Design Guides have limited relevance to the design of the Energy Park and extension at Bicker Fen substation as these elements of the proposal are equipment for the generation, storage and distribution of electricity. Therefore, the future detailed design of the solar panels, onsite substation, extension to Bicker Fen and the Energy Storage facility is constrained by manufacturer product design and the operational requirements linked to necessary H&amp;S for exporting electricity into the National Grid Infrastructure. The future detailed design of these elements will comply with the proposed design which is within the <b>Outline Design Principles</b> (document reference: 7.1). Requirement 6(2) in Schedule 2 of the dDCO requires the Applicant to comply with the Outline Design Principles document in relation to detailed design.</p> <p>The future detailed design of the vegetation boundary treatments and soft landscaping will be agreed in the final LEMP and will be maintained for the operational lifetime of the Proposed Development. Discussions with the Relevant Planning Authorities can continue to develop the final planting mix for climate resilience within the final LEMP. The future detailed design of these elements will comply with the proposed design which is within the <b>Outline LEMP</b> (document reference 7.7). Requirement 8 in Schedule 2 of the dDCO requires the Applicant to comply with the Outline LEMP document in relation to detailed design.</p>
DLV 1.2	Boston Borough Council	Can the RPAs provide comment:	

	<p>Lincolnshire County Council</p> <p>North Kesteven District Council</p>	<p>i) Do the DAS [PS-144], the Technical Guide [PS-045] and the Outline Design Principles Document (DPD) [PS-138] provide enough detail and a sufficient basis to guide detailed design development post consent? Are any further visuals or illustrative drawings required?</p> <p>ii) Is Requirement 6 of the dDCO [PS-024] sufficient to secure the detailed design of the structures listed at Tables 1.1 to 1.6 of the Outline DPD [PS-138]?</p> <p>iii) Do the RPAs have the necessary experience and expertise to take on the design approval post-consent, or would an external design review be necessary? If so, please could the RPAs indicate what additional support you believe would be required and from whom such support should come.</p>	
<p>DLV 1.3</p>	<p>The Applicant</p>	<p>Within ES Chapter 6 (Landscape and Visual) [PS-059] and ES Chapter 7 (Residential Visual Amenity) [PS-061] only major effects and above are considered significant. However, paragraph 2.10.11 of ES Chapter 2 (EIA Methodology and Consultation) [PS-051] states that major or moderate effects are considered significant. It is noted (paragraph 2.10.12) that this overarching methodology could differ per aspect-specific methodology, and paragraph 6.3.47 of ES Chapter 6 [PS-059] recognises that this is a “high bar”.</p> <p>Could the Applicant explain why a different approach has been used within ES Chapters 6 and 7 from the overarching ES methodology and why effects of moderate significance are</p>	<p>In relation to the first part of the question: ‘... why a different approach has been used within ES Chapters 6 and 7 from the overarching ES methodology...’ our responses are as follows:</p> <p>Neither EC Directive 2011/12/EU nor the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 define a threshold at which an effect may be determined to be significant. In certain other environmental disciplines, there are regulatory thresholds or quantitative standards which help to determine the threshold of what constitutes a significant effect.</p> <p>With reference to ES <b>Chapter 6 - Landscape and Visual</b> (document reference 6.1.6/ PS-059) Paragraph 6.3.44: <i>‘In LVIA, any judgement about what constitutes a significant effect is ostensibly a subjective opinion expressed as in this case by a competent and appropriately qualified professional assessor.’</i> In other words, it is for the expert consultant to determine their thresholds in a clear and logical way. <b>Appendix 6.1 - LVIA Methodology</b> (document reference 6.3.6.1/ APP-177) explains this.</p>

		<p>not considered as being significant with reference to relevant industry guidance.</p>	<p>In respect of the second part of the question ‘...why effects of moderate significance are not considered as being significant with reference to relevant industry guidance’, our responses are:</p> <p>Pegasus’ methodology has been written with regard to the current industry standards, namely The Guidelines on Landscape and Visual Impact Assessment 3<sup>rd</sup> Edition (GLVIA3).</p> <p>The GLVIA3 reiterates the subjective nature of the assessment of significant effects (its paragraph 3.32, page 40): <i>‘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 to be significant and non-significant effects.’</i></p> <p>The GLVIA3 goes on to say (its paragraph 5.56, page 92 and 93): <i>‘There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the location and landscape context and with the type of proposal. At opposite ends of a spectrum it is reasonable to say that:</i></p> <ul style="list-style-type: none"> <li>• <i>major loss or irreversible negative effects, over an extensive area, or element and/or aesthetic and perceptual aspect that are key to the character of nationally valued landscape are likely to be of the greatest significance; and</i></li> <li>• <i>reversible negative effects of short duration, over a restricted area, on elements and/or aesthetic and perceptual aspects that contribute to but are not key characteristics of landscape value are likely to be the least significant and may depending upon the circumstance, be judged as not significant. (...)</i></li> </ul> <p>Similarly, the overall significance of visual effects is a combination of the sensitivity of the visual receptor and the magnitude of the visual effects. GLVIA3 (its paragraph 6.44, page 116) clearly states that: <i>‘There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the location and context and with the type of proposal. In making a judgement about the significance of visual effects the following points should be noted:</i></p> <ul style="list-style-type: none"> <li>• <i>Effects on people who are particularly sensitive to changes on views and visual amenity are more likely to be significant;</i></li> </ul>
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			<ul style="list-style-type: none"> <li>• <i>Effects on people at recognised and important viewpoints or from recognised scenic routes are more likely to be significant; and</i></li> <li>• <i>Large-scale changes which introduce new, non-characteristic or discordant or intrusive elements into the view are more likely to be significant than small changes or changes involving features already present within the view.'</i></li> </ul> <p>GLVIA3 also notes at paragraph 6.42, page 115 that '<i>It is for each assessment to determine the approach...'</i>'.</p>
DLV 1.4	The Applicant	<p>Paragraph 4.5.44 of ES Chapter 4 [PS-055] states that during operation “No areas of the Proposed Development are proposed to be continuously lit” with lighting on sensors proposed for security purposes. Table 4.4 of ES Chapter 4 states that a design principle of the Onsite Substation (Work No.4) is that “Lighting would be triggered by movement only or manually turned on”. The information provided suggests a level of uncertainty around the frequency and duration for which lighting may be activated, and whether this is limited only to short periods being triggered by movement, or whether the potential exists for lighting to be activated manually and therefore over more constant or prolonged periods. A Lighting Strategy is not provided.</p> <p>Could the Applicant confirm:</p> <p>i) Whether lighting will be restricted solely to being triggered by movement and if so how this is to be secured.</p> <p>ii) If there are times at which lighting is to be activated manually: confirm the likely frequency of such events along with likely durations of lighting, and any limitations on</p>	<p>i. The Applicant confirms lighting will not be restricted to solely being triggered by movement. Motion detection security lighting will be in key areas (such as the onsite substation, energy storage area and gate entrance to the Proposed Development) to allow access for personnel before they manually turn the lighting on, to avoid permanent lighting. Any lighting will only be required at night or low light levels to ensure health and safety requirements are achieved. Further details on the use of lighting activated manually is set out in section ii) of this question response. The use of motion detection lighting is secured through <b>Appendix H Outline Artificial Light Emissions Plan</b> of the <b>Outline Construction Environmental Management Plan</b> (document reference 7.7). This details lighting requirements during construction, operation and decommissioning phase. The control of lighting is additionally secured in the <b>Outline Operational Environmental Management Plan</b> (document reference ExA.oOEMP-D2.V1).</p> <p>ii. During operation, no part of the Proposed Development will be continuously lit. Manually operated, and motion-detection lighting will be utilised for operational and security purposes around electrical infrastructure. Any lighting will be directed downward and away from boundaries. Lighting cannot be restricted to solely being triggered by movement, as in the event of an emergency or maintenance required in lower light levels, lighting will be manually turned on. Such events could occur during the winter months, or early morning or late afternoon, or overnight should an unexpected issue occur. No limitations are proposed in regard to the timing,</p>



		<p>the timing, frequency or duration of lighting that would be applied.</p> <p>iii) How any limitations on lighting would be secured through the DCO.</p>	<p>frequency or duration of lighting that would be applied in an event that would require lighting to be manually turned on.</p> <p>iii. Limitation on lighting is secured through the <b>Outline Design Principles</b> (document reference 7.1), <b>Appendix H Outline Artificial Light Emissions Plan</b> of the <b>Outline Construction Environmental Management Plan</b> (document reference 7.7) and the <b>Outline Operational Environmental Management Plan</b> (document reference ExA.oOEMP-D2.V1).</p>
DLV 1.5	The Applicant	<p>Paragraph 19.2.8 of ES Chapter 19 (Summary) [PS-079] notes that “prior to the implementation of the proposed mitigation measures, significant effects are not anticipated” in relation to residential visual amenity. However, paragraph 7.4.3 of ES Chapter 7 (Residential Visual Amenity) [PS-061] states that major adverse (significant) effects would occur at the residential properties listed. It is noted in paragraph 7.6.1 that following the implementation of the proposed additional mitigation measures significant effects would not occur at these residential properties.</p> <p>Considering the reliance on mitigation measures, the statement at paragraph 19.2.8 is incorrect. The Applicant is asked to update ES Chapter 19 to ensure it reflects the conclusions made within the ES aspect chapters.</p>	<p>The Applicant confirms <b>Chapter 19: Summary</b> (document reference 6.1.19/PS-079) has been updated, and a Revision 3 will be submitted at Deadline 2.</p> <p>The Applicant confirms a review of the most up to date revisions for all ES technical chapters (6-18) has been undertaken. Any omissions when listing technical chapters that have significant effects anticipated prior to mitigation has been updated. Accordingly, the update to <b>Chapter 19: Summary</b> (document reference 6.1.19/PS-079) details Residential Amenity, Cultural Heritage, Noise and Vibration and Glint and Glare have significant effects anticipated prior to mitigation, and the details have been updated in the relevant tables. It should be noted, the four aforementioned topics show with mitigation measures implemented, no significant residual effects are anticipated for the Proposed Development.</p> <p>Land Use and Agriculture has been removed from the list of technical disciplines to have significant effects prior to mitigation when assessing the Proposed Development on its own, due to the confirmation of significance thresholds set out in the Applicant’s response for question LUS 1.1. <b>Chapter 16: Land Use and Agriculture</b> (document reference 6.1.16, Revision 2) only has significant effects anticipated in relation to loss of agricultural land from cumulative projects, set out in the <b>ES Technical Note- Updated Information on Cumulative Projects</b> (document reference ExA.ESLN-Cumulative-D2.V1).</p>





**Table 5: Development Consent Order**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
DCO 1.1	<p>The Applicant</p> <p>Boston Borough Council</p> <p>Lincolnshire County Council</p> <p>North Kesteven District Council</p>	<p>At ISH1 the references to the individual RPAs in the dDCO [PS-024] was referred to in relation to numerous Articles and Schedules. The ExA understands that the Applicant is working with the RPAs to agree which authority is responsible for each of the individual discharge of requirements. References to individual consultees is also to be reviewed. The Applicant is asked to reflect this review and agreed wording with the RPAs in the D2 submission of the dDCO.</p>	<p>The Applicant has continued to engage with the RPAs following ISH1. The Applicant received comments from the RPAs on the draft DCO drafting on 29 September 2023 and the Applicant has subsequently held a meeting with the RPAs to discuss these matters.</p> <p>The Applicant has prepared a detailed response document to the comments from the RPAs, which is contained with the Deadline 2 submissions - <b>Applicant Response to RPA Comments on the Draft DCO</b> (document reference ExA.ResponseDCO-D2.V1). In summary, the Applicant has updated the draft DCO throughout to reflect the agreed position with the RPAs on the definition of the "relevant planning authority" and "county authority", as well as in respect of the relevant discharging authorities within Requirement 2 of the draft DCO.</p> <p>These updates are incorporated within Revision 4 of the draft DCO submitted with Deadline 2 (document reference 3.1).</p>
DCO 1.2	<p>National Gas Transmission Plc</p>	<p>The RR from National Gas Transmission Plc (NGT) [RR-016] raises a number of comments in relation to protection of apparatus including a high pressure gas transmission pipeline. The Applicant's response [REP1-019 and REP1-022] indicates that protective provisions have been agreed and that access to the pipeline and gas valve will remain for NGT, however the NGT's position is not yet included in the SoCG [REP1-013].</p> <p>Could NGT confirm if protective provisions in Schedule 13 Part 4 of the dDCO [PS-024] are agreed, and whether they wish to raise any</p>	

		<p>further comments in response to the Applicant.</p>	
DCO 1.3	National Grid Electricity Transmission Plc	<p>The RR from NGET [RR-017] raises a number of comments in relation to protection of apparatus and that they have entered into a connection agreement with the Applicant. The Applicant's response [REP1-019 and REP1-022] indicates that protective provisions have been agreed and that a grid connection agreement is in place.</p> <p>The SoCG [REP1-014] indicates that the agreed form of protective provisions are in version 3 of the dDCO [PS-024] and that discussions on commercial terms for the protection of NGET's assets are ongoing but expected to be concluded during the course of the Examination.</p> <p>Could NGET confirm if the protective provisions in Schedule 13 Part 7 of the dDCO [PS-024] are agreed, and provide an update on discussions regarding asset protection, highlighting any issues which remain outstanding.</p>	
DCO 1.4	National Grid Electricity Transmission Plc	<p>In the latest version of the dDCO received at D1 [PS-024] an additional Article (45) was added in relation to the NGET extension works.</p> <p>Could NGET:</p> <p>i) Explain the situation which might arise that would mean they need to apply for Work No's 6B or 6C under the Town and Country Planning Act 1990 or the General Permitted Development Order 2015.</p>	

		ii) Confirm if they are satisfied with the wording of Articles 32 and 45.	
DCO 1.5	Environment Agency	<p>The RR from the EA [RR-009] requests amendments and additions to the protective provisions in the dDCO [PS-024], and the Applicant's response [REP1-019 and REP1-022] states that protective provisions are now agreed and that the dDCO will be updated at D2. Point 6.5 of the draft SoCG with the EA [REP1-011] refers to the wording of Schedule 14 in terms of replacement of 'business day' with 'working days' and the time period for notification. The Applicant's response to this and their oral submissions to ISH1 [REP1-019] states that an amended wording will be reflected in the next deadline.</p> <p>Could the EA confirm if this would address their concerns, and whether they have other outstanding comments relating to the dDCO including the protective provisions at Schedule 13 Part 6 (previously Part 5).</p> <p>The EA may wish to combine their answer with WE.1.4</p>	
DCO 1.6	Network Rail Infrastructure Limited	<p>The RR from Network Rail [RR-001] refers to the need for adequate protective provisions and requirements to prevent adverse impacts to the railway. The Applicant has confirmed that they are in discussions with Network Rail on this matter.</p> <p>Could Network Rail confirm if protective provisions in Schedule 13 Part 9 of the dDCO [PS-024] are agreed, and whether they wish to raise any further comments.</p>	

DCO 1.7	The Applicant	<p>Schedule 13 Part 2 of the dDCO [PS-024] provides protective provisions for operators of electronic communications code networks. The BT Group Plc is included as a Category 2 and 3 party in the BoR [PS-034].</p> <p>The Applicant is asked to confirm if there are any other such operators likely to be affected and clarify to whom Part 2 would apply.</p>	<p>Vodafone Limited have identified themselves as an operator to whom Part 2 may apply. Vodafone contacted the Applicant about the impact of the Project on their assets on 19 April 2023 as part of the statutory consultation phase for the Project. Following this, the Applicant and Vodafone discussed via email the potential impact of the Project on Vodafone's assets over the course of April and May 2023. On 15 May 2023, Vodafone sent the Applicant correspondence which confirmed that the Project would not impact its assets. As part of the Change Application submitted on 25 August 2023, the Applicant further consulted Vodafone on the impact of the Project on its assets. As part of their response, Vodafone provided the Applicant with a list of Special Requirements. The Applicant intends to comply with the list of Special Requirements and Vodafone's requirements contained within it as part of the construction phase of the Project. In any event, both Vodafone and any third party asset operators with assets within the Project limits have the benefit of the general protective provisions for operators of electronic communications code networks included under Part 2 of Schedule 13 to the draft DCO.</p> <p>Part 2 of Schedule 13 imports Part 10 of the Communications Act 2003, meaning that the Applicant/"undertaker" must follow the process outlined under Part 10 of the 2003 Act when working in proximity to, or carrying out works to, electronic communications equipment. This is a familiar procedure for undertakers and operators – providing both a streamlined process for undertaker works as well as protections for operators.</p>
DCO 1.8	Black Sluice Internal Drainage Board	<p>Article 6 and Schedule 3 of the dDCO [PS-024] refer to a range of drainage legislation to be disapplied.</p> <p>Can the Black Sluice Internal Drainage Board (IDB) confirm:</p> <p>i) If you have any comments on the legislation to be disapplied</p> <p>ii) Is the list of drainage legislation at Schedule 3(1) a complete list, or do you consider any should be added or removed.</p>	

**Table 6: Historic Environment**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
HE 1.1	<p>The Applicant</p> <p>Boston Borough Council</p> <p>North Kesteven District Council</p>	<p>ES Chapter 10 [APP-063] includes assessment of heritage assets within a minimum area of 5km. Mill Green Farmhouse, the former Primitive Methodist Chapel, Elm Grange and the Rectory are surrounding buildings within the 5km assessment zone which have all been identified by the Applicant as non-designated heritage assets (NDHA) in the heritage desk-based assessment [APP-206]. The derelict cottages and barn of Six Hundreds Farm, the low boundary wall at Elm Grange, and the former drainage pump at Head Dike are identified as NDHAs within the order land.</p> <p>Could the Applicant:</p> <p>i) Label all of the above-mentioned buildings on a plan.</p> <p>ii) Explain the criteria and or/documentation that led them to identify these buildings as NDHAs.</p> <p>iii) Explain why only Mill Green Farmhouse was considered for further setting assessment but not the other NDHAs.</p> <p>Could NKDC and BBC:</p> <p>i) Confirm if you are in agreement with the identification of the above buildings as NDHAs and that only Mill Green Farmhouse should be considered for further assessment.</p>	<p>i) The following buildings form part of the ‘Monuments’ dataset held by the Lincolnshire Historic Environment Record:</p> <ul style="list-style-type: none"> <li>• Mill Green Farmhouse – HER MonUID MLI121988</li> <li>• Primitive Methodist Chapel – HER MonUID MLI85904</li> <li>• Elm Grange – HER MonUID MLI121956</li> <li>• Rectory – HER MonUID MLI121954</li> <li>• Six Hundreds Farm – HER MonUID MLI121951</li> </ul> <p>They are all marked and labelled with their HER reference number on Figure 4a of <b>Appendix 10.1- Heritage Desk-Based Assessment</b> (document reference 6.3.10/1APP-206).</p> <p>The following structures were not recorded by the Lincolnshire Historic Environment Record at the time the heritage desk-based assessment was prepared (2021), but were identified by the site walkover survey:</p> <ul style="list-style-type: none"> <li>• Low boundary wall at Elm Grange</li> <li>• Former drainage pump at Head Dike</li> </ul> <p>Photographs of these two structures were supplied in Appendices 4 and 6 of <b>Appendix 10.1- Heritage Desk-Based Assessment</b> (document reference 6.3.10/1APP-206).</p> <p>ii) A plan showing the locations of all of the above mentioned buildings and structures is provided at <b>Appendix 2</b>. Planning Practice Guidance (2019) defines non-designated heritage assets as follows:</p> <p><i>“Non-designated heritage assets are buildings, monuments, sites, places, areas or landscapes identified by plan-making bodies as having a degree of heritage significance meriting</i></p>

		<p>ii) Provide comment on the proposed mitigation set out in paragraph 10.6.2 of ES Chapter 10 [APP-063]</p>	<p><i>consideration in planning decisions but which do not meet the criteria for designated heritage assets.</i></p> <p><i>A substantial majority of buildings have little or no heritage significance and thus do not constitute heritage assets. Only a minority have enough heritage significance to merit identification as non-designated heritage assets.” Paragraph: 039 Reference ID: 18a-039-20190723.</i></p> <p>Although not every historic component recorded by the HER is necessarily a heritage asset, it was considered that the five buildings listed above should be considered non-designated heritage assets. This is on account of their perceived local significance as derived from their architectural and historic interest, which was presumably recognised when listed by the HER: a county-level organisation linked to plan-making bodies.</p> <p>Regarding the two structures, it was assumed that their existence might not have been known by the HER at the time <b>Appendix 10.1- Heritage Desk-Based Assessment</b> (document reference 6.3.10/1APP-206) was produced (2021) – especially as the drainage pump was not mentioned in the heritage assessments carried out between 2011-2014 for the previously-proposed wind farm.</p> <p>It was considered that given the boundary wall’s association with the recorded building (read heritage asset) of Elm Grange, it could likewise be identified as a heritage asset by the HER on behalf of plan-making bodies. It was considered that the drainage pump’s association with <i>“the historic archaeological and drainage landscape of the Fens”</i>, described in Policy 29 of the Central Lincolnshire Local Plan, should also warrant its identification as a heritage asset. It is less well-preserved than the Grade II Listed draining scoop wheel and channel at Spinney Farm, and so it is deemed a non-designated rather than a designated heritage asset.</p> <p>iii) An appropriate level of setting assessment was completed for Mill Green Farmhouse, Primitive Methodist Chapel, Elm Grange</p>
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			<p>(and by extension its wall), and Rectory. The latter three assets were not progressed beyond Step 1 as no potential sensitivity to the proposed development was identified; the Step 1 assessment is detailed and justified in paragraphs 6.38–6.41 of <b>Appendix 10.1- Heritage Desk-Based Assessment</b> (document reference 6.3.10/1APP-206). Mill Green was deemed potentially sensitive due to its historical and visual associations with the Energy Park and so was subject to Stages 1–4 setting assessment, presented in paragraphs 6.63–6.71 of <b>Appendix 10.1- Heritage Desk-Based Assessment</b> (document reference 6.3.10/1APP-206).</p> <p>A setting assessment was not carried out for the former drainage pump at Head Dike; this was an oversight. However, it is considered that the key elements of its setting contributing to its significance are its historic functional associations with the neighbouring Head Dike and the surrounding farmland that it was intended to drain. While the pump is currently in a poor state of preservation, having lost much of its machinery and housing, its position close to the dike and within flat, low-lying farmland renders its former function legible. The pump will be preserved as part of the Proposed Development and despite the introduction of solar infrastructure to the fields of the Energy Park, the wider agricultural landscape context will still be appreciable.</p>
HE 1.2	North Kesteven District Council Historic England	ES Chapter 10 [APP-063] includes a setting assessment of the Grade I listed Kyme Tower and it is concluded at paragraph 10.5.22 that there would be no harm to its significance. NKDC in their LIR [REP1-033] disagree, stating at paragraph 16.26 that ‘no views of the tower, or away from the tower, should be classed as ‘incidental’ and they assign a negative impact on its significance.	

		<p>i) Can NKDC explain further what contribution they consider the Site makes to the significance of the setting of Kyme Tower and why a negative impact would arise.</p> <p>ii) Can Historic England provide comment on both the Applicant's and NKDCs assessment of harm to Kyme Tower?</p>	
HE 1.3	The Applicant	<p>NKDC in their LIR [REP1-033] state at paragraph 16.21 that there is an apparent disjoint between ES Chapter 10 [APP-063] and the Outline Written Scheme of Investigation for Archaeological Mitigation [APP-245].</p> <p>Could the Applicant provide clarification and amend ES Chapter 10 as necessary.</p>	<p>The discrepancies between <b>Chapter 10: Cultural Heritage</b> (document reference 6.1.10/APP-063), <b>Figure 10.4 - Energy Park Archaeological Mitigation Areas</b> (document reference 6.2.10/ APP-162) and the <b>Outline Written Scheme of Investigation for Archaeological Mitigation</b> (document reference 7.14/ APP-162) have been resolved and a 'Revision 2' of the aforementioned documents are provided at Deadline 2. A more comprehensive mitigation strategy comprising making provision for micro-siting of the cable, undertaking strip map record excavations, undertaking archaeological watching briefs, and adhering to construction control measures, is now described and illustrated in revisions to the aforementioned documentation.</p>



**Table 7: Land Use and Soils**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
LUS 1.1	The Applicant	<p>The methodology used to define significant effects within ES Chapter 16 (Land Use and Agriculture) [APP-069] is unclear. Table 16.11 provides a summary of the residual effects however the significance of these effects is not provided.</p> <p>Could the Applicant clarify the methodology used to define significant effects within ES Chapter 16 and provide an update to Table 16.11 which includes the significance of the residual effects.</p>	<p>The methodology for defining what can be considered a significant effect in EIA terms is unclear, for which the Applicant apologises and provides the following explanation. The methodology is clear but the thresholds for what is significant are not clearly defined.</p> <p>The methodology for assessing the significance of effects is set out in section 16.3.16 to 16.3.26 of <b>Chapter 16: Land Use and Soils</b> (document reference 6.1.16/APP-069), with the methodology tables for sensitivity, magnitude and significance set out in Tables 1 to 3 in <b>Appendix 16.2- Agriculture and Soils Significant of Effect Methodology</b> (document reference 6.3.16.2/APP-221) .sets out:</p> <ul style="list-style-type: none"> <li>• Sensitivity with land in grades 1 and 2 as of very high sensitivity, and subgrade 3a as high sensitivity, with subgrade 3b of moderate sensitivity and grade 4 as low sensitivity. There are also sensitivity columns for soils and for farm businesses (Table 1)</li> <li>• Magnitude with losses (by sealing or permanent downgrading) of over 20 hectares being a major magnitude effect, and loss of 5 to 20ha as a moderate magnitude effect (Table 2)</li> <li>• Significance with the significance determined by the magnitude and the sensitivity as set out in the matrix (Table 3).</li> </ul> <p>Table 16.11 of <b>Chapter 16: Land Use and Soils</b> (document reference 6.1.16/APP-069) summarises the effects. The significance of effects is set out in column 7, and the residual effects in column 9 of Table 16.11. The residual effects describe the significance by reference to the terminology from Table 3 of <b>Appendix 16.2- Agriculture and Soils Significant of Effect Methodology</b> (document reference 6.3.16.2/APP-221).</p> <p>Table 3 in Appendix 16.2 does not determine which effects are significant for EIA terms. It is considered that the loss of more than 5ha of Grades 1 and 2 can be considered significant in EIA terms, as can the loss of more than 20ha</p>

			<p>of Grade 3a, as the latter (but not the former) would trigger consultation with Natural England (a threshold set at 20ha of BMV). Both those losses would be Large or Very Large in Table 3 of Appendix 16.2 (e.g., more than 20ha of Grade 3a is a major magnitude effect on a resource of high sensitivity, so a Large or Very Large adverse effect). Losses of less than that would not be significant in EIA terms but may be locally significant.</p> <p>Therefore, the threshold for EIA significance from the categories in Table 3 of Appendix 16.2 are as follows.</p> <p><b><u>SIGNIFICANT IN EIA TERMS</u></b>          Very Large          Large or Very Large</p> <p><b><u>NOT SIGNIFICANT IN EIA TERMS</u></b>          Moderate or Large          Moderate          Slight or Moderate          Slight          Neutral or Slight          Neutral          Negligible</p> <p>The assessment in Table 3 of Appendix 16.2 shows that the loss, for the duration of the operational period of 3.5 ha of BMV results in a minor magnitude effect (Table 2) on a resource of very high (0.5ha Grade 1 and 0.5ha Grade 2) and high (1.8 ha Grade 3a) sensitivity (Table 1), which under Table 3 from Appendix 16.2 equates to a Moderate or Large adverse significance of effect, which is NOT SIGNIFICANT in EIA terms.</p> <p>The loss, for the operational phase, of 13.5 ha of subgrade 3b is a moderate magnitude effect (Table 2 of Appendix 16.2) on a resource of high sensitivity (Table 1) leading to a moderate or large adverse significance effect (Table 3), which is NOT SIGNIFICANT in EIA terms.</p> <p>The effects on soils and farm businesses are similarly assessed and are NOT SIGNIFICANT in EIA terms.</p>
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			<p>An updated and revised Chapter 16- Land Use and Agriculture (Revision 2), addressing policy, other changes since the original was written and updating Table 16.11 to state significance of effect is to be submitted at Deadline 2.</p>
LUS 1.2	The Applicant and Natural England	<p>NE's RR [RR-019] refers to further work being required to fully assess the extent of impacts to Best and Most Versatile (BMV) agricultural land. The Applicant's response [REP1-022] indicates that they are content to undertake further Agricultural Land Classification studies on the cable route prior to construction, with the methodology to be agreed with NE.</p> <p>The draft SoCG [REP1-016] (yet to include input from NE) indicates that due to land access not being granted for intrusive soil sampling, that this be completed post-consent and at the detailed design stage. It states that a methodology to address this has been submitted to NE for their review. The Applicant also highlights that the latest draft of NPS EN-3 does not include reference to surveys of underground cabling and access routes. The cabling trenching is expected to be less than 1m across the majority of the route.</p> <p>Could the Applicant provide:</p> <p>i) An update on when any further studies of the cable route may take place and confirm why they are unable to carry out such studies during the Examination period.</p> <p>ii) A copy of the methodology for intrusive soil sampling which has been submitted to NE for review.</p> <p>Could NE:</p> <p>i) Provide a response to the Applicants comments as summarised above.</p>	<p>i) The Applicant has permission in place with the majority (but not all) landowners to undertake non-intrusive surveys. The Applicant has sought to agree formal licence agreements with all parties represented by the Land Interest Group to allow all necessary survey work, both intrusive and non-intrusive, but terms for licences to allow access post-harvest and pre sowing have not been agreed. Given the impact of undertaking intrusive surveys on landowners, tenants and occupiers' agricultural operations at this time of year (autumn and winter), the Applicant has taken the decision to defer the negotiation of separate licence agreements for further survey work and intends that the rights for surveys will be included in the legal agreements being discussed with all interested parties.</p> <p>ii) The amended methodology sent to Natural England is at <b>Appendix 3</b> of this document and is a revised version of the Outline Soil Management Plan (oSMP). The methodology requires that the cable route easement is the subject of detailed surveys post-consent and that the information is fed into the Soil Management Plan (an outline of which is submitted to the Examination). That soil survey information will inform the detailed soil handling and timing for the easement works, noting any variations due to changes in soil along the route. The information and detailed SMP will be subject to approval pre-construction.</p> <p>The methodology for installing the cable has limited impacts on soils and limited potential to cause downgrading of land, and over small areas only. The suggested post-consent information will inform the SMP. The cable installation involves storing soils on one side of the trench, with vehicles (excavator and delivery vehicles) using the other side of the trench. At the outset and in suitable conditions, the topsoil is stripped from the full width of the easement and stored at the side within the easement. The trench is then dug, working from the opposite side to the topsoil</p>

		<p>ii) Confirm whether they are satisfied with the methodology for intrusive soil sampling.</p>	<p>bund, and the subsoil is placed in a bund next to the topsoil. Once the cables have been delivered and installed the subsoils are replaced into the trench. The area that has been the subject of vehicle travel is then loosened by normal farm implements, and the topsoil is then replaced over the full width of the easement. This is then worked back to a tilth ready for sowing.</p> <p>Consequently, the trench, where the soils have been disturbed and there is the potential for downgrading, is a small width and overall, a small area. The wider area involves only the temporary removal of topsoil for the duration of the installation period, and its replacement in suitable conditions. The key factor is not land quality but soil characteristics, and the most important factor is the way that the soils are handled. This will be the focus of the SMP.</p>
LUS 1.3	The Applicant and Natural England	<p>NE's RR [RR-019] notes that deficiencies in the outline Soil Management Plan (SMP) must be addressed to ensure soil resources are managed and maintained appropriately during construction and for the lifetime of the development. The Applicant's response [REP1-022] indicates that further detail from NE has been sought as part of the SoCG [REP1-016].</p> <p>i) Could NE provide details on the further information that they require at this stage, bearing in mind that the Applicant has confirmed that a detailed SMP would be secured by a standalone Requirement in the next version of the dDCO to be submitted at D2 (rather than as part of the Construction Environmental Management Plan (CEMP) secured by R13 of the current version [PS-024]).</p> <p>ii) Could the Applicant provide an update on the matter.</p>	<p>ii) The Applicant understands Natural England have reviewed the Soil Management Plan internally. The Statement of Common Ground has been updated to reflect this position including that Natural England are broadly content with the principles outlined in SMP (see section 9 of the SOCG – document reference 7.6i).</p>

LUS 1.4	The Applicant	<p>Paragraph 18.4.36 of ES Chapter 18 [PS-077] states that stripped soils will be stored in bunds no more than 3m in height. Paragraph 4.21 of the outline SMP for the Energy Park Site (Appendix E of the outline CEMP [PS-146]) states that “quantities of soils involved are limited and topsoil mounds would be a maximum of 1m high”. The outline SMP for the Offsite Grid Route Corridor (Appendix F of the outline CEMP) indicates that topsoil mounds would be a maximum of 1m to 2m high. The draft SoCG with NE [REP1-016] assumes that soil will be secured in a bund of 3-4m maximum in height. Paragraph 18.4.28 of ES Chapter 18 states that there is also the potential for soils to be removed from the site.</p> <p>Could the Applicant:</p> <p>i) Indicate the quantities of soil that will need to be excavated, stored, or removed from the Order Limits.</p> <p>ii) Provide a consistent response which clarifies the maximum heights and locations of soil stockpiles shown on a plan.</p> <p>iii) Clarify whether these soil estimates are included within the estimated construction phase Heavy Goods Vehicle (HGV) movements presented in Table 5.1 of the Outline Construction Traffic Management Plan (CTMP) [PS-152].</p>	<p>i) A range of 40,000 – 80,000m<sup>3</sup> of soil could be excavated and stored within the Energy Park. No soil is proposed to be removed, unless, which is considered unlikely, it is found to be contaminated. The Cable Route Corridor quantities will be much less and will be reinstated following the completion of the works.</p> <p>ii) The Construction Code of Practice for the Sustainable Use of Soils notes stockpile heights of 3-4m are commonly used for topsoil that can be stripped and stockpiled in a dry state but heights may need to be greater where storage space is limited. It goes on to say if soils are wet when moved, initial bunds of maximum 2m high should be used until the soil has dried out. For the Energy Park a maximum height for long term storage is up to 3m high. For the cable route the soil management plan referred to 1 – 2m height, as these will be short-term stores so even if the soil is wet, it will be within the Construction Code suggestion of up to 2m. A location plan of soil stockpiles is shown at <b>Appendix 5</b> of this document.</p> <p>iii) Paragraph 18.4.38 (rather than 18.4.28) of <b>Chapter 18: Miscellaneous Issues</b> (document reference 6.1.18/PS-077) refers to the need to remove soils from the Order limits for treatment or disposals, if found to be contaminated and it is not practical to treat this onsite. The Applicant confirms no soil is proposed to be removed from the Proposed Development, so as to ensure it can be reinstated following decommissioning. Additionally, the land being utilised is predominantly agricultural land with a low chance of contamination, as such no vehicles have been assessed to remove contamination. Machinery already on site will be utilised to move soil, such as JCBs and excavators. Therefore, only vehicle movements within the Proposed Development are required, and are not included in the estimated construction phase of Heavy Goods Vehicle (HGV) movements presented in Table 5.1 of the <b>Outline Construction Traffic Management Plan</b> (document reference 7.10/PS-152). It should be noted, a contingency of 10% is built</p>
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			into the number of HGV movements at Table 5.1 to account for in the event of such occurrences of removal of soils is required.
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**Table 8: Noise and Vibration**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
NV 1.1	The Applicant  Boston Borough Council	<p>ES Chapter 12: Noise and Vibration [PS-069] relates to noise and vibration effects primarily in relation to the energy park, access and cable route where it crosses the A17. NKDC in their LIR [REP1-033] provide a detailed response in respect of the energy park and accesses. BBC provide limited comment in section 12 of their LIR [REP1-025]. RRs from local residents have raised objections relating to construction noise in the area of the Bicker Fen substation [RR-008].</p> <p>Could the Applicant:</p> <p>i) Explain on what basis the noise generated by the works to extend the existing substation at Bicker Fen have been scoped out of ES Chapter 12 [PS-069].</p> <p>ii) Further to the above, explain how the conclusions in section 12.8 of ES Chapter 12 were arrived at regarding cumulative effects with Vicarage Drove and other nearby projects.</p> <p>Could BBC:</p> <p>i) Provide any comments you may have specifically on construction and operational noise in the Bicker Fen area arising from the grid connection and substation works, and cumulative effects with other developments.</p>	<p>i) The works associated with the proposed connection to the National Grid Bicker Fen Substation were considered in the assessment of ES <b>Chapter 12: Noise and Vibration</b> [document reference 6.1.12/PS-069] and were not scoped out.</p> <p>Paragraph 12.6.4 of the Noise and Vibration Chapter noted that the construction activities within the National Grid Bicker Fen Substation extension would be more than 500m from the nearest noise-sensitive locations and would therefore correspond to negligible noise levels. This was based on comparing the predicted noise levels of <b>Appendix 12.2 - Noise Modelling</b> (document reference 6.3.12.2/APP-216) for different construction activities and the criteria of Table 12.1 in <b>Chapter 12: Noise and Vibration</b> (document reference 6.1.12/PS-069).</p> <p>The relevant representation [RR-008] raises concerns regarding the construction traffic associated with these works and, in particular, heavy vehicles using a haul route to the Substation that passes through Cowbridge Road. The effect of construction traffic associated with the National Grid Bicker Fen Substation were assessed at Paragraph 12.6.15 of <b>Chapter 12: Noise and Vibration</b> (document reference 6.1.12/PS-069). This estimated that noise levels associated with a heavy vehicle traffic of 12 trips per day (or an average of around 1 trip per hour) would be associated with noise levels not exceeding 55 dB which represent a negligible noise effect on residents adjoining the haul route. Some of this traffic may include use a haul route from the A52 which could pass through Cowbridge Road. At this time, it is not possible for National Grid to commit to using the alternative Triton Knoll access track instead of using Cowbridge Road, but the Applicant is exploring this further.</p> <p>ii) The assessment of cumulative impacts in section 12.8 of <b>Chapter 12: Noise and Vibration</b> (document reference 6.1.12/PS-069) was based</p>

		<p>ii) Explain how the overall 'neutral' impact as set out in section 17 of the LIR [REP1-025] was arrived at.</p>	<p>on the assessment presented in <b>Chapter 14 -Transport and Access</b> (document reference 6.1.14/PS-073) which did not highlight any significant cumulative construction traffic effects. This assessment is being updated as part of a revised cumulative assessment to be submitted as part of Deadline 2 (<b>ES Technical Note- Updated Information on Cumulative Projects</b> (document reference ExA.ESTN-Cumulative-D2.V1)), which considers the potential effects of worst-case cumulative construction traffic on the A17: the conclusions remain that the cumulative construction traffic noise effects are negligible. In relation to the concerns raised regarding traffic on Cowbridge Road, which may be used by construction for the neighbouring Vicarage Drove and Cowbridge Road solar farm developments, it was considered unlikely that the construction periods would overlap. On this basis, there was no need to assess potential cumulative construction traffic implications with the National Grid Bicker Fen Substation extension works and their noise impact.</p>
<p>NV 1.2</p>	<p>The Applicant</p>	<p>Paragraph 12.3.2 of ES Chapter 12 [PS-069] notes that Build-A-Future East Heckington based at Elm Grange will accommodate young people with Autistic Spectrum Disorder (ASD) or learning difficulties, and recognises that sudden noise events of sufficient amplitude and character has the potential to disturb some people with ASD. It goes on to assume that the design of the school will account for management of the existing baseline environment for ASD pupils sensitive to noise. Table 12.4 sets out the Applicant's response to NKDC on this matter, stating that the school was contacted and no concerns were raised with regard to noise effects on pupils. Paragraphs 12.6.6 and 12.6.7 consider effects of noise and vibration on the school and</p>	<p>i) The Build-A-Future East Heckington school is located in proximity to the A17 and therefore exposed to relatively elevated baseline noise levels from road traffic on the A17, as well as noise from farm machinery: it is therefore considered likely that the school would provide some level of insulation from external noise in order to provide a suitable teaching environment within the school buildings. The school may also take steps to manage any sensitivity of some of the pupils to noise due to this existing noise environment, for example any sudden noises associated with road traffic. These measures will therefore also reduce in practice the effects of noise from the construction activities from the Proposed Development on pupils using the school. The assessment <b>Chapter 12: Noise and Vibration</b> (document reference 6.1.12/PS-069) was however undertaken on a precautionary basis that did not rely on these measures, as discussed at point iii) below.</p> <p>ii) The final detailed CEMP to be submitted prior to commencement of the Proposed Development will include a provision to specifically alert Build-A-Future East Heckington school and notify them in</p>



		<p>recommends that the school is informed at the start of piling works.</p> <p>Could the Applicant:</p> <p>i) Explain the assumption in paragraph 12.3.2 that the Build-A-Future East Heckington school will account for management of the existing baseline environment for ASD pupils sensitive to noise.</p> <p>ii) Confirm that the final CEMP will include provision to specifically alert the school of construction works, including the information which they will be provided (type of works, period of works) and a relevant notice period.</p> <p>iii) Consider implications in relation to the requirements of the Public Sector Equality Duty (PSED) (you may wish to combine your answer with question GEN.1.13).</p>	<p>advance of certain works in proximity of the school, in particular the upgrade and temporary use of the track west of Elm Grange and any piling works within 600m, and include information on the type of works, and the duration of them. The final provisions of this engagement such as relevant notice periods and information provided will be determined by the contractor in consultation with the school as part of the process of finalising the detailed CEMP. This is reflected in paragraph 1.2.9 of <b>Appendix G- Outline Construction Noise Management Plan</b> of the <b>Outline Construction Environmental Management Plan</b> (document reference 7.7/PS-146). This will be secured through Requirement 13 of the Draft DCO (document reference 3.1/PS-024) which requires a final detailed CEMP, substantially in accordance with the outline version, to be submitted and agreed.</p> <p>iii) In addition to the comments made in response to query GEN 1.13, additional care was taken in the assessment of potential noise impacts on the school in ES <b>Chapter 12: Noise and Vibration</b> (document reference 6.1.12/PS-069). Notwithstanding the assumptions discussed above in point i), the particular additional sensitivities that some pupils may have were considered in the assessment. In addition to being assessed as a noise-sensitive receptor, an additional qualitative assessment of the potential effects was undertaken at this receptor. Specific additional mitigation measures (see ii) above) were also proposed, despite the absence of any significant adverse effects predicted at the school based on the general assessment methodology used. This therefore addresses the potential adverse impacts on a protected characteristic group (children with disabilities).</p> <p>As is noted in response to question GEN 1.13, an Equality Impact Assessment will be prepared and submitted at Deadline 3. This will respond to the requirements of the Public Sector Equality Duty (PSED). In so doing, all relevant Protected Groups will be identified and considered in respect of the assessment undertaken. Cross-reference will be made to documentation prepared in relation to the DCO application which has identified potential effects, as well as mitigation for any adverse effects and enhancement of any beneficial effects, on relevant Protected Groups. This includes, but is</p>
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			<p>not limited to, appropriate engagement with the Build-A-Future East Heckington school based at Elm Grange in respect of timings of the proposed piling works, through provisions made within the final detailed CEMP to be submitted prior to commencement of the Proposed Development.</p>
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**Table 9: Planning Policy and Legislation**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
PPL 1.1	The Applicant	<p>Presently there is no designated NPS that has effect with respect to the consideration of the proposed solar park nor the energy facility. Paragraphs 5.5 and 5.6 of the Statement of Need and Planning Statement [PS-142] recognise this, and go on to state that “both EN-1 and EN-3 are still relevant as they relate to renewable energy development, and thus the SoS must have regard to it”, and that “the current NPSs are important and relevant to the determination of this Application pursuant to section 105 of the Planning Act 2008”.</p> <p>It was noted at ISH2 [EV-009 to EV-015, REP1-020] that the Statement of Need and Planning Statement, would be updated as necessary to reflect any new local or national policy or guidance or legislation that emerges during the Examination via an addendum. As part of this, the Applicant is asked to:</p> <p>i) Include more detail regarding the matters which are considered to be important and relevant for the purposes of decision making.</p> <p>ii) Consider the approach taken in other solar generation NSIPs including Longfield Solar Farm and Little Crow Solar Park which considered that EN-3 should not take effect or be considered as being important or relevant given that solar is expressly excluded from the coverage of EN-3.</p>	<p>This question is considered fully within the submitted <b>Statement of Need and Planning Statement Addendum</b> (document reference 7.3a) submitted at Deadline 2. A summary of where the answers are found are set out below:</p> <p>i) In order to supplement the submitted <b>Statement of Need and Planning Statement</b> (SNPS) (document reference 7.1, APP-234) the Applicant has set out within the <b>Statement of Need and Planning Statement Addendum</b> (SNPSA) (document reference 7.3a) consideration of the following matters which are considered to be important and relevant for the purposes of decision making:</p> <ul style="list-style-type: none"> <li>• National Policy Statements for Energy, NPSs EN1, EN3, and EN5 and the emerging draft NPSs (SNPSA - Document ref 7.3 sections 2, 3, and 4))</li> <li>• National Planning Policy Framework (NPPF)- September 2023 (SNPSA - Document ref 7.3, section 6)</li> <li>• National Planning Policy Guidance (NPPG) note on Renewable and Low Carbon Energy – August 2023 (SNPSA - Document ref 7.3, Section 7)</li> <li>• Local Plan Policies <ul style="list-style-type: none"> <li>○ The Central Lincolnshire Local Plan 2018 - 2040, adopted 13 April 2023 (North Kesteven) replaces in full The Central Lincolnshire Local Plan 2012 - 2036 (April 2017 (SNPSA - Document ref 7.3, Section 8)</li> <li>○ South East Lincolnshire Local Plan 2011 – 2036, adopted 8 March 2019 (Boston</li> </ul> </li> </ul>

		<p>iii) Include consideration of whether EN-5 is important and relevant and why.</p>	<p>Borough Council) (SNPSA - Document ref 7.3, Section 8)</p> <ul style="list-style-type: none"> <li>• Other relevant recently published Government Documentation in relation to Renewable Energy (SNPSA - Document ref 7.3, Section 9)</li> </ul> <p>ii) In response to the ExA question regarding the approach taken in relation to other DCOs, the Applicant has given consideration to the Secretary of State's (SoS) decision letters for both the Longfield Solar Farm and the Little Crow Solar Park. The Applicant's summary of these considerations is provided within the <b>Statement of Need and Planning Statement Addendum</b> (SNPSA – document reference 7.3, Section 3.5).</p> <p>iii) The Applicant's consideration of the importance and relevance of EN5 is set out within the <b>Statement of Need and Planning Statement Addendum</b> (SNPSA – document reference 7.3 Section 4).</p>
PPL 1.2	The Applicant	<p>The Planning Statement and the ES refer to the suite of energy NPSs.</p> <p>i) Is there a differentiation between those NPSs which you consider the Proposed Development to be 'in accordance with' and those that may be (in part) 'important and relevant'?</p> <p>ii) And to which elements of the Proposed Development are they applicable? Please provide a summary.</p>	<p>i) <b>Is there a differentiation between those NPSs which you consider the Proposed Development to be 'in accordance with' and those that may be (in part) 'important and relevant'?</b></p> <p><b><u>Summary of Applicant's response:</u></b></p> <p>The Applicant considers that there is a technical differentiation between NPSs which developments need to be "<b>in accordance</b>" with and those that may be "<b>important and relevant</b>". The differentiation arises in relation to Sections 104 and 105 of the Planning Act 2008 (the 2008 Act), and it turns on whether or not there is a National Policy Statement in effect in relation to the Proposed Development.</p> <p>If there is a designated national policy statement that applies to the Proposed Development, the Secretary of State must decide the application "<i>in accordance with</i>" that NPS (section 104 Planning Act 2008). If there is no National Policy Statement arguably in effect, then the Secretary of State must</p>

			<p>have regard to any other matters which the Secretary of State thinks “<i>are both important and relevant</i>” to the Secretary of State’s decision (section 105 Planning Act 2008).</p> <p>Whilst that is the case technically:</p> <p>(1) given the urgent need by the Secretary of State for renewable energy stated in both the designated NPS EN-1 and emerging draft NPS EN-1 (March 2023); and</p> <p>(2) the consistent approach taken by the Secretary of State in previous solar DCO decisions in this context, where (for example) in the Longfield decision, the Secretary of State decided that “<i>.....that both the designated NPSs and the dNPSs contain policy that is both important and relevant to this decision.</i>” (this was an approach also adopted in the Little Crow Solar Farm DCO decision,</p> <p>the Applicant does not consider the technical difference between “in accordance with”, and “important and relevant” to cause any issue, or to lead to this Proposed Development to be treated any differently.</p> <p>It is the Applicant’s position that both the relevant designated and the emerging draft National Policy Statements EN-1, EN-3, and EN-5 must be given significant importance and weight, above other national and local policies. The Applicant explains as follows.</p> <p><b><u>Detail of Applicant’s response:</u></b></p> <p>Section 104 of the 2008 Act deals with “<b>Decisions in cases where national policy statement has effect</b>” and confirms at subsection (3) that “<i>The Secretary of State must decide the application <b>in accordance with any relevant national policy statement, except to the extent that one or more of subsections (4) to (8) applies</b>”.</i> (our emphasis added). Where a Section 104(2)(d) also adds that “<i>In deciding the application the [Secretary of State] must have regard to ....any other matters which the [Secretary of State] thinks are both important and relevant to [the Secretary of State’s] decision.</i>”</p>
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			<p>Section 105 of the Planning Act 2008 addresses “<b>Decisions in cases where no national policy statement has effect</b>”. Subsection (2) confirms that in deciding the application the Secretary of State must have regard to Subsection (2)(c) – “<i>any other matters which the Secretary of State thinks are <b>both important and relevant</b> to the Secretary of State's decision</i>” (our emphasis added).</p> <p>For the reasons set out below the Applicant considers that the proposal falls outside the scope of designated EN1 and EN3 and consequently the Application falls to be determined under Section 105 of the 2008 Act.</p> <p>For the reasons also explained below the Applicant has concluded that:</p> <p>NPS’s EN1, EN3 and EN5 are important and relevant matters.</p> <ul style="list-style-type: none"> <li>• Draft EN1, EN3, and EN5 are also important and relevant matters.</li> <li>• The Secretary of State should have regard these matters as having significant weight in determining the application under Subsection (2)(c) of Section 105 of the Planning Act 2008.</li> <li>• The urgent need to deliver new renewable energy generation to meet the objectives for achieving net zero and recognising the need for such development is established in designated and emerging NPSs.</li> </ul> <p>The application proposals accord with the policies within both the designated and emerging NPSs, as described in the Statement of Need and Planning Statement (document reference 7.3) and Statement of Need and Planning Statement Addendum (document reference 7.3a).</p> <p><b>Designated NPS EN1, EN3 and EN5</b></p> <p>The suite of designated SNPs referred to in the Planning Statement and the ES include the following:</p> <p>Overarching National Policy Statement for Energy (EN-1) – July 2011</p> <ul style="list-style-type: none"> <li>• National Policy Statement for Renewable Energy Infrastructure (EN-3) – July 2011</li> </ul>
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			<ul style="list-style-type: none"> <li>• National Policy Statement for Electricity Networks Infrastructure (EN-5) – July 2011</li> <li>• <u>EN1</u></li> </ul> <p>In defining the scope of the NPS's, Paragraph 1.4.2 of EN1 states that</p> <p><i>“The Planning Act 2008 sets out the thresholds for nationally significant infrastructure projects (NSIPs) in the energy sector. The Act empowers the IPC to examine applications and make decisions on the following nationally significant energy infrastructure projects:</i></p> <p><i>electricity generating stations generating more than 50 megawatts onshore and 100 megawatts offshore. This includes generation from fossil fuels, wind, biomass, waste and nuclear. For these types of infrastructure, the Overarching NPS (EN-1) in conjunction with the relevant technology specific NPSs (EN-2 on fossil fuel generating stations, EN-3 on renewable energy infrastructure or EN-6 on nuclear power generation as appropriate) will be the primary basis for IPC decision making”.</i></p> <ul style="list-style-type: none"> <li>• Further to this Paragraph 1.4.5 of EN1 states: <i>“The generation of electricity from renewable sources other than wind, biomass or waste is not within the scope of this NPS.”</i></li> </ul> <p>Notwithstanding, the designated EN1 confirms the presumption in favour of granting consent for renewable energy infrastructure, given the level and urgency of need. This level of need been further emphasised through government policy since 2011. The Applicant therefore considers that Designated EN1 is relevant and important to the determination of the application.</p> <p><u>EN3</u></p> <p>Paragraph 1.8.2 of the designated EN-3 states that the NPS does not cover any other types of onshore renewable energy generation that were technically viable over 50MW when the document was published in July 2011.</p>
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			<p>The designated NPS EN3 (July 2011) recognises (at paragraph 1.82) that as renewable technology becomes economically and technically viable the Government will further consider either revisions to current NPS or separate NPSs to cover such technologies.</p> <p>The Applicant considers that solar technology has become economically and technically viable since the designation of the NPS and in light of the latter part of paragraph 1.8.2, designated EN3 is a matter which is important and relevant to the decision making process.</p> <p><u>EN5</u></p> <p>The designated NPS EN-5 provides the primary basis for decisions taken by the Secretary of State on applications received for electricity networks infrastructure and sets out the factors influencing route selection and the impacts that may arise from such development.</p> <p>Paragraph 1.8.1 of designated EN-5 confirms that infrastructure for electricity networks generally can be divided into two main elements:</p> <p><i>transmission systems (the long distance transfer of electricity through 400kV and 275kV lines), and distribution systems (lower voltage lines from 132kV to 230V from transmission substations to the end-user) which can either be carried on towers/poles or undergrounded; and</i></p> <ul style="list-style-type: none"> <li>• <i>associated infrastructure, e.g. substations (the essential link between generation, transmission, and the distribution systems that also allows circuits to be switched or voltage transformed to a useable level for the consumer) and converter stations to convert DC power to AC power and vice versa</i></li> <li>• In terms of the infrastructure covered by EN-5, the NPS states at paragraph 1.8.2:</li> </ul> <p><i>“This NPS covers above ground electricity lines whose nominal voltage is expected to be 132kV or above. Any other kind of electricity infrastructure (including lower voltage overhead lines, underground or sub-sea cables at any voltage, and associated infrastructure as referred to above) will only be subject to the Planning Act 2008 – and so be covered by this NPS – if it is in</i></p>
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			<p><i>England, and it constitutes associated development for which consent is sought along with an NSIP such as a generating station or relevant overhead line.”</i></p> <p>It is the Applicant’s view that Designated EN5 has effect in relation to the associated electrical infrastructure aspects of the application, however these elements of the proposal are ancillary to the solar development which falls outside the designated NPSs. Therefore, the Applicant considers EN5 to also be relevant and important to determination of the application.</p> <p><b><u>Emerging Draft NPSs</u></b></p> <p>In light of the statement on Transitional Arrangements at Page 52 of the Government’s Consultation response on the draft NPSs, the Draft EN1, EN3, and EN5 are also important and relevant matters which carry significant weight in the consideration of the application.</p> <p>A review of the NPSs was announced in the 2020 Energy white paper: Powering our net zero future. This review was to ensure the NPSs were brought up to date to reflect the policies set out in the white paper. The Government started consultation on revising EN1, EN3 and EN-5 in 2021. The consultation has ended.</p> <p>That consultation produced a March 2023 Government’s response (<i>Consultation Response   Planning for New Energy Infrastructure Draft National Policy Statements for energy infrastructure</i>). This document explains the interrelationship between the emerging amendments and to the designated EN1, EN3 and EN5.</p> <p>At the same time as publishing their response, In March 2023 the Government also published further revised drafts of the emerging NPSs.</p> <p>For clarity these latest draft NPSs, referred to in the Application are as follows:</p> <p>Draft Overarching National Policy Statement for Energy (EN-1) – March 2023</p>
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			<ul style="list-style-type: none"> <li>• Draft National Policy Statement for Renewable Energy Infrastructure (EN-3) – March 2023</li> <li>• Draft National Policy Statement for Electricity Networks Infrastructure (EN-5) – March 2023</li> <li>• The transitional provisions set out in the March 2023 Government Response provide the understanding of the weighting to be given to the emerging NPS amendments.</li> </ul> <p>In relation to Transitional Arrangements, Page 52 of the March 2023 Government response to the NPS consultation says:</p> <p><i>“While the review is undertaken, the current suite of energy NPS (or for nuclear development the position set out in the Written Ministerial Statement of 7 December 2017) remain relevant government policy and EN-1 to EN-5 have effect for the purposes of the 2008 Act.</i></p> <p><i>The Secretary of State has decided that for any application accepted for examination before designation of the updated energy NPSs, the original suite of energy NPS should have effect. The amended energy NPSs will therefore only have effect in relation to those applications for development consent accepted for examination after the designation of the updated energy NPSs. However, any emerging draft energy NPSs (or those designated but not having effect) are potentially capable of being important and relevant considerations in the decision-making process. The extent to which they are relevant is a matter for the relevant Secretary of State to consider within the framework of the Planning Act and with regard to the specific circumstances of each development consent order application.”</i></p> <p><b><u>Secretary of State’s recent approach</u></b></p> <p>The Applicant refers the Secretary of State to Section 3.5 of the Addendum to the Statement of Need and Planning Statement (SNPSA – document reference 7.3) being submitted at Deadline 2, which set out in detail the Secretary of State’s decision in the Longfield and Little Crow Solar Farm DCOs, which adopted the same approach to the Applicant’s position. It is the Applicant’s position that this Proposed Development should be decided</p>
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			<p>consistently with the recent approach taken by the Secretary of State. The main points to highlight for the purposes of this response are:</p> <ul style="list-style-type: none"> <li>• In the Secretary of State’s decision letter on the Longfield Solar Farm DCO dated 26 June 2023 he stated at paragraph 7.1:: <i>“Although this is a decision under section 105 of the 2008 Act, the Secretary of State considers that both the designated NPSs and the dNPSs contain policy that is both important and relevant to this decision.”</i> He also states at paragraph 4.7: <i>“While the Secretary of State acknowledges that EN-1 does not have effect in relation to solar, and therefore section 104 of the 2008 Act does not apply, the need for solar is established in the dNPSs and is a matter he considers to be important and relevant to this decision under section 105 of the 2008 Act. The Secretary of State agrees with the ExA’s conclusions and ascribes the Proposed Development’s contribution to meeting this need substantial positive weight in the planning balance.”</i></li> <li>• In the Secretary of State’s decision letter on the Little Crow Solar Farm DCO dated 5 April 2022, he stated at paragraph 4.3: <i>“Although the new NPSs are in draft form and have not been designated, the Secretary of State considers them to be important and relevant for the purpose of section 105 of the 2008 Act. As such, the Secretary of State has had regard to the draft energy NPSs in deciding the Application”.</i> He also stated at paragraph 4.21 that <i>“Paragraph 3.2.6 of draft NPS EN-1 highlights that substantial weight should be given to the need for new energy infrastructure when determining NSIP applications”.</i> Finally, at the Secretary of State decided at para 4.19 that <i>“NPS EN-1 overarching policy objectives include meeting UK demand for energy generation and transitioning to low carbon sources and reducing greenhouse gas emissions, including the need for secure and reliable electricity supplies during the transition [(ER 4.4.3 et seq.)]. ... The ExA concluded that the Application falls to be decided under section 105 of the 2008 Act but there was no inconsistency between the proposed Development and the thrust of the policy expressed in NPS EN-1 and NPS EN-5”.</i></li> </ul>
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			<p><b>ii) And to which elements of the Proposed Development are they applicable? Please provide a summary.</b></p> <p>As noted above Paragraph 1.4.2 of designated EN1 and the revised Draft EN1 confirm that electricity generating station of over 50MW on shore fall within the scope of significant infrastructure projects under the Planning Act 2008 and to which EN1 and other relevant technology specific NSPs including EN3 will be the primary basis for decision making.</p> <p>Paragraph 1.4.3 addresses development associated with energy infrastructure, confirming that:</p> <p><i>“EN-1, in conjunction with the relevant technology-specific NPS, will be the primary basis for IPC decision making on associated development.”</i></p> <p>The scope of infrastructure to which EN3 and the revised Draft EN3 are applicable is set out above and the Applicant has concluded that EN3 and the draft EN3 are relevant and important matters.</p> <p>The Applicant therefore considers that NPS’s EN1 and EN3 are applicable to <b>all of the works proposed</b> under the application. Similarly, the emerging drafts EN1 and EN3 are applicable to <b>all of the works</b> covered by the Application.</p> <p>As noted above Paragraph 1.8.1 of designated EN-5 is confirmed to relate to transmission systems, distribution systems and associated infrastructure.</p> <p>Accordingly, the Applicant considers that EN5 and the emerging draft EN5 are applicable to the elements of electricity infrastructure associated development forming part of the proposals, including cabling in the proposals, the energy storage facility, the substation and related electricity infrastructure and works at the Bicker Fen substation including its extension.</p>
PPL 1.3	Boston Borough Council Lincolnshire County Council	Could the RPAs: i) Provide to the Examination full copies of any Development Plan policies that have or will be referred to in your LIRs.	

	North Kesteven District Council	<p>ii) Provide copies of any Supplementary Planning Documents that may be of relevance.</p> <p>iii) Confirm whether there are any relevant made or emerging neighbourhood plans that the ExA should be aware of, and if so provide details.</p> <p>iv) Confirm whether the Applicants' policy analysis set out in section 4 of the Statement of Need and Planning Statement [PS-142] is comprehensive</p>	
PPL.1.4	The Applicant	<p>The current 2023 version of the National Planning Policy Framework has been published since the Application documents were produced.</p> <p>Could the Applicant confirm whether there would be any implications for the Application arising from the 2023 revision and if so include it in the forthcoming addendum to the Statement of Need and Planning Statement.</p>	<p>This question is considered fully within the submitted <b>Statement of Need and Planning Statement Addendum</b> (SNPSA - Document ref 7.3, section 6). A summary of the answer is set out below:</p> <p>The changes made to the September 2023 NPPF were relatively minor in relation energy development and they relate primarily to policy for onshore wind. There were no changes to important and relevant aspects of the NPPF as it relates to the Application.</p> <p>The latest version of the NPPF retains the over-arching presumption in favour of sustainable development as set out in para. 10 and retains support for on the delivery of renewable and low carbon energy and associated infrastructure (Para 152).</p> <p>Most importantly, it remains within the new NPPF (Sept 2023) at para. 158 that when determining applications for renewable and low carbon energy development planning authorities should not require Applicants to demonstrate the overall need for renewable or low carbon energy and such projects provide a valuable contribution to cutting greenhouse gas emissions and should be supported where it is or can be made acceptable.</p> <p>Therefore, there no requirement to demonstrate a need for renewable energy under the NPPF in terms of 'need'. The Government position hasn't changed in relation to the new NPPF published in September 2023.</p>

PPL 1.5	The Applicant	<p>Could the Applicant confirm whether there are any implications for the Application arising from the updated Planning Practice Guidance (Renewable and Low Carbon Energy) paragraphs 032 to 036 relating to battery energy storage systems, and if so include it in the forthcoming addendum to the Statement of Need and Planning Statement.</p>	<p>This question is considered fully within the submitted <b>Statement of Need and Planning Statement Addendum</b> (SNPSA - Document ref 7.3, section 7). A summary of the answer is set out below:</p> <p>The Government’s Planning Practice Guidance (PPG) on Renewable and Low Carbon Energy was updated in August 2023. The Applicant has identified the PPG as a relevant policy in the matters considered relevant to Item 5 of the ISH2 agenda.</p> <p>In relation to BESS over 1MWh, (which the application exceeds) the revised PPG includes planning guidance on battery energy storage systems and advises on fire safety risks. (Paragraph: 032 Reference ID: 5-032-20230814 to Paragraph: 036 Reference ID: 5-036-20230814) states:</p> <p>“Electricity storage can enable us to use energy more flexibly and de-carbonise our energy system cost-effectively – for example, by helping to balance the system at lower cost, maximising the usable output from intermittent low carbon generation (e.g. solar and wind), and deferring or avoiding the need for costly network upgrades and new generation capacity”.</p> <p>Applicants for proposed developments of battery energy storage systems of 1 MWh or over, excluding those associated with a residential dwelling, “are encouraged to engage with the relevant local fire and rescue service before submitting an application to the local planning authority”.</p> <p>This is to ensure that matters relating to the siting and location of battery energy storage systems, “particularly in the event of an incident, prevention of the impact of thermal runaway, and emergency services access”, can be considered before an application is made. Thermal runaway is the phenomenon in which battery cells enter a self-heating state, potentially resulting in extremely high temperatures and explosion.</p> <p>Applicants are also encouraged to consider guidance produced by the National Fire Chiefs Council when preparing the application, while local planning authorities are encouraged by the document to consider the same guidance when determining the application.</p> <p>The guidance also deals with the question of what measures local authorities can take to ensure potential risks are considered when determining a planning application for an energy storage facility. It encourages consultation</p>
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			<p>with the local fire and rescue service as part of the formal period of public consultation prior to deciding the planning application.</p> <p>The Applicant has undertaken consultation with Lincolnshire Fire and Rescue Service on the proposals, considering in particular the energy storage element. The response to this consultation noted a number of measures for the developer to ensure risk is minimised, for example procuring and using construction techniques which comply with all relevant legislation; inclusion of Automatic Fire Detection systems in the development design; and automatic fire suppression systems in the development design. The comments were incorporated into the design where applicable (e.g. adequate separation between containers) and the <b>Outline Energy Storage Safety Management Plan</b> (document reference 7.11/APP-242).</p>
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**Table 10: Socio-Economics**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
SET 1.1	The Applicant	<p>The Application Site encompasses two local authority areas. ES chapter 11 [PS-067] paragraph 11.3.27 confirms Boston has been included in the baseline analysis but the effects from the Proposed Development are only considered in North Kesteven. Following ISH2 [EV-009], it is understood that an update will be provided to effects on Boston at D2 [REP1-020].</p> <p>To add to this, the Applicant is also asked why an identification and assessment of the Local Impact Area or Travel to Work Area were not included in the baseline.</p>	<p>Effects relating to Employment and Economic Contribution were considered for both North Kesteven and Boston districts for all phases of development (construction, operational and decommissioning) in the previous version of ES <b>Chapter 11- Socio Economics</b> (document reference 6.1.11/PS-067). As of Deadline 2, an update to ES Chapter 11-Socio Economics has been undertaken in respect of the baseline and assessment of likely significant effects relating to the Accommodation Demand to ensure consideration of the potential effects during the construction and decommissioning phases in respect of Boston district (potential effects relating to Accommodation Demand are scoped out in respect of the operational phase). This updated assessment now includes for:</p> <ul style="list-style-type: none"> <li>• Consideration of the effect of accommodating workers within North Kesteven only, which provides an indication of potential worst case, assuming making use of bedspaces in only one of the two districts.</li> <li>• Consideration of the effect of accommodating works within Boston only, which provides an indication of potential worst case, assuming making use of bedspaces in only one of the two districts.</li> <li>• Consideration of the effect of accommodating workers based on a combined total bedspaces within North Kesteven and Boston districts, which will provide a view of the realistic perspective of this accommodation demand effect.</li> </ul> <p>It is considered most realistic and relevant to present the effects of the Proposed Development at the district scale rather than in respect of a Local Impact Area or Travel to Work Area. Reasons for this include:</p> <ul style="list-style-type: none"> <li>• For impacts such as business rates, it is the local authorities who will benefit from this, given it is the Councils who could receive a proportion of the additional revenue. For the contribution to economic output (GVA) impact, the baseline data used to assess the significance of impact are available down to a local authority level. It</li> </ul>



			<p>is not possible to calculate the business rates impact and GVA effects at either a LIA or TTWA level. For consistency throughout the analysis, impacts are therefore considered at a local authority level.</p> <ul style="list-style-type: none"> <li>• Similar to the point above, accommodation data are only available down to a local authority level and again, the reporting has focused on each district in order to reflect this.</li> <li>• In addition to the points above, the number of jobs created during the construction and decommissioning phases are of a scale which means that very few will be taken by people living in the local area, therefore a LIA is not considered suitable. A TTWA could potentially be considered, however, taking into account the issue with the baseline data geographies, a local authority-focused approach is felt to be more appropriate.</li> </ul>
SET 1.2	<p>Applicant Boston Borough Council Lincolnshire County Council North Kesteven District Council</p>	<p>The Application includes an Outline Supply Chain, Employment and Skills Plan [APP-243], and this is identified in ES Chapter 11 [PS-067] as being mitigation in maximising the local benefits of the Proposed Development. It states at paragraph 11.6.2-11.6.3 that measures will include local employment opportunities and partnership with local educational institutions.</p> <p>Could the Applicant:</p> <p>i) Confirm if any communications have been made to date with local colleges/university and the form that such partnerships might take?</p> <p>Could the RPA's provide:</p> <p>i) Comments on the Outline Supply Chain, Employment and Skills Plan [APP-243].</p> <p>ii) Confirm if you would be able to liaise with the relevant educational institutions in order</p>	<p>Communications with local education providers (including Boston College, Grantham College, Grimsby College and University of Lincoln) has been undertaken to start building these relationships. Partnerships could include careers fayres, open days, or talks either onsite or in their venues. Ongoing partnerships could include apprenticeships and work experience.</p>



		<p>to discharge Requirement 16 of the dDCO [PS-024]?</p> <p>iii) Details of any current initiatives in place regarding promotion of related careers in renewable energy in the area?</p>	
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**Table 11: Traffic, Transport and Public Right of Way**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
TT 1.1	The Applicant	<p>The Proposed Development includes the creation of a permissive path through the site, including footbridge crossings of drains (Work No.9B).</p> <p>Could the Applicant:</p> <p>i) Provide further details of the process for the planning, implementation (including timing) and maintenance of the new paths.</p> <p>ii) Clarify what would be the legal status and would there be any restrictions on their use?</p> <p>iii) Indicate if a legal agreement regarding the use of the permissive path for the lifetime of the project will be completed within the Examination period.</p>	<p>i) The Applicant confirms the permissive path around the Energy Park will be open to the public prior to the date of final commissioning of the phase or phases of works that incorporate the path (per Requirement 17(2)). The path will in part reinstate public footpath (HECK 15/1) and will utilise field margins, which are flat and grassed. No physical improvements are proposed to the surface, for example the path will not be tarmacked or gravel. Maintenance will involve periodic cutting of the grass as required.</p> <p>The western most section of public footpath is outside of the main Energy Park boundary. The Applicant is progressing discussions with the landowner for a licence/legal agreement to re-instate the footbridge so to as re-open the public footpath to give public access to the permissive path, which in its current form would stop at the Energy Park boundary. Should this agreement not be reached then the Applicant has sought compulsory rights in the dDCO for a small parcel of land to enable it to reinstate the public footpath footbridge (as shown at plot 279 of the <b>Land Plans</b> (document reference 2.1)).</p> <p>The legal status of the permissive path is 'permissive for the lifetime of the proposed development'. The permissive path is restricted in so far as it connects into the public right of way network, therefore only allowing users of the footpath network access. Restrictions would only be necessary where safety requirements are needed, for example if there was a maintenance activity that required vehicles to cross the path. The permissive path within the Order Limits is agreed with the landowner for the Energy Park.</p> <p>ii) The permissive path route will include part of public footpath HECK 15/1. This part runs along the north-west boundary of the</p>

			<p>site. The public footpath is not currently accessible because three footbridges over the watercourse/drains are no longer in existence. Two of these footbridges will be reinstated so that the public footpath will be useable between Sidebar Lane (to the west of the site) and the point which it meets the watercourse/drain in the north east corner of the field forming Work No. 9A (as shown on sheet 1 of the Works Plans (document reference 2.2)).</p> <p>The public footpath will be temporarily stopped up during construction of the development (albeit that the footpath is not currently useable because the absence of footbridges prevent its use). Once reinstated following construction, this public footpath will remain open to the public at all times.</p> <p>The Applicant's proposed path (being the remainder of Work No. 9B) will be open to the public as a permissive path. The rights to use the land are made permissively to all public on foot. Permissive paths do not have any legal status but the agreement to provide the path is delivered through Requirement 17 of the DCO. This provides that:</p> <ul style="list-style-type: none"> <li>• The details of the permissive path (which includes the final routing, specification, and maintenance regime) must be submitted to North Kesteven District Council (NKDC) prior to implementation of the permissive path;</li> <li>• The path must be open to the public prior to the date of final commissioning of the respective phase of works; and</li> <li>• The path must be provided and maintained in accordance with the approved details for the lifetime of the authorised development.</li> </ul> <p>The undertaker will be entitled to restrict access, after construction, for at least 24 hours in any year and also at times for operational requirements and in an emergency. These restrictions have been incorporated into the outline Operational Environmental Management Plan (document reference</p>
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			<p>ExA.oOEMP-D2.V1), which is included with the Deadline 2 submissions.</p> <p>iii) It is not intended, nor does the Applicant consider it necessary, to provide a legal agreement as the permissive path grants a free licence to all members of the public on foot to use the permissive path. The obligation to deliver the path is provided for through Requirement 17 of the DCO. Requirement 17(2) and (3) makes it clear on the face of the DCO that the path must be open to the public for the lifetime of the authorised development.</p>
TT 1.2	The Applicant	<p>Paragraph 2.8.2 of ES Chapter 2 [PS-051] states that the future baseline has been considered and paragraph 2.9.1 states that future baseline years of 2026, 2027, and 2067/2068 have been assessed. The updated ES Chapter 14 [PS-073] uses baseline traffic flows from 2022 (with targeted additional surveys relating to the substation from May 2023), including for the assessment of the decommissioning phase in 2067/2068.</p> <p>Could the Applicant clarify whether traffic growth factors have been incorporated into the transport assessment to take into account any anticipated growth or development within the wider area or provide justification for why this is not required and confirmation that a worst-case scenario has been assessed.</p>	<p>The Applicant confirms that traffic growth factors (typically established using the TEMPro database) have not been applied to the baseline traffic data obtained from surveys carried out in March 2022 (links one to three; on the A17) and May 2023 ( Links Four (Cowbridge Road), Five (Bicker Drove) and Six (Vicarage Drove)), and 2021 data obtained from Department for Transport traffic count 46559 (link seven; A52).</p> <p>If growth factors were applied, this would result in a higher future baseline scenario. As such, by using the recorded 2022 and 2023 flows to determine the percentage impact of traffic associated with the Proposed Development, this represents a worst-case scenario assessment as it is assessed against a lower baseline. It is therefore likely that the percentage increase of development traffic on the links would be lower than what has currently been assessed in reality, in particular during the later assessment years.</p> <p>An assessment has been undertaken to check the impacts if growth is applied. With a 1.0546 growth rate to 2028 (the end of the construction period), the percentage impact of development traffic would still be within the same thresholds assessed against Table 14.1 of the ES. This would result in no change to the significance of effect for the Proposed Development on these roads even with growth applied.</p> <p>The low and temporary number of vehicles per day associated with the construction phase are considered to be within the daily variation of flows and will not have an impact on the capacity of links and junctions on the A17.</p>

TT 1.3	<p>The Applicant National Electricity Transmission Plc</p> <p style="text-align: right;">Grid</p>	<p>Paragraph 4.3 of the outline CTMP [PS-152] states that “<i>Construction traffic accessing the Bicker Fen substation will also follow the same construction route to the A52 and A17 roundabout where it will turn onto the A52 towards Bicker. It is anticipated that the majority of construction traffic will use the existing National Grid Bicker Fen Substation access road and access and egress the site via Cowbridge Road, Bicker Drove and Vicarage Drove, as shown at Figure 2.1.</i>” It is noted that NGET are expected to submit a final CTMP for their own works, as the Bicker Fen extension Works No’s 6B and 6C would be a standalone phase.</p> <p>Could the Applicant and NGET consider:</p> <p>i) Should the dDCO [PS-024] specify a separate CTMP for the Bicker Fen substation works, or is Requirement 14 sufficient to cover this?</p>	<p>The Applicant considers that Requirement 14 is sufficient as currently drafted and it is not necessary to expressly state on the face of the DCO that NGET will submit a separate plan (i.e. the CTMP). This is because Works No's 6B and 6C will either form a separate phase of the development or form part of a phase dealing with the works at Bicker Fen substation.</p> <p>Paragraph 2.1.20 of the <b>Explanatory Memorandum</b> (document reference 3.3/PS-026) states that the number of phases will be determined by the undertaker prior to commencement of the Order and notified to the relevant planning authority under Requirement 3 of Schedule 2 to of the Order. Each phase of the Authorised Development is then considered in accordance with the Requirements at Schedule 2 of the DCO, which allow for discharge in respect of each phase. The final plans submitted will therefore be relevant for the particular phase in question.</p> <p>Requirement 14 (Construction Traffic Management Plan (CTMP)) is structured so that "no phase of the authorised development may commence..." until the final CTMP (relevant for that phase) is approved by the county authority in consultation with the relevant planning authority. It is anticipated that NGET will submit a CTMP for the traffic movements associated with Works No’s 6B and 6C or that NGET's traffic movements will be dealt with as part of the overall discharge of Requirements in respect of the phase of works at Bicker Fen substation.</p> <p>Pursuant to Requirement 14(1), the final CTMP must be in accordance with the general principles in the <b>outline CTMP</b> (document reference 7.10/ PS-152), as is relevant to that phase of works.</p>
TT 1.4	The Applicant	<p>Paragraph 14.6.5 of ES Chapter 14 [PS-073] sets out that a maximum of 400 construction workers are anticipated to be on the energy park site at any one time during the peak construction period, with an average of 150 for the majority of the construction. Paragraph 14.6.6 anticipates that the vast majority of workers will be transported by minibuses. NPS EN-1 at paragraph 5.13.3 requires, where appropriate, preparation of a travel plan</p>	<p>Paragraph 5.5 and 5.18 of the <b>outline CTMP</b> (document reference 7.10) states that the vast majority of workers will be transported by minibuses.</p> <p>Pursuant to Requirement 14(1), the final CTMP must be in accordance with the <b>outline CTMP</b> (document reference 7.10), as is relevant to that phase of works.</p> <p>The final CTMP will therefore include the precise details of how workers will travel to, and access, the site. To the extent that LCC and the relevant planning authorities (who have approval powers under Requirement 14) consider it necessary to include a standalone Workers Travel Plan then the Applicant can produce this alongside the final CTMP once the exact travel measures and</p>

		<p>including demand management measures to mitigate transport impacts.</p> <p>Could the Applicant clarify if a Construction Workers Travel Plan is to be produced, and if so, how would it be secured in the dDCO?</p>	<p>details are known. It is, however, the Applicant's position that the principles provided for in the outline CTMP are sufficient to secure the intention to use mini-buses and/or measures to minimise car use.</p> <p><b>Chapter 14: Transport and Access</b> (document reference 6.1.14/ps-073) also confirms that there are forecast to be no significant transport impacts of the scheme (including accounting for staff travelling via minibus) and therefore it is considered that no further measures are required to mitigate transport impacts of construction workers journeys to work.</p>
TT 1.5	<p>The Applicant Lincolnshire County Council National Grid Electricity Transmission Plc</p>	<p>Table 14.8 of ES Chapter 14 [PS-073] sets out the activity and type of HGV traffic flows to the energy park and indicates that substation transformers and a crane would be delivered via Abnormal Indivisible Load (AIL). Paragraph 14.6.3 indicates that the construction of the energy park would require around 107 AILs.</p> <p>i) Could the Applicant and NGET clarify if AILs would be necessary for the works at Bicker Fen substation?</p> <p>ii) Could LCC clarify if they have any comments to make regarding the use of AILs on the local highway network?</p>	<p>National Grid Electricity Transmission have confirmed to the Applicant that no AILs would be necessary for the extension works at National Grid Bicker Fen Substation.</p>
TT 1.6	<p>The Applicant Lincolnshire County Council National Grid Electricity Transmission Plc</p>	<p>Paragraph 14.6.14 to 16 of ES Chapter 14 [PS-073] estimate traffic flows to the National Grid Bicker Fen substation extension works to 2,076 vehicles over the 60 week construction period, plus construction worker movements, leading to an average of 18 two way vehicle movements per day. Tables 14.9 and 14.11 indicate Links Four (Cowbridge Road), Five (Bicker Drove) and Six (Vicarage Drove) as having a high impact significance from HGV traffic flows. Paragraph 14.6.22 states "Given that Links Four to Six are of negligible sensitivity, the increases in traffic result in a</p>	<p>i) The Links noted (Cowbridge Road, Bicker Drove and Vicarage Drove) have been assessed as having negligible sensitivity value as they do not serve any of the trip attractors such as schools, hospitals or tourist destinations which are listed at Table 14.2 of <b>Chapter 14:Transport and Access</b> of the ES. They do not have any collision clusters or road safety concerns (noting their existing use by NGET), or any junctions/highway links at or over capacity. The roads are relatively rural in nature and serve only a handful of dwellings and agricultural land/farms. Whilst it is acknowledged that there are no footways, there are no PRoW connections nor desire lines for non-motorised users and there is unlikely to be a high number of people 'at home' or 'at work' on these roads. Whilst Links Four to Six (Cowbridge Road, Bicker Drove and Vicarage Drove) may be used by</p>

		<p>temporary Negligible level of impact significance at all links, and therefore are Not Significant in EIA terms”.</p> <p>i) Can the Applicant explain why these particular Links are identified as being of negligible sensitivity value.</p> <p>ii) Can NGET confirm if paragraphs 14.6.14 to 14.6.18 and Table 14.9 of ES Chapter 14 [PS-073] are an accurate indication of existing and proposed traffic flows to the Bicker Fen substation.</p> <p>iii) Can LCC confirm if they agree with the Applicant’s assessment of sensitivity of Links Four (Cowbridge Road), Five (Bicker Drove) and Six (Vicarage Drove), or if, having regard to Table 14.2 of ES Chapter 14 [PS-073], you consider the sensitivity of any of these Links should be increased.</p>	<p>a small number of people associated with the properties in this location, on the basis that the route is already used by NGET to access the Substation this would not in itself change the assessment.</p> <p>On this basis, Cowbridge Road, Bicker Drove and Vicarage Drove are not considered to be sensitive receptors and have been categorised as “negligible significance”.</p>
TT 1.7	The Applicant	<p>Section 14.8 of ES Chapter 14 [PS-073] sets out that it is not necessary to assess the cumulative transport impacts given the distance from the listed other developments, the temporary nature of the construction phase and the insignificant changes in annual average daily traffic (AADT).</p> <p>Could the Applicant confirm if the additional sites being considered in the Interrelationship with other NSIPs report [REP1-021], in particular Beacon Fen, change these conclusions?</p>	<p>The conclusions are not changed having undertaken a cumulative assessment of transport impacts which is recorded within <b>ES Technical Note- Updated Information on Cumulative Projects</b> (applicant document reference ExA.ESTN-Cumulative-D2.V1) submitted at Deadline 2 The assessment sets out that the cumulative number of vehicles on the A17 and A52 is likely to be of negligible impact, and in EIA terms is Not Significant. Traffic assessed on the routes to Bicker substation via Cowbridge Road, Bicker Drove and Vicarage Drove are unchanged on the basis that there is insufficient information in the public domain in relation to those sites which may also connect to the substation.</p>
TT 1.8	The Applicant Lincolnshire County Council	<p>The outline Decommissioning and Restoration Plan (DRP) [PS-150] sets out at section 1.10 that a separate Decommissioning Traffic</p>	<p>The Applicant considers that the principle of a decommissioning traffic management plan is secured through the measures referred to in the body of the control plans, and that it would not be necessary (in the interests of</p>



		<p>Management Plan (DTMP) will be produced and agreed with the RPA.</p> <p>Could the Applicant and LCC consider if the wording of Requirement 18 of the dDCO [PS-024] is sufficient to secure a DTMP?</p>	<p>conciseness and best practice drafting<sup>6</sup>) to refer to the need for traffic management measures on the face of the DCO at Requirement 18.</p> <p>Paragraph (4) of Requirement 18 in Schedule 2 of the DCO provides that the final decommissioning and restoration plan (DRP) must be substantially in accordance with the <b>outline DRP</b> (document reference 7.9/PS-150). Accordingly, given that the outline DRP (at paragraph 1.10) stipulates that a decommissioning traffic management plan will be produced, the final decommissioning scheme must incorporate such traffic management measures.</p> <p>The relevant planning authorities will have the power to consider whether the final DRP is in accordance with the outline plan and, by extension, whether the traffic management measures are sufficient before agreeing to approve the DRP.</p>
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<sup>6</sup> Including the themes within the National Infrastructure Planning Advice Note 15: Drafting Development Consent Orders (most notably at paragraph 16.2).

**Table 12: Water Environment and Flood Risk**

ExA Question Number:	Question Addressed to:	Question	Applicant's Response
WE 1.1	The Applicant	<p>The RR from the EA [RR-009] requests clarification in respect of finished floor levels for the control rooms. The Applicant's response [REP1-022] and the draft SoCG [REP1-011] state that further details will be provided within a revised Outline DPD.</p> <p>Could the Applicant provide an updated version of the Outline DPD at D2.</p>	<p>The Applicant confirms the <b>Outline Design Principles</b> (document reference 7.1/PS-138) has been updated and submitted at Deadline 2 to reflect comments from the Environment Agency and secures the design of the control rooms to be at or above 2.25m AOD. Additionally, <b>Figure 4.21- Central Control Building</b> (document reference 6.2.4/APP-128) and <b>Figure 4.22 - Substation Control Building</b> (document reference 6.2.4/APP-129) have been updated to a Revision 2 and submitted at Deadline 2 to reflect the design alteration.</p>
WE 1.2	Anglian Water	<p>Anglian Water's RR [RR-012] refers to the draft Water Resources Management Plan. Could Anglian Water explain the relevance of the document to the Proposed Development, its current status and provide a copy of any extracts of the latest version which are of relevance to the Examination.</p>	
WE 1.3	The Applicant	<p>ES Chapter 9 [PS-065] and Appendix 9.1 (Flood Risk Assessment) [AS-020 to AS-023] refer to the Level 1 Central Lincolnshire Strategic Flood Risk Assessment (SFRA) 2015 and the Southeast Lincolnshire SFRA 2017, amongst other versions.</p> <p>Could the Applicant provide a copy of the relevant extracts of the relevant versions of the SFRAs which include the Application Site, including title page/introduction of both SFRAs and mapping plans with an overlay of the Application Site.</p>	<p>The Applicant has provided a Technical Note at <b>Appendix 1</b> of this document setting out relevant extracts from:</p> <ul style="list-style-type: none"> <li>• the, Central Lincolnshire Strategic Flood Risk Assessment (SFRA) – Level 1 (2022);</li> <li>• the Central Lincolnshire SFRA – Level 2 (2022);</li> <li>• the Central Lincolnshire SFRA – Level 1 (2015);</li> <li>• The Central Lincolnshire SFRA – Level 2 (2016); and</li> <li>• the South-east Lincolnshire SFRA (2017).</li> </ul>

<p>WE 1.4</p>	<p>The Applicant Black Sluice Internal Drainage Board Environment Agency Lead Local Flood Authority</p>	<p>Water Bodies in a River Basin Management Plan [PS-017] shows the range of watercourses which cross the Order Land and in the surrounding area, many of which will need to be crossed by the Proposed Development.</p> <p>i) Could the Applicant clarify how the directional drilling or similar technology under the IDB drains and other major wet drains would be controlled through the DCO process?</p> <p>ii) Could the IDB, the EA and Lead Local Flood Authority (LLFA) provide any further comments they wish to raise regarding the proposed methods of watercourse crossings and whether you consider the final details are able to be adequately secured by Requirement 6 of the dDCO [PS-024] alongside the protective provisions set out in Schedule 13 Parts 5 and 7.</p> <p>iii) For the smaller field ditches can the Applicant explain how these will be monitored for water retention and rainfall during construction to ensure that silt run off is minimised.</p> <p>iv) Could the EA, IDB or LLFA comment on the mitigation and monitoring measures.</p>	<p>i) The protective provisions at Part 7 of Schedule 13 to the dDCO provide that any part of the development that is within 8 metres of a watercourse or drain (defined as a "drainage work") is subject to the condition in paragraph 76(1) of the protective provisions. That paragraph requires the Applicant to submit any information reasonably required by the Drainage Authorities about the Applicant's proposed works to cross watercourses (which are either the responsibility of the Internal Drainage Board (IDB) or a third party).</p> <p>The information submitted about the proposed works must then be approved by the Drainage Authorities before the works can commence.</p> <p>The information submitted to the Drainage Authorities must include drawings, specifications, assessments and method statements about the proposed crossing works. As a result, the details the Applicant will be submitting will need to specify the type of technology being proposed to cross the watercourse/drains in question.</p> <p>The approval of the Drainage Authorities under the protective provisions of the information submitted may be given subject to reasonable requirements for the purpose of protecting the watercourse being crossed.</p> <p>Accordingly, the need for the Drainage Authorities to approve the Applicant's works when crossing a watercourse and the ability for the Drainage Authorities to impose reasonable requirements means that the Drainage Authorities have the ability to determine whether any directional drilling or similar technology proposed for the crossing works is reasonable and that appropriate safeguards are in place for the watercourse/drain.</p> <p>The IDB have agreed to the Protective Provisions in Part 7 of Schedule 13, and the Environment Agency have agreed the form of Protective Provisions at Part 5 of Schedule 13.</p>
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			<p>Additionally, control of noise related to directional drilling or similar technology is set out in paragraphs 7.80-7.86 of the <b>Outline Construction Environmental Management Plan</b> (document reference 7.7/PS-146) and paragraphs 1.2.16-1.2.18 of <b>Appendix G: Outline Construction Noise Management Plan</b> of the <b>Outline Construction Environmental Management Plan</b> (document reference 7.7/PS-146). The final CEMP will be secured by DCO requirements which will implement these controls in practice.</p> <p>iii) The Applicant confirms smaller field ditches will be monitored for the purpose of controlling and minimising silt loading through the following measures:</p> <ul style="list-style-type: none"> <li>• A pre-commencement survey/visual inspection of the sites ditch network will be undertaken prior to construction to inform the ditch networks ongoing management and maintenance regime,</li> <li>• During the construction phase, the appointed Ecological Clerk of Works will regularly review the weather forecast. The flow regime, water level and turbidity of smaller field ditches will be monitored accordingly by the Ecological Clerk of Works. It is envisaged that monitoring will take the form of visual inspection/checks and, in the case of turbidity, the use of a hand-held turbidity meter, or similar,</li> <li>• All access tracks and solar array working areas will be inspected during wet periods in order to identify (i) areas where surface water run off collects and pools and (ii) areas characterised by overland surface water flows. This will facilitate the implementation of silt run-off mitigation measures on a 'dynamic' basis.</li> <li>• Impacts from major construction works will be avoided by minimising works during periods of high precipitation,</li> </ul>
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			<ul style="list-style-type: none"> <li>• SuDS, in the form of swales, will form part of the solar array infrastructure and will assist in the control of sediment and surface-water run-off,</li> <li>• Silt fences will be erected within areas considered at risk of erosion (i.e. where surface water run-off is likely to be mobilised overland)</li> <li>• Silt fences will be inspected daily and cleaned as required.</li> <li>• Silt matting will be installed where required (e.g. within temporary drainage channels), checked daily and replaced as necessary.</li> <li>• Excess silt will be deposited within designated areas at least 50m away from any on-site ditch</li> </ul> <p>ES Chapter 9- <b>Hydrology, Hydrogeology, Flood Risk and Drainage</b> (document reference 6.1.9/PS-064) signposts to the oCEMP (document reference 7.7/PS-026) in regard to measures to mitigate silt-loading. In response to this question the Applicant has updated proposals in respect of the monitoring of ditches and implementation of measures to control silt-laden run-off have been incorporated into Revision 4 of the oCEMP submitted at Deadline 2.</p> <p>The schedule/programme of ditch monitoring and implementation of construction impact mitigation measures will be agreed in consultation with the Black Sluice Internal Drainage Board.</p>
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## Appendix 1 – Q WE 1.3: Hydrology Technical Note

# Heckington Fen Solar Park

The Examining Authority's written  
questions and requests for information  
(ExQ1) – Question WE.1.3

October 2023

[www.jbaconsulting.com](http://www.jbaconsulting.com)

**Ecotricity (Heck Fen Solar) Limited**  
**Lion House**  
**Rowcroft**  
**STROUD**  
**GL5 3BY**

JBA Project Code	2023s0747
Contract	Heckington Fen Solar Park
Client	Ecotricity (Heck Fen Solar) Limited
Date	October 2023
Author	Stuart Harwood
Reviewer	Mark Bentley
Subject	The Examining Authority's written questions ExQ1

## 1 Introduction

The Examining Authority's (ExA's) first round of written questions and requests for information (ExQ1) includes Question WE.1.3, as follows:

***ES Chapter 9 [PS-065] and Appendix 9.1 (Flood Risk Assessment) [AS-020 to AS-023] refer to the Level 1 Central Lincolnshire Strategic Flood Risk Assessment (SFRA) 2015 and the Southeast Lincolnshire SFRA 2017, amongst other versions.***

***Could the Applicant provide a copy of the relevant extracts of the relevant versions of the SFRAs which include the Application Site, including title page/introduction of both SFRAs and mapping plans with an overlay of the Application Site.***

The Flood Risk Assessment refers to the following SFRA documents:

1. Central Lincolnshire SFRA – Level 1 (2022)
2. Central Lincolnshire SFRA – Level 2 (2022)
3. Central Lincolnshire SFRA – Level 1 (2015)
4. Central Lincolnshire SFRA – Level 2 (2016)
5. South-east Lincolnshire SFRA (2017)

Relevant extracts relating to the scope of each study and flood risk mapping associated with the Application Site are presented below.

## 2 Central Lincolnshire SFRA – Level 1 (2022)

[FLOOD RISK ASSESSMENT \(n-kesteven.gov.uk\)](https://n-kesteven.gov.uk)



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Contract	Heckington Fen Solar Park
Client	Ecotricity (Heck Fen Solar) Limited
Date	October 2023
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Reviewer	Mark Bentley
Subject	The Examining Authority's written questions ExQ1

## 1.0 INTRODUCTION

- 1.1 This Strategic Flood Risk Assessment, (SFRA), is compliant with the requirements set out in the National Planning Policy Framework 2018, (NPPF), and the associated online Planning Practice Guidance.
- 1.2 This Level 1 SFRA was produced on behalf of the Central Lincolnshire Local Plan Team to provide the initial evidence base to support the local plan site allocation process.

### Data Used

- 1.3 This Level 1 SFRA is based on the following information:
  - Environment Agency Data
  - Proposed Central Lincolnshire Local Plan Allocations
  - Previous Level 1 SFRA for Central Lincolnshire dated 30/3/15

### Background

- 1.4 The Central Lincolnshire Joint Strategic Planning Committee (CLJSPC) was established in October 2009 and the Central Lincolnshire Local Plan Team (previously called the Joint Planning Unit) was established in May 2010.
- 1.5 The Central Lincolnshire Local Plan Team is responsible for producing the Central Lincolnshire Local Plan which will contain planning policies that relate to the delivery and management of development in Central Lincolnshire.

## 3.0 LEVEL 1 STRATEGIC FLOOD RISK ASSESSMENT

### Previous Level 1 SFRA

- 3.1 The previous Level 1 SFRA was issued on 30<sup>th</sup> March 2015. It contains information which is still relevant and can be found on the Central Lincolnshire Planning Policy Library website.

### Current Level 1 SFRA

- 3.2 This Level 1 SFRA was used by the Central Lincolnshire Local Plan Team for their initial consideration of all the proposed allocations. This level of SFRA showed any site identified in the current Housing and Economic Land Availability Assessment, (HELAA), existing allocated residential sites and Strategic Urban Extensions, (SUE), that had any portion of the site in either Flood Zone 3 or 2, as identified on the current Environment Agency, (EA) Flood Map for Planning. The information was provided in a series of maps attached as **Appendix 1**.

### Surface Water Flooding

- 3.3 At this stage it did not include any potential surface water flooding outlines, and these were considered in subsequent stages.

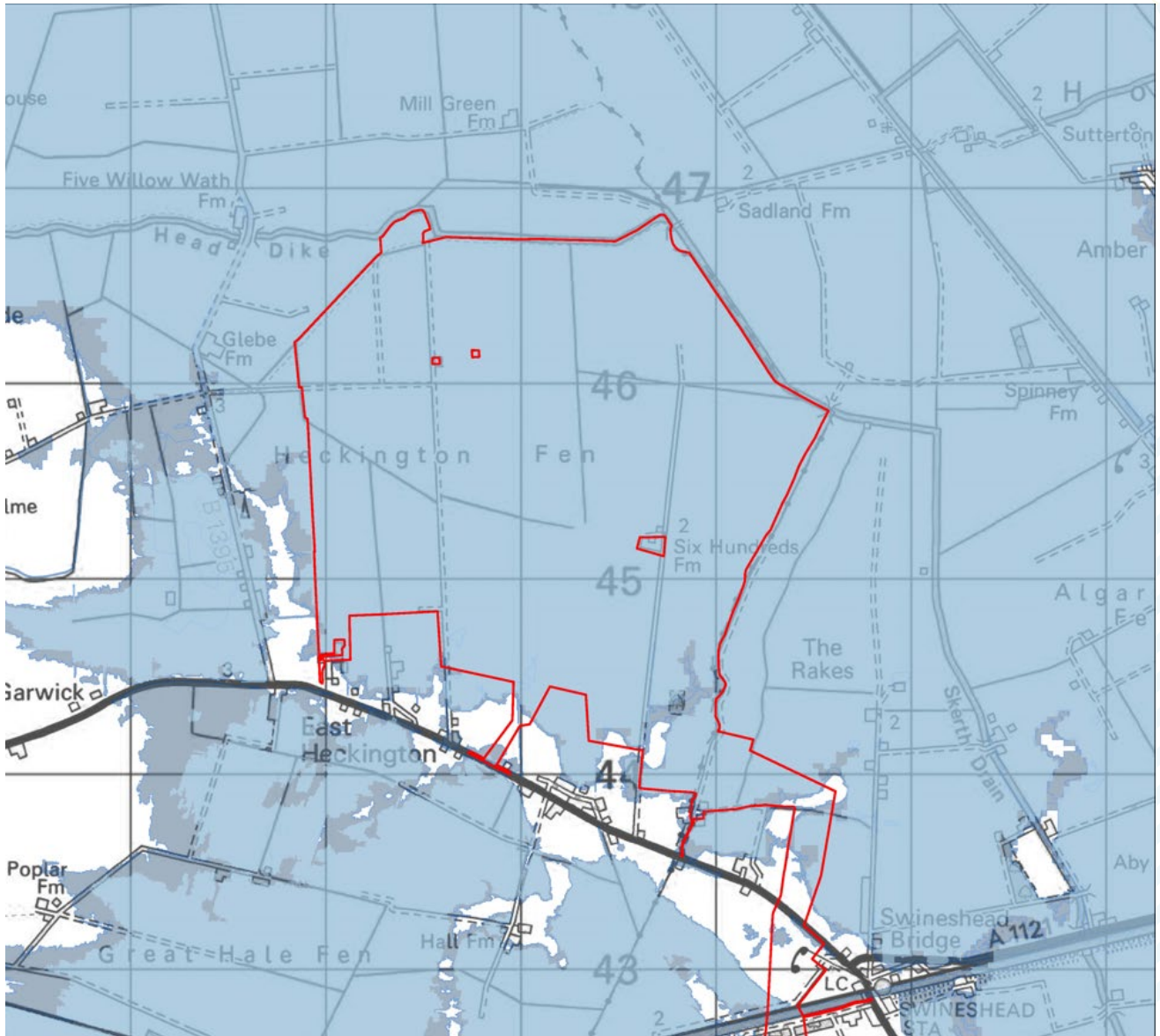
### Climate Change

- 3.4 The EA Flood Zones do not currently include an allowance for climate change. However, recent discussions with the EA has concluded that the impact of climate change on the extent of the Flood Zones in this area is likely to be negligible and should not significantly impact on the strategic allocation of land.

# Technical Note

JBA Project Code 2023s0747  
Contract Heckington Fen Solar Park  
Client Ecotricity (Heck Fen Solar) Limited  
Date October 2023  
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Reviewer Mark Bentley  
Subject The Examining Authority's written questions ExQ1

SFRA Level 1 map extract showing Flood Zones at Heckington Fen (using EA 'flood map for planning' data):



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Client	Ecotricity (Heck Fen Solar) Limited
Date	October 2023
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Reviewer	Mark Bentley
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## 3 Central Lincolnshire SFRA – Level 2 (2022)

### [FLOOD RISK ASSESSMENT \(n-kesteven.gov.uk\)](https://n-kesteven.gov.uk)

#### 1.0 INTRODUCTION

- 1.1 This Strategic Flood Risk Assessment, (SFRA), is compliant with the requirements set out in the National Planning Policy Framework 2019, (NPPF), and the associated online Planning Practice Guidance.
- 1.2 This Level 2 SFRA has been produced on behalf of the Central Lincolnshire Local Plan Team to provide the evidence base to support the local plan site allocation process.

#### Data Used

- 1.3 This Level 2 SFRA is based on the following information:
  - Environment Agency Data
  - British Geological Survey Geology Maps
  - Proposed Central Lincolnshire Local Plan Allocations

#### Background

- 1.4 The Central Lincolnshire Joint Strategic Planning Committee (CLJSPC) was established in October 2009 and the Central Lincolnshire Local Plan Team (previously called the Joint Planning Unit) was established in May 2010.
- 1.5 The Central Lincolnshire Local Plan Team is responsible for producing the Central Lincolnshire Local Plan which will contain planning policies that relate to the delivery and management of development in Central Lincolnshire.

#### Level 1 SFRA

- 1.6 A Level 1 SFRA was used by the Central Lincolnshire Local Plan Team for their initial consideration of all the proposed allocations at that time. That level of SFRA included any site identified in the current Housing and Economic Land Availability Assessment, (HELAA), existing allocated residential sites and Strategic Urban Extensions, (SUE), that had any portion of the site in either Flood Zone 3 or 2, as identified on the current Environment Agency, (EA) Flood Map for Planning. The information was provided in a series of maps.
- 1.7 At that stage, the Level 1 SFRA did not include any potential surface water flooding outlines or reference to other sources of flooding.

As set out at 3.2.5 of the FRA (AS-020 to AS-023), the Level 2 SFRA (2022) only reported on the proposed site allocations (without planning permission) arising from the Level 1 SFRA that have any portion of the site in either Flood Zone 3 or 2. The Level 2 SFRA does not include flood risk mapping for the proposed Energy Park.

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## 4 Central Lincolnshire SFRA – Level 1 (2015)

[Flood Risk Assessment Template \(n-kesteven.gov.uk\)](https://n-kesteven.gov.uk)

### 1.0 INTRODUCTION

- 1.1 This Level 1 Strategic Flood Risk Assessment (SFRA) is compliant with the requirements set out in the National Planning Policy Framework (NPPF) and the associated Planning Practice Guidance. The SFRA has been produced on behalf of the Central Lincolnshire Local Plan Team as part of the evidence base for their Local Plan.

#### Sources of Data

- 1.2 The report is based on the following information:
- (i) West Lindsey District Council SFRA July 2009
  - (ii) Lincoln Policy Area SFRA February 2010
  - (iii) North Kesteven District Council SFRA November 2009
  - (iv) Environment Agency Flood Zone and Surface Water Mapping

#### Background

- 1.3 The Central Lincolnshire Joint Strategic Planning Committee (CLJSPC) was established in October 2009 and the Central Lincolnshire Local Plan Team (previously called the Joint Planning Unit) was established in May 2010.
- 1.4 The Central Lincolnshire Local Plan Team is responsible for producing the Central Lincolnshire Local Plan which will contain planning policies that relate to the delivery and management of development in Central Lincolnshire. The Central Lincolnshire Local Plan will progressively replace the Local Plans of the City of Lincoln, West Lindsey and North Kesteven District Councils.
- 1.5 The planning policies in the Central Lincolnshire Local Plan will be used to help determine planning applications within the Central Lincolnshire area – the policies will set out what can be built and where.
- 1.6 An initial review of the three existing Strategic Flood Risk Assessments covering the area was undertaken and concluded that one SFRA covering the combined area would provide a more robust evidence base.

#### The SFRA Structure

- 1.11 The two stages proposed for this SFRA are:
- Level 1 SFRA – Enables application of the Sequential Test,
  - Level 2 SFRA – Increases scope of SFRA for sites where the Exception Test is required.
- 1.12 The Level 1 SFRA (this report), will present sufficient information to enable the LPA to apply the Sequential Test to potential development sites and assist in identifying whether the application of the Exception Test will be necessary.

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Contract Heckington Fen Solar Park  
Client Ecotricity (Heck Fen Solar) Limited  
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Reviewer Mark Bentley  
Subject The Examining Authority's written questions ExQ1

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## 3.0 CENTRAL LINCOLNSHIRE LEVEL 1 SFRA

3.1 Following discussions between the Central Lincolnshire Local Plan Team, the Environment Agency and Lincolnshire County Council regarding the need for and scope of a level 1 SFRA to inform the Sequential Test for the site allocations in the Local Plan the following has been agreed.

### Level 1 SFRA Scope

- 3.2 The Environment Agency Flood Zone maps will provide the basis for the Sequential Test.
- 3.3 Proposed allocations will initially be tested against available flood risk data as follows:
- Sites in Flood Zone 1 will be considered to have met the requirements of the Sequential Test and continue to be assessed against other local plan criteria.
  - Sites in Flood Zones 2 and 3 will be considered not to have met the requirements of the Sequential Test and will be subject to further consideration through the Exception Test undertaken in a Level 2 SFRA.
  - Environment Agency Risk of Flooding from Surface Water maps will be used to highlight any sites where further advice on the level of flood risk is required from the Lead Local Flood Authority and the relevant Internal Drainage Board.

### Level 1 SFRA Mapping

3.4 The following maps accompany this report and will provide the evidence for the Sequential Test:

#### Appendix 1 Flood Zones

- Flood Zone Map Overview
- Flood Zone Map Area A
- Flood Zone Map Area B
- Flood Zone Map Area C
- Flood Zone Map Area D

#### Appendix 2 Surface Water

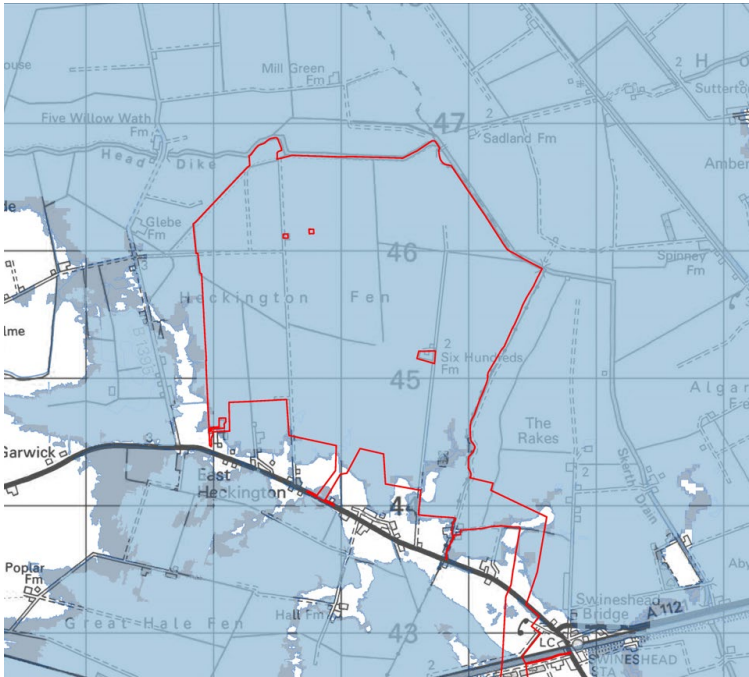
- Surface Water Risk Map Overview
- Surface Water Risk Map Area A
- Surface Water Risk Map Area B
- Surface Water Risk Map Area C
- Surface Water Risk Map Area D

# Technical Note

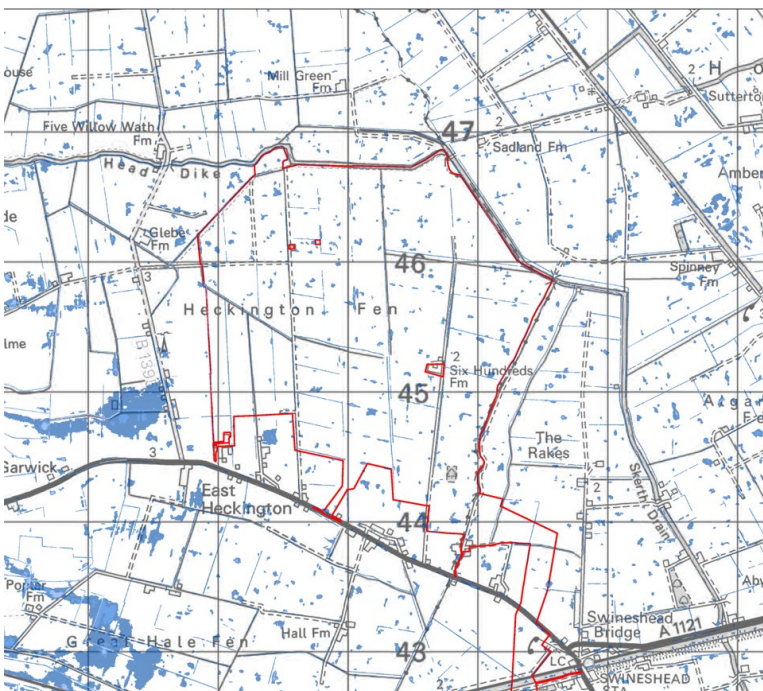


JBA Project Code 2023s0747  
Contract Heckington Fen Solar Park  
Client Ecotricity (Heck Fen Solar) Limited  
Date October 2023  
Author Stuart Harwood  
Reviewer Mark Bentley  
Subject The Examining Authority's written questions ExQ1

Extract from SFRA Level 1 map 'Area D' showing Flood Zones at Heckington Fen (using EA 'flood map for planning' data):



Extract from SFRA Level 1 map 'Area D' showing surface water flood risk at Heckington Fen (using EA data):



JBA Project Code 2023s0747  
Contract Heckington Fen Solar Park  
Client Ecotricity (Heck Fen Solar) Limited  
Date October 2023  
Author Stuart Harwood  
Reviewer Mark Bentley  
Subject The Examining Authority's written questions ExQ1

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## 5 Central Lincolnshire SFRA – Level 2 (2016)

[Flood Risk Assessment Template \(n-kesteven.gov.uk\)](https://n-kesteven.gov.uk)

### 1.0 INTRODUCTION

#### Background

- 1.1 The Central Lincolnshire Joint Strategic Planning Committee (CLJSPC) was established in October 2009 and the Central Lincolnshire Local Plan Team, (CLLPT), previously called the Joint Planning Unit, was established in May 2010.
- 1.2 The CLLPT is responsible for producing the Central Lincolnshire Local Plan which will contain planning policies that relate to the delivery and management of development in Central Lincolnshire. The Central Lincolnshire Local Plan will progressively replace the Local Plans of the City of Lincoln, West Lindsey and North Kesteven District Councils.
- 1.3 The planning policies in the Central Lincolnshire Local Plan will be used to help determine planning applications within the Central Lincolnshire area, the policies will set out what can be built and where.
- 1.4 An initial review of the three existing Strategic Flood Risk Assessments (SFRAs) covering the area was undertaken and concluded that one SFRA covering the combined area would provide a more robust evidence base.

#### The SFRA Structure

- 1.9 The two stages of the SFRA are:
  - Level 1 SFRA – The Level 1 SFRA (dated 30<sup>th</sup> March 2015), presented sufficient information which enabled the CLLPT to apply the Sequential Test to potential development sites and assisted in identifying whether the application of the Exception Test was necessary,
  - Level 2 SFRA – (This report) will increase the scope of the SFRA for sites where the Exception Test is required.

JBA Project Code 2023s0747  
Contract Heckington Fen Solar Park  
Client Ecotricity (Heck Fen Solar) Limited  
Date October 2023  
Author Stuart Harwood  
Reviewer Mark Bentley  
Subject The Examining Authority's written questions ExQ1

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## 2.0 CENTRAL LINCOLNSHIRE LEVEL 2 SFRA

- 2.1 This Level 2 SFRA is compliant with the requirements set out in the NPPF and the associated Planning Practice Guidance. The SFRA has been produced on behalf of the CLLPT as part of the evidence base for the next stage (submission version) of the Central Lincolnshire Local Plan.
- 2.2 The Level 1 SFRA was used to inform the Site Allocations Sequential Test undertaken in October 2015 which supported the consultation on the Further Draft Local Plan between 15<sup>th</sup> October 2015 and 25<sup>th</sup> November 2015.
- 2.3 The Sequential Test of Site Allocations October 2015 and consultation process identified 72 sites that either have a significant portion of their area located in Flood Zone 2 or 3 or are located in Flood Zone 1 with a potential surface water flooding issue.

### Level 2 SFRA Scope

- 2.4 Following discussions between the CLLPT, the Environment Agency and Lincolnshire County Council regarding the scope of a Level 2 SFRA to inform the Exception Test for the proposed allocations in the Local Plan the following scope has been agreed.
- 2.5 Proposed allocations will be reviewed against readily available flood risk data as follows:
  - Flood Map for Planning to identify Flood Zones.
  - Historical flooding.
  - Modelled fluvial and tidal flood levels.
  - Modelled surface water risk including depth and velocity.
  - Risk of flooding from a reservoir.
  - Ground conditions as shown on the British Geological Survey maps.
- 2.6 The possible mitigation measures will be identified to give an indication as to the suitability of the proposed allocations. These possible mitigation measures will need to be further investigated in site specific Flood Risk Assessments (FRAs).

The 2016 Level 2 SFRA considers flood risk at 45 proposed allocations, but does not present data for the Heckington Fen area.



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Client Ecotricity (Heck Fen Solar) Limited  
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## 6 South-east Lincolnshire Strategic Flood Risk Assessment (2017)

[SE-Lincolnshire-SFRA-2017-v6-24th-Jan-2018.pdf \(southeastlincslocalplan.org\)](https://www.southeastlincslocalplan.org/SE-Lincolnshire-SFRA-2017-v6-24th-Jan-2018.pdf)

### 1.3. South East Lincolnshire SFRA

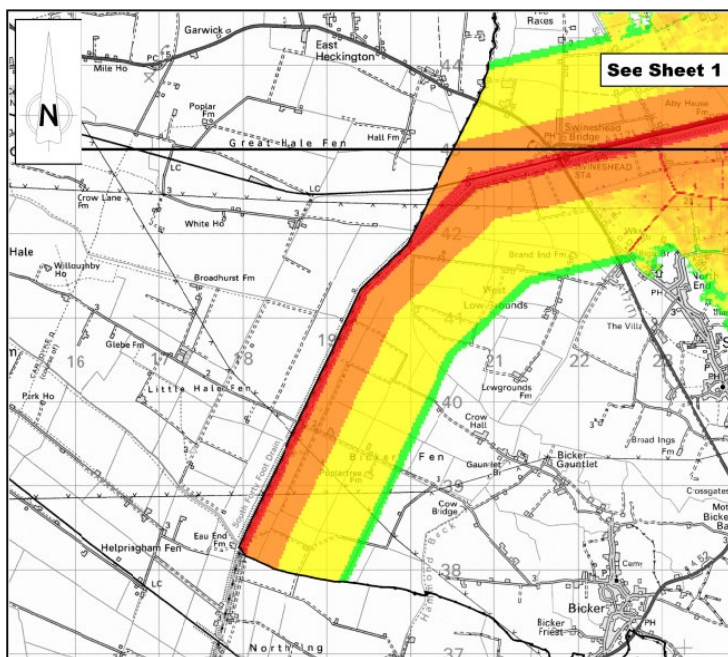
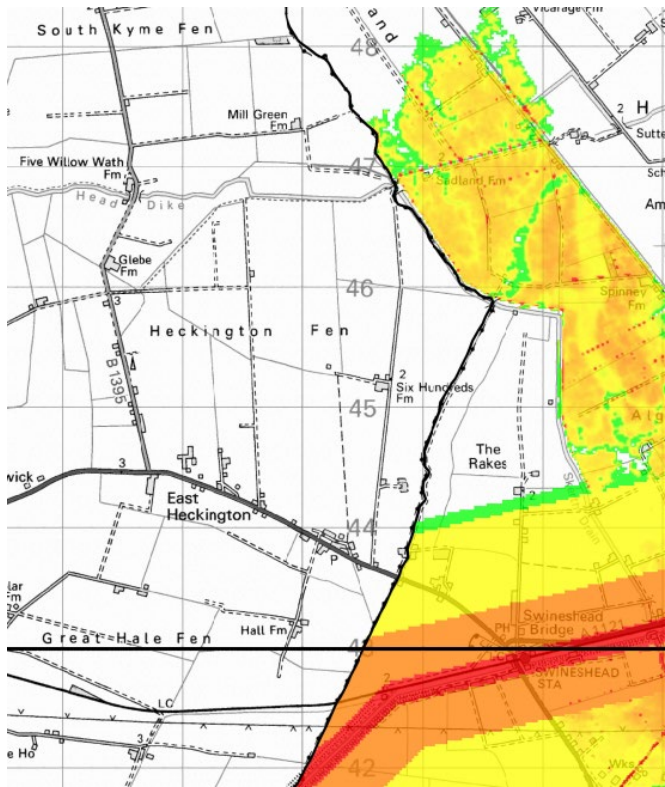
- 1.3.1 This report contains the SFRA carried out by the South East Lincolnshire Joint Planning Unit (SELJPU). It is accompanied by mapping which shows the variation in flood risk for land within the SELJPU area.
- 1.3.2 The assessment has been undertaken to ensure there is consistent evidence base against which the SELJPU can inform its Local Plan and Development Management decisions.
- 1.3.3 The previous Boston Borough Council SFRA was completed in October 2010. South Holland District Council's SFRA was completed in January 2010.
- 1.3.4 This report supersedes these existing documents and provides the latest and best available information on flood risk.
- 1.3.5 The report contains information to cover the two levels of assessment recommended by the National Planning Practice Guidance (NPPG), i.e. Level 1 and Level 2 assessments.
- 1.3.6 The Level 1 assessment is present in the form of the Environment Agency's Flood Map, Flood Map for Surface Water and Reservoir Flood Map. These maps identify the potential extent of flooding from tidal, fluvial, surface water and reservoirs (further detail on these maps is contained in the relevant sections below).
- 1.3.7 The Level 2 assessment is present in the form of hazard mapping, which classifies flood risk as Low Hazard and Danger to Some/Most/All based upon the modelling of factors including the potential depths of flooding, the velocity of flood flows and the presence of water borne debris.
- 1.3.8 The hazard mapping covers the whole of the Boston Borough Council area (please note that the component maps for the hazard in Boston, i.e. depth and velocity, are only available for those areas where tidal risk is dominant). In the South Holland area, the hazard map covers Spalding, Pinchbeck, Surfleet, Crowland and Sutton Bridge.
- 1.3.9 Development in areas beyond the Level 2 SFRA boundaries (and the fluvially dominant areas of Boston) and within a Flood Zone will need to undertake their own assessment, relative to the scale and nature of the proposed development, to inform appropriate mitigation consistent with the appended Standing Advice.
- 1.3.10 This document has been prepared in consultation with the Environment Agency, and Lincolnshire County Council in its role as Lead Local Flood Authority. It brings together information from these organisations, as well as the Internal Drainage Boards.
- 1.3.11 The Local Authorities and the Environment Agency have agreed a framework of flood risk mitigation requirements for development proposals according to different levels of risk (standing advice - see section 10 below). This sets a level of safety over the lifetime of the development where development in areas at risk is deemed appropriate and necessary to meet local need. The Local Authorities will use the relevant parts of the standing advice to ensure a consistent approach to flood mitigation is applied and to ensure development in high hazard areas is made safe as required by the NPPF. The standing advice also gives a clear indication of where mitigation will need to be incorporated into development proposals, which will enable developers to design in these elements and include in any viability appraisal from the outset.

# Technical Note



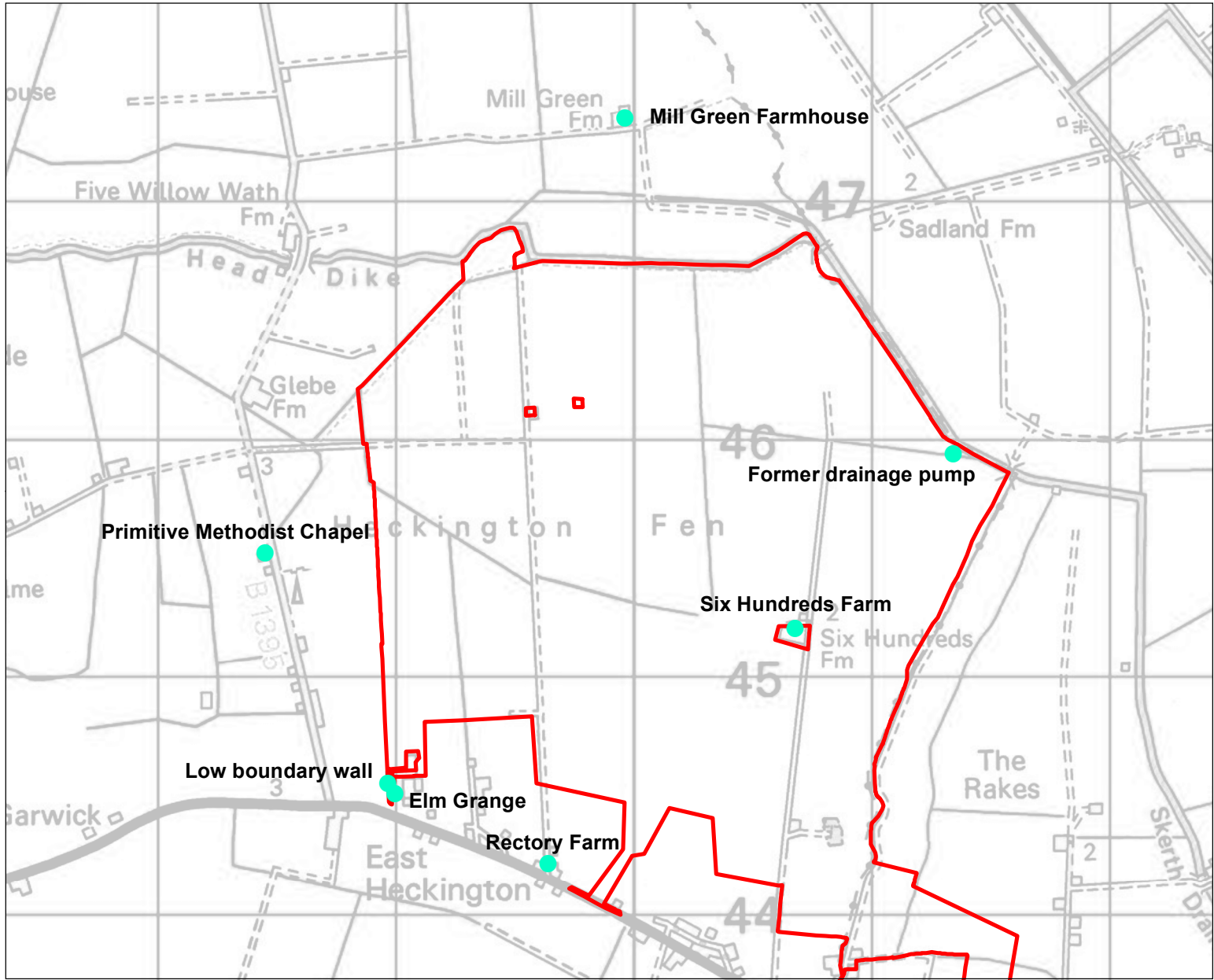
JBA Project Code 2023s0747  
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Author Stuart Harwood  
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Subject The Examining Authority's written questions ExQ1

Extracts from SFRA Figures 1.1 and 1.4 showing fluvial and tidal flood hazard mapping for the 2115 scenario:





## Appendix 2 – Q HE 1.1: Cultural Heritage Plan



**KEY**

- Order Limits
- Non-designated heritage assets cited in Examiner's Questions

**Response to Examiner's Questions for Deadline 2**

**Heckington Fen Solar Park**

Client: Ecotricity (Heck Fen Solar) Ltd  
 DRWG No: P20-2370  
 Drawn by: EP  
 Date: 25/10/2023  
 Scale: 1:25,000 @ A4  
 Approved by: GS





## **Appendix 3 – Q LUS 1.2 ii: Methodology of Intrusive Soil Sampling (NE)**

## Appendix F: Outline Soil Management Plan for the Offsite Grid Route Corridor

Document Properties		
<b>Regulation Reference</b>	Regulation 5(2)(q)	
<b>Planning Inspectorate Scheme Reference</b>	EN010123	
<b>Application Document Reference</b>	7.7	
<b>Title</b>	Appendix F: Outline Soil Management Plan for the Offsite Grid Route Corridor	
<b>Prepared By</b>	Heckington Fen Energy Project Team (Kernon Countryside Consultants Ltd)	
Version History		
<b>Version</b>	<b>Date</b>	<b>Version Status</b>
Rev 2	September 2023	Application Version

**DRAFT**

**HECKINGTON FEN  
ENERGY PARK**

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**REVISED**

**OUTLINE**

**SOIL MANAGEMENT PLAN  
(OFFSITE GRID ROUTE CORRIDOR)**

**September 2023**





**DRAFT**

**HECKINGTON FEN  
ENERGY PARK**

---

**REVISED**

**OUTLINE  
SOIL MANAGEMENT PLAN  
(OFFSITE GRID ROUTE CORRIDOR)**

**September 2023**

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**Authorised By .....**

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T: 01793 771333 Email: [info@kernon.co.uk](mailto:info@kernon.co.uk) Website: [www.kernon.co.uk](http://www.kernon.co.uk)*

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*Directors - **Tony Kernon** BSc(Hons), MRAC,, MRICS, FBIAC **Sarah Kernon**  
Consultants - **Ellie Chew** BSc(Hons), **Amy Curtis** BSc(Hons)*



# 1 INTRODUCTION

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- 1 Introduction
- 2 The Proposed Route
- 3 Soil Resources and Characteristics
- 4 Consultation Process
- 5 Key Principles
- 6 Management Requirements

## **Annexes**

- A Survey Notes
- B Description of Soil Types
- C Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites  
(extracts only)

DRAFT

# 1 INTRODUCTION

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- 1.1 This document provides an outline of the proposed Soil Management Plan (SMP) for the Heckington Fen Offsite Grid Connection Route Corridor “the Route”.
- 1.2 The Route will connect from the Heckington Fen Energy Park to the extension at the existing substation on Bicker Fen.
- 1.3 The Route needs to cross under roads, rivers and a railway, and there are therefore construction areas where deep excavations and boring machinery will be involved.
- 1.4 There will be a need for some fixed above ground infrastructure along the route. This will be located at field edges, as far as possible, so as not to disrupt the ongoing agricultural use of the land, which will return once installation is complete.
- 1.5 For much of the route there will be a 25m working corridor with a trench of maximum dimensions 1.5m wide to install a cable.
- 1.6 This outline of the SMP describes the survey work that will be carried out prior to drafting the SMP, and the consultation process that will be inbuilt prior to finalising the SMP before works commence.
- 1.7 This outline SMP is structured as follows:
- (i) section 2 describes the route;
  - (ii) section 3 sets out the soil resources and characteristics, and the soil survey that will be undertaken;
  - (iii) section 4 sets out the proposed consultation process;
  - (iii) section 5 sets out key principles;
  - (iv) and section 6 sets out the management required.
- 1.8 This oSMP is submitted as part of the DCO process in advance of detailed field surveys for soils. The significant amount of soil information recorded for the Energy Site, coupled with the recent installation of cables nearby, means that we can be confident that soil management can be carried out in a way that the ALC grading, and soil properties, will not be significantly or long-term adversely affected.
- 1.9 Accordingly field survey in advance of the DCO approval is not necessary.

## 2 THE PROPOSED ROUTE

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2.1 This outline SMP relates to a route to connect the proposed Energy Park to the existing substation at Bicker Fen.

2.2 A corridor is considered within the Order Limits of this DCO application and has been considered in this outline SMP, but the indicative route is shown below.

*Insert 1: Indicative Route*



2.3 The survey corridor, and photographs along the Route, are set out in **Annex A**.

2.4 The cable will be buried in a trench. At points the trench will be deep to allow for the cable to be buried under obstacles including the A17, the railway and the South Forty Foot Drain. At these points it is expected that an open cut trench will not be used, instead an alternative cabling solution will be used such as drilling the cable under these existing features.

2.5 In respect of the current use of the farmland along the Route all of it is arable farmland.

### 3 SOIL RESOURCES AND CHARACTERISTICS

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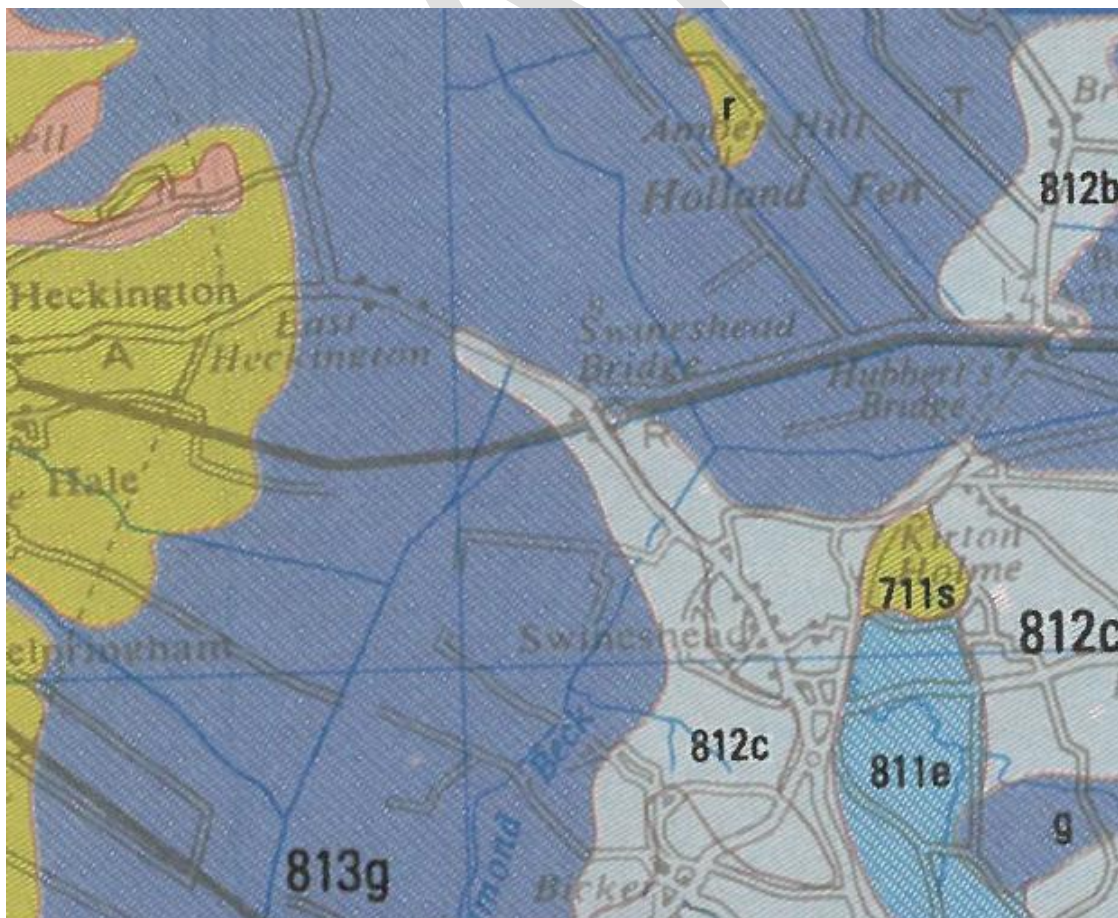
#### Climatic Conditions

- 3.1 The climatic data for the area, using the climate data set for ALC, shows annual rainfall between 575 and 590mm across the Energy Park site and the Route.
- 3.2 Soils are at field capacity, i.e. replete with water, for usually 107 days per year, mostly during the period from autumn to early spring. This is the period when soils are most susceptible to damage because they are saturated.

#### Soil Types

- 3.3 It is evident from surveys of the Energy Park site that the land quality is very variable, influenced by the historic passage of waterbodies. The aerial photographs in **Annex A** show the variability well.
- 3.4 The published soil map shows the area is mostly of the 813g Wallasea 2 Association, with a band of 812c Agney Association soils between the A17 and the railway, as shown below.

*Insert 2: Published Soil Map Excerpt*



**Extent and Depth of Topsoil Units and Soil Types**

- 3.5 It is evident from survey over the Energy Park site and nearby, and the available aerial photography, that the soils across the Energy Park site are variable. The Energy Park site is generally flat, and most is covered with soils of the Wallasea 2 Association. These soils are extensive on reclaimed marine alluvium in the marshlands of Lincolnshire. The soils are clayey with a greyish brown topsoil over greyish or grey and ochreous mottled subsurface horizons. The soils respond to drainage and, if undrained, are wet for longer periods in the winter.
- 3.6 The area of Agney Association are calcareous alluvial gley soils, generally well drained and silty in nature.
- 3.7 The texture of the Wallasea 2 soil varies from medium silty clay loam through heavy clay loams to silty clay and shows a complex mix of soil textures and drainage status.
- 3.8 The variability of the soils over short distances could make for variable and therefore challenging conditions. The variability is evident on the aerial photographs in **Annex A**.
- 3.9 The description of the soils, which are from the Wallasea 2 Association and Agney Association, are provided in **Annex B**, taken from the soil memoire. This identifies the ideal landwork season in a normal year, as follows (see the top row), for Wallasea soils. Agney soils are generally similar.

*Insert 3: Landwork Table*

Soil series	Soil assessment	Type of Year	M.W.D.'s	AUTUMN		WINTER				SPRING		M.W.D.'s
				SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	
Wallasea & Newchurch	b	Normal	111									36
		Wet	89									15
Blacktoft & Wisbech	a	Normal	122									46
		Wet	109									25
Wallasea & Newchurch	c	Normal	68									18
		Wet	43									0
Blacktoft & Wisbech	a	Normal	108									33
		Wet	83									15

M.W.D.'s : Number of good machinery work days during the period indicated

Frequent opportunities for Autumn landwork     
 Frequent opportunities for Spring landwork     
 Little opportunity for landwork

Figure 71. The effects of soil and climate on landwork, Wallasea 2 association

**Propensity to Damage**

- 3.10 The Institute of Environmental Management and Assessment (IEMA) have produced a Guide “A New Perspective on Land and Soil in Environmental Impact Assessment” (2022). Table 4 in the guidance identifies that clay and heavy clay loam soils where the Field

Capacity Days (FCD) is less than 150 (as here) have a medium resilience to structural damage.

- 3.11 The IEMA guide identifies that lighter soils, including medium clay loams, are of medium resilience where the FCD is less than 225. Here, where the FCD is 104 - 111 days, these soils will be at low risk of structural damage. This describes most of the soils along the Route.
- 3.12 The pattern of soils and land quality distribution is complex, as shown on the aerial images. However, the soils that will be least prone to compaction if trafficked in the wetter mid-winter months are the lighter soils.
- 3.13 As cable installation is a linear process, and cannot stop and start easily, the most susceptible soils dictate the methodology for the whole Route.

#### **Proposed Soil Survey**

- 3.14 Based on soil survey of the proposed Heckington Fen Energy Park, it is known that soils can vary over short distances. This reflects the historic action of water, which is evident from a 2022 Google Earth image such as the extract below.

*Insert 4: Section of Proposed Route*



- 3.15 Prior to submission of the SMP for consultation, a soil survey will be completed along the line of the proposed cable using a soil auger and, as needed, a spade, sampling where possible down to 1.2m. The soil survey will sample on a regular 100m grid pattern, along the central line of the proposed cable route.
- 3.16 Where works will extend wider than 50m either side of this sampling route, additional sampling points will be undertaken.

3.17 The survey will identify the soil resource. In particular it will identify and map:

- topsoil type;
- topsoil depth;
- subsoil type and depth;
- any limitations from poor drainage.

3.18 This detailed survey will be written up and will inform the SMP.

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## 4 CONSULTATION PROCESS

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4.1 This oSMP sets out the key principles.

4.2 Underpinning a good Soil Management Plan is a detailed knowledge of the soils involved.

4.3 Therefore prior to any works being commenced, it is intended that the draft SMP be submitted for comment from the following organisations:

- Natural England;
- Lincolnshire County Council.

4.4 The SMP will then be amended as necessary, with reconsultation as necessary, and approved prior to works starting.

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## 5 KEY PRINCIPLES

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- 5.1 The installation of the cable requires soils to be disturbed and deep excavations for the trench. There will be deep engineering operations to bore under the drains, road and railway.
- 5.2 There are numerous buried services in this area, including the Triton Knoll cable. The installation of these services have been achieved successfully, with no evident damage to agricultural land and operations.
- 5.3 For successful restoration to a farming use, the key is to restore the topsoil and upper subsoil to the same profile, without compaction, as they are before construction commences. Plants will root down to about 1 – 1.2 metres, but the top 60cm is the most important for plant growth. This is usually a topsoil and upper subsoil layer.
- 5.4 The key principles for successfully avoiding damage to soils are:
- timing of works involving moving soils;
  - storing soils;
  - retaining soil profiles during restoration;
  - avoiding compaction;
  - ameliorating compaction.

### **Timing**

- 5.5 The most important management decision/action to avoid adverse effects on soils is the timing of works involving moving soils. If the construction work takes place when soil conditions are sufficiently dry, then damage from vehicle trafficking, moving and trenching will be minimal.
- 5.6 The soils are relatively resilient to vehicle passage for much of the year. Under the ALC Guidelines the field capacity period, i.e. the days in the year when soils are saturated, is about 104 - 111 days per year. The soil memoire for the Wallasea 2 Association (**Appendix B**) identifies limited opportunities for landwork between mid-December and mid to late March. Similar periods apply to the Agney Association soils.
- 5.7 The soils are generally resilient, and any damage from vehicle trafficking can generally be made good by mechanical husbandry once the soils start to dry in the spring.

- 5.8 The period when soils are least likely to be wet is between March and November, but with seasonal variations (the English weather being unpredictable). To the extent that it is feasible, topsoil movement should be targeted for this window. Topsoil stripping could be phased ahead of deeper trenching works.
- 5.9 It may not be feasible to limit trenching works to these periods. In so far as it is possible, handling of the upper subsoils (30-60cm depth) should also be carried out when the soils are not saturated. They should be stored separately to the topsoils, and if dug out when wet, allowed to dry in bunds of no more than 1 metre in height prior to storage at any greater depth
- 5.10 Replacement of the upper subsoil and topsoil should be undertaken in reverse order, and so far as is possible carried out when soils are dry, as they will then restore more rapidly and require less restorative mechanical work.
- 5.11 Guidance on stockpiling is set out in the Construction Code of Practice For the Sustainable Use of Soils on Construction Sites, Defra (2009), an extract from which is at **Annex C**.
- 5.12 In instances where it is not possible to avoid undertaking construction activities when soils are wet and topsoil damage occurs then soils can be recovered by normal agricultural management, using normal agricultural cultivation equipment (subsoiler, harrows, power harrows etc) once soils have dried adequately for this to take place. There may be localised wet areas in otherwise dry fields, for example, which are difficult to avoid.

#### **Avoiding Compaction**

- 5.13 This oSMP sets out when soils should generally be suitable for being trafficked. There may be periods within this window, however, when periodic rainfall events result in soils becoming liable to damage from being trafficked or worked. In these (likely rare) situations, work involving handling soils (e.g. stripping, replacing) should stop until soils have dried, usually within 48 hours of heavy rain stopping.

#### **Ameliorating Compaction**

- 5.14 If localised compaction occurs during construction, it should be ameliorated. This can normally be achieved with standard agricultural cultivation equipment, such as subsoilers (if required), power harrows and rolls.

### **Storing Soil and Restoring Soil**

- 5.15 The quantities of soil involved are limited and topsoil mounds would be a maximum of 1m – 2m high. This will not result in the soil becoming anaerobic even in storage in a bund for more than 12 months. Advice on the stockpiling of soils taken from the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009) is reproduced in **Annex C**. These areas will need to be managed during the life of the Proposed Development to prevent the establishment of woody growth or brambles.
- 5.16 The following photograph, from January 2023, shows topsoil being stored next to the temporary access track for the Viking Link cable works to the immediate east of the Energy Park.

*Insert 5: Temporary Topsoil Storage (January 2023)*



- 5.17 The mound should be kept clear of woody vegetation. It is acceptable to sow the mound with grass seed.
- 5.18 The mound should not be moved for restoration unless the soil is sufficiently dry. Testing the centre of the mound with a soil auger should take place before the soil is moved.

## 6 MANAGEMENT REQUIREMENTS

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### **Timing**

- 6.1 The works of soil stripping and trench excavation should be carried out, so far as possible, between March and November.
- 6.2 The works of trench infilling and soil restoration should be carried out, so far as possible, between March and November.

### **Avoiding Drainage**

- 6.3 Trackways required outside the dry period should be created from laying stone onto matting, such as shown below.

*Insert 6: Trackway*



### **Soil Storage**

- 6.4 Topsoils, upper and lower subsoils should be stored in separate bunds.
- 6.5 Topsoil and subsoil should only be handled when dry. Storage in bunds, such as shown above, will ensure that the soils are kept dry and remain aerobic.

### **Depth of Soils**

- 6.6 Topsoil should be removed to a depth of 30 – 40cm, which will be clear from the colour during excavation.
- 6.7 The upper subsoil, a similar depth of 30cm, should be stored separately.

**Restoration**

6.8 The lower and upper subsoils should be replaced in reverse order, to restore the current profile. Topsoil should then be replaced to the depth removed, and as close as possible to the original position the soil came from.

6.9 The soil will then be cultivated. The photograph below shows part of the Viking Link under restoration.

*Insert 7: Part of the Viking Link, Under Restoration*



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**ANNEX A**  
**Survey Notes**

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**SURVEY NOTES January 2023**

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**Introduction**

- 1 The Route was the subject of a walk-over survey in January 2023. At the request of agents, no digging was permitted. The walk-over took place on Monday 16<sup>th</sup> January and Tuesday 17<sup>th</sup> January 2023.

**Photographs and Description**

- 2 The area surveyed is shown on the aerial plans below. Only those areas where access had been granted were walked over. Other areas were inspected and photographed without going onto the ground.
- 3 The area surveyed, and photographs taken, are shown below. This is an approximation of the refined Route, and detailed plans should be studied for a definitive boundary. The Route is divided into sections.

**Section 1**

- 4 Section 1 runs from the edge of the Energy Park south to the railway, as shown below.  
*Insert A: Area Surveyed and Photograph Locations*



*Position 1: Rough ley grassland, likely due to the Viking Link works to the east*



*Position 2: Ploughed land east of the Viking Link construction track*



*Position 3: Cereals. This section of the route has heavier soils and drainage, albeit after high levels of rainfall, is imperfect*





*Position 4: In plough. There are lighter patches and some variability in the soils, as seen. The soils remain loamy and moderately free draining*



*In cereals. Loamy field with variability and some low patches*



*Position 5: Stubble/fallow field, similar to the field to the north*



*Position 6: Stubble/fallow field, similar to the field to the north*



*Position 7: In cereal. This field is generally well drained except near the gateway, with friable soils*



*Position 8: Looking south over cereal field. Aside from the gateway the field was generally dry. These are the Agney Association soils.*





## **Section 2**

5 Section 2 runs from the railway south through four arable fields, as shown below.

*Insert B: Area Surveyed and Photograph Locations*



*Position 9: Looking south over cereal field, previously in potatoes*



*Position 10: Looking north, currently stubble*



*Position 11: Looking north, over stubble*





*Position 12: Looking south over cereal and ploughed land*



### **Section 3**

- 6 This covers the four fields shown below. Access was not permitted to the two northern fields at the time of survey, but it was evident that they were in a similar variable soil pattern to surrounding land.

*Insert C: Area Surveyed and Photographs Locations*



*Position 13: Looking north over cereals*



*Position 14: Looking south over cereals*



Position 15: Looking South from North Drove



**Section 4**

- 7 Section 4 runs from the field north of Bicker Drove round to the substation connection. The land within the Order Limits within the Bicker Fen substation is owned by National Grid as an operational substation. It is therefore not considered within this oSMP.

*Insert D: Area Surveyed and Photograph Locations*



*Position 16: Looking north from Bicker Drove over cultivated land*



*Position 17: Looking south over the arable land. There are cables under this field already*



*Position 18: Cereal land (left of the dyke) near to the substation*





*Position 19: Small grassland area at the substation*



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**ANNEX B**  
**Description of Soil Types**

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# Soil Survey of England and Wales

## Soils and their Use in Eastern England

series (Plate 28). The Chalk outcrop is close by and chalky Reach (§ 113) and Wilbraham series (Clayden and Hollis 1984) form up to a fifth of these parcels. Further south, near Soham, the strongly acid Mendham series (§ 91) occurs locally.

#### Key to component soil series

Peat thicker than 40 cm	1
Mineral soils; sandy	2
1. Amorphous peat	ADVENTURERS'
Fibrous peat with grass and sedge remains	ALTCAR
2. With dark, humose or peaty topsoil	ISLEHAM
With grey, distinct topsoil	Blackwood

#### Soil water regime,

The soils are permeable and, apart from a few places where there is a clay subsoil, the land can be drained by ditches alone. With efficient arterial drainage as in much of the Fens, the soils are well-drained (Wetness Class I). The Adventurers' and Altcar soils are water-retentive and crops other than grass do not normally suffer from drought. Isleham soils, where well-drained, have less water available to plants. They are slightly droughty for cereals, moderately to very droughty for potatoes and very droughty for grass. Because they are not humose, Blackwood soils are correspondingly droughtier. The effect of drought is well shown by patchy crop growth on land with hummock and hollow microrelief, as groundwater is relatively lower in raised sandy soils than in the peaty hollows.

#### Cultivation and cropping

Where well-drained, the soils are easily worked, especially Isleham and Blackwood series which are accessible shortly after rain. There are thus few restrictions to cultivating the land and harvesting crops. These are mainly cereals, but sugar beet, potatoes and field vegetables are grown, and carrots and celery are characteristic on the peat soils. Cereals do not always finish well and sugar beet, although yielding heavily, has a low sugar content. Manganese deficiency occurs where the soils are calcareous. Wind erosion is a hazard especially in dry springs and care must be taken not to start fires as a burning peat subsoil is difficult to extinguish.

### § 11. AGNEY ASSOCIATION

812c

Agney association consists mainly of calcareous alluvial gley soils belonging to Agney and Wisbech series developed in marine alluvium on flat reclaimed land at 2 to 8 m O.D.

near the coast in parts of Humberside, Lincolnshire, Essex and Wales. The soils are stoneless and silty with brownish plough layers over greyish brown mottled horizons with blocky or relic laminar structure.

Typically, Agney association has about half Agney and one third Wisbech soils; Blacktoft (§ 28), Newchurch (§ 28), Romney (§ 28), Stockwith (§ 46), Tanvats (§ 125) and Wallasea (§ 125), and some Paglesham (Sturdy 1976) and Loggans (Staines 1979) series also occur. Brief descriptions of the two main soils are given in the Normoor association (§ 104). The degree of development of soil structure in Agney and Wisbech series depends upon the time since reclamation. On recently reclaimed land the original laminated sedimentary layers occur directly below the cultivated horizon, but on older sites, blocky soil structure has developed to 50 or 60 cm depth.

In Lincolnshire, where land has been reclaimed since 1970, around the Wash and in a small area near Boston, the association is composed consistently of Agney and Romney or Wisbech soils in a complex pattern. Many Agney soils have coarse silty layers below 50 cm depth. As elsewhere, the lighter Wisbech and Romney soils are on the sites of former creeks. In north-east Lincolnshire near Tetney and Marshchapel, there are low mounds up to 3 m above general marsh level formed by the medieval salt industry (Plate 9). The soils of these salterns are similar to Blacktoft series. Near Donna Nook, the alluvium overlies dune sand and near the coast Loggans series is included. Occasional Wallasea and Newchurch soils are also found.

In Essex the association is mainly on the Dengie peninsula and the seaward side of Foulness and Havengore Islands. On parts of the Dengie peninsula Romney and Newchurch series are common, and near the southern end of the peninsula the association is bounded to the west by shell ridges. On Foulness and Havengore islands there are a few Newchurch soils, and soils with clayey over fine silty layers are common.

#### Key to component soil series

Subsoils calcareous above 40 cm	1
Subsoils non-calcareous above 40 cm	6
1. Prominently mottled or greyish above 40 cm	2
Subsoil faintly mottled within 60 cm or distinctly mottled between 40 and 80 cm	5
2. With silty horizons	3
Other soils	4
3. Fine silty	AGNEY
Coarse silty	WISBECH
Silty over clayey	Stockwith
4. Sandy	Loggans
Clayey	Newchurch
5. Coarse silty	Romney
Fine silty	Blacktoft

6. Fine silty  
Clayey  
Fine loamy over clayey

Tanvats  
Wallasea  
Paglesham

#### Soil water regime

The soils are very porous with numerous root channels and burrows formed under saltmarsh before reclamation. The land is mostly drained by ditches and pumps and the soils are rarely waterlogged (Wetness Class I). Parts of the Dengie peninsula suffer occasional flooding through breaches of the sea defences. The available water reserves of the Agney series are large and the soil is non-droughty for cereals and sugar beet. Shallow-rooting crops such as potatoes may suffer drought. In the dry climate of Essex crops on Agney soils suffer slightly more from droughtiness than in Lincolnshire. There are only minor limitations on grassland growth and utilization in Lincolnshire, but in Essex, droughtiness checks summer growth. Wisbech soils are well suited to grassland as well as other crops, because of their large moisture reserves.

#### Cultivation and cropping

The soils are easy to cultivate, though the heavier Agney soils are less so than Wisbech soils. The laminated subsoils of recently reclaimed soils compact readily below the plough layer. There are ample days available for cultivation in autumn and spring. The soils are not well suited to direct drilling because of their high silt content and the risk of compaction.

In Lincolnshire cereals, sugar beet and potatoes are grown and the land is used extensively for field vegetables, particularly brassicas. The Agney soils are not ideal for onion crops because sticky topsoils make it difficult to get a clean crop. In Essex arable crops, including cereals, potatoes and some sugar beet are grown. Lucerne and grass are grown locally. Many parts of Foulness Island have rough grazing around military installations.

## § 12. ALTCAR 1 ASSOCIATION

1022a

The Altcar association is extensive on the Somerset Moors, in the Norfolk Fens and the Lancashire mosses. There are also small areas in Northern England, Cheshire, Staffordshire and the Welsh Borderland. It covers about 223 km<sup>2</sup> nationally, at heights usually less than 6 m O.D. The soils are formed in fen peat, one to two metres thick, most of which has been drained and reclaimed. The Altcar series (§ 10), earthy eu-fibrous peat soils in grass sedge peat, dominate with Adventurers' series (§ 10), earthy eutroamorphous peat soils, where the subsoil is humified. The association covers 27 km<sup>2</sup> in Methwold Fens, Norfolk (Plate 7), where some land remains under semi-natural woodland but most is cultivated. Because of shrinkage and oxidation following effective

and if sequentially direct drilled the soils benefit from being loosened periodically. Shallow cultivations and minimum tillage techniques are commonplace. Some land is affected by salinity which, followed by leaching, has led to clay deflocculation, and the stopping of drains by dispersed clay, eventually causing patchy waterlogging and crop failure on arable land. Grassland productivity is limited by summer drought but, because of the poaching risk, grazing by cattle is restricted to the summer months. Occasional liming is needed, but manganese deficiency can occur in over-limed spots. The soils contain little phosphorus but reserves of potassium and magnesium are large.

### § 133. WALLASEA 2 ASSOCIATION

813g

This association is extensive on reclaimed marine alluvium in the marshlands of Lincolnshire (Fig.45), Cambridgeshire and Norfolk, and is also present in Romney Marsh, the Essex marshes and in Holderness. The land is generally level but there are occasional ridges on the sites of former creeks. The soils are mainly Wallasea series, pelo-alluvial gley soils; Newchurch series, pelo-calcareous alluvial gley soils; Blacktoft series, gleyic brown calcareous soils; and Wisbech series, calcareous alluvial gley soils. Wallasea and Newchurch soils are clayey with a greyish brown topsoil over greyish or grey and ochreous mottled subsurface horizons; Newchurch series is calcareous. Blacktoft soils are calcareous and fine silty with grey colours and mottling in the subsoil. Wisbech soils are also calcareous, but have greyish and mottled coarse silty horizons below the plough layer, often with sedimentary laminations. Wallasea series predominates and Newchurch, Blacktoft and Wisbech soils are common. Dymchurch (Clayden and Hollis 1984), Snargate (§ 114), Agney, (§ 104) Stockwith (§ 46), Tanvats (§ 114) and Paglesham (Sturdy 1976) series also occur. Brief descriptions of the principal soils are given elsewhere in the text. Wallasea series in § 125, Newchurch series in § 28, Blacktoft series in § 28 and Wisbech series in § 104.

Wallasea soils consistently constitute over half of the association, but the proportion of other soils varies widely throughout the country. Generally, Wisbech and Blacktoft series are found on or near former creeks (rodhams), with Wallasea and Newchurch soils in the intervening areas. The incidence of creek ridges, and so the proportion of coarser soils, increases seawards where Blacktoft soils cover a third of the land, except in Lincolnshire where the similar Agney series is more common. The proportion of the less common Wisbech soils also increases seawards. Inland towards high ground, clayey soils are predominant, Wallasea soils being most common in Lincolnshire and Cambridgeshire, but in Norfolk, Newchurch and Wallasea soils are co-dominant. In places in Lincolnshire, Wallasea soils have developed from former Downholland soils (§ 48) from which topsoil organic matter has been lost by oxidation. Wisbech soils are rare in north Lincolnshire

and non-calcareous soils, including Pepperthorpe (§ 125) and Tanvats series, become more common. Near Huttoft, where islands of Devensian till rise through the alluvium, some Holderness soils (§ 75) are included. Creek ridges are uncommon in Essex and Wisbech soils are rare. Calcareous fine silty Agney soils cover one sixth of the land and non-calcareous Tanvats and Paglesham soils also occur. Locally there are a few saline soils and, where leaching has occurred, subsoil structure has deteriorated causing silting of drains, waterlogging and reduced crop yields.

### Key to component soil series

Subsoils non-calcareous above 40 cm	1
Subsoils calcareous above 40 cm	2
1. Clayey	WALLASEA
Fine silty	Tanvats
Fine loamy over clayey	Paglesham
Fine silty over clayey	Pepperthorpe
2. Silty throughout	3
With clayey horizons	5
3. Coarse silty	WISBECH
Fine silty	4
4. Subsoil faintly mottled above 60 cm or distinctly mottled between 40 and 80 cm	BLACKTOFT
Prominently mottled or greyish above 40 cm	Agney
5. Clayey throughout	NEWCHURCH
Silty over clayey	Stockwith

### Soil water regime

Most of the land is pump-drained and the more permeable Blacktoft and Wisbech soils are well drained (Wetness Class I). Wallasea and Newchurch soils are less permeable but respond to underdrainage; drained soils are occasionally waterlogged (Wetness Class II) but undrained soils are waterlogged for long periods in winter (Wetness Class III or IV). Droughtiness assessments for selected crops are given in Table 38. Droughtiness slightly restricts the growth of arable crops in Wallasea and Newchurch soils. Wisbech soils have large available water reserves and are non-droughty whilst Blacktoft soils are intermediate in droughtiness. Grassland suffers from drought on all soils in south Lincolnshire, Norfolk and Essex but growth is less restricted in the higher rainfall area of north Lincolnshire.

### Cultivation and cropping

The effects of soil and climate on the time available for landwork is shown in Figure 71. With adequate underdrainage, Wallasea and Newchurch soils are moderately easy to work. There are adequate days for safe cultivation in autumn and spring, but in north



Lincolnshire the moist climate reduces the opportunity for spring cultivation, particularly in wet years, and the soils are marginal for spring-sown crops. The land is generally used for winter cereals and ley grassland, but sugar beet, peas and field brassicas are grown in the drier districts. The use of heavy machinery often causes topsoil compaction and surface wetness on the heavier soils especially Wallasea series though they can be direct drilled very successfully if subsoiled periodically. Newchurch soils which are calcareous have a more stable structure. Wisbech and Blacktoft soils are less suitable for direct drilling because of the problems associated with this system on silty soils.

**Table 38**  
**Profile Available Water (A.P. mm), Crop-adjusted Mean Moisture Deficit (M.D. mm)**  
**and Droughtiness Class for extensive crops—Wallasea 2 Association**

Location Grid Ref.	Wallasea series Holbeach St Johns TF350180	Newchurch series Holbeach St Johns TF350180	Blacktoft series Holbeach St Johns TF350180	Wisbech series Holbeach St Johns TF350180
<b>Winter wheat</b>				
A.P.	160	150	190	270
M.D.	126	126	126	126
Droughtiness	slightly droughty	slightly droughty	non- droughty	non- droughty
<b>Spring barley</b>				
A.P.	160	150	190	270
M.D.	119	119	119	119
Droughtiness	slightly droughty	slightly droughty	non- droughty	non- droughty
<b>Potatoes</b>				
A.P.	115	115	140	200
M.D.	127	127	127	127
Droughtiness	moderately droughty	moderately droughty	slightly droughty	non- droughty
<b>Sugar beet</b>				
A.P.	195	180	235	335
M.D.	127	127	127	127
Droughtiness	non- droughty	non- droughty	non- droughty	non- droughty
<b>Oilseed rape</b>				
A.P.	160	150	190	270
M.D.	109	109	109	109
Droughtiness	non- droughty	slightly droughty	non- droughty	non- droughty

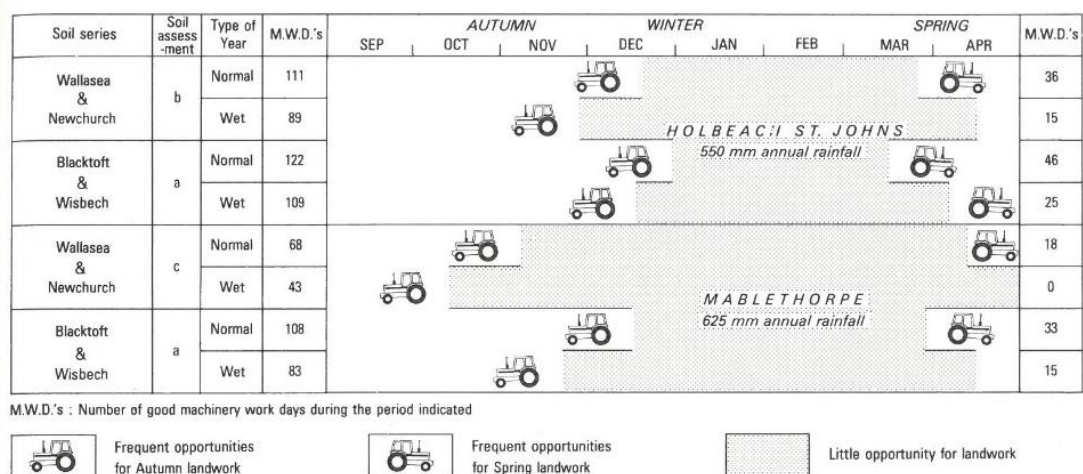


Figure 71. The effects of soil and climate on landwork, Wallasea 2 association

### § 134. WANTAGE 1 ASSOCIATION (342c)

This association consists of greyish, well drained silty soils on the Lower Chalk mainly in south Oxfordshire, north Wiltshire, Kent and Buckinghamshire. In Bedfordshire, Hertfordshire, and Cambridgeshire the association occurs in small patches. North of Luton it forms a narrow strip of gently sloping land at the foot of the chalk escarpment. Near Luton the soils form the side of a ridge and the association continues sporadically to the south-west, fronting the Chiltern Hills (Avery 1964). The principal soil is Wantage series (§ 135), loamy grey rendzinas with an extremely calcareous silty clay loam subsoil and chalk at moderate depth. The land is affected locally by springs and winterbournes so Burwell (§ 113) soils are found on valley floors and on gentle slopes. Shallow Upton soils, grey rendzinas, are confined to convex valley sides below the main Chalk scarp.

The soils of the association are predominantly well drained (Wetness Class I), but there are patches of less permeable Burwell soils on some valley floors and flat valley sides which when field drainage is effected are largely well drained (Wetness Class I).

The main crops are cereals, grown continuously or in rotation. Yields of winter wheat are consistently high and those of spring barley about average. The soils are easy to work and any surface capping usually breaks up as the soil dries. There is adequate time for autumn and spring landwork. There is little risk of poaching in grassland but there is some drought limitation on the shallowest soils. The association is fully described by Jarvis, M.G. *et al.* (1984).

**ANNEX C**

**Defra Construction Code of Practice for  
the Sustainable Use of soils on  
Construction Sites (extracts only)**

DRAFT

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# Construction Code of Practice for the Sustainable Use of Soils on Construction Sites



**BIS** | Department for Business  
Innovation & Skills



Material change for  
a better environment

**defra**  
Department for Environment  
Food and Rural Affairs

## Soil management during construction

### 5.4 Soil stockpiling

#### Why?

1. Soil often has to be stripped or excavated during the construction process. In order to enable its reuse on site at a later stage, soil needs to be stored in temporary stockpiles to minimise the surface area occupied, and to prevent damage from the weather and other construction activities.



#### How?

2. The main aim when temporarily storing soil in stockpiles is to maintain soil quality and minimise damage to the soil's physical (structural) condition so that it can be easily reinstated once respread. In addition, stockpiling soil should not cause soil erosion, pollution to watercourses or increase flooding risk to the surrounding area.
3. When soil is stored for longer than a few weeks, the soil in the core of the stockpile becomes anaerobic and certain temporary chemical and biological changes take place. These changes are usually reversed when the soil is respread to normal depths. However, the time it takes for these changes to occur very much depends on the physical condition of the soil.
4. Handling soil to create stockpiles invariably damages the physical condition of the soil to a greater or lesser extent. If stockpiling is done incorrectly the physical condition of the soil can be damaged irreversibly, resulting in a loss of a valuable resource and potentially significant costs to the project. The Soil Resource Survey and Soil Resource Plan should set out any limitations that the soil may possess, with respect to handling, stripping and stockpiling.
5. The size and height of the stockpile will depend on several factors, including the amount of space available, the nature and composition of the soil, the prevailing weather conditions at the time of stripping and any planning conditions associated with the development. Stockpile heights of 3-4m are commonly used for topsoil that can be stripped and stockpiled in a dry state but heights may need to be greater where storage space is limited.
6. Soil moisture and soil consistency (plastic or non-plastic) are major factors when deciding on the size and height of the stockpile, and the method of formation. As a general rule, if the soil is dry (e.g. drier than the plastic limit) when it goes into the stockpile, the vast majority of it should remain dry during storage, and thereby enable dry soil to be excavated and respread at the end of the storage period. Soil in a dry and non-plastic state is less prone to compaction, tends to retain a proportion of its structure, will respread easily and break down into a suitable tilth for landscaping. Any anaerobic soil also usually becomes re-aerated in a matter of days.
7. Soil stockpiled wet or when plastic in consistency is easily compacted by the weight of soil above it and from the machinery handling it. In a compacted state, soil in the core of the stockpile remains wet and anaerobic for the duration of the storage period, is difficult to handle and respread and does not usually break down into a suitable tilth. A period of further drying and cultivation is then required before the soil becomes re-aerated and acceptable for landscaping.

## Soil management during construction

### Stockpiling methods

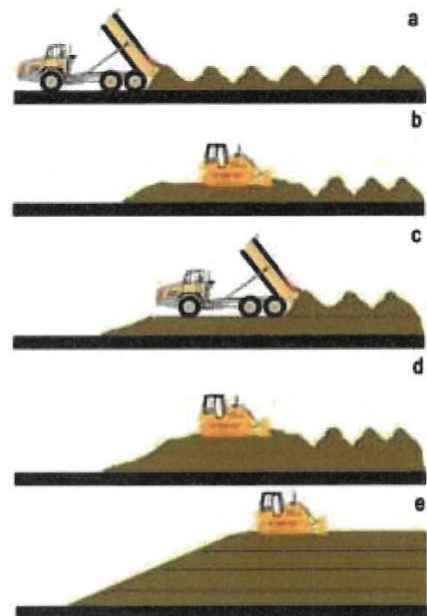
8. There are two principal methods for forming soil stockpiles, based on their soil moisture and consistency.
9. Method 1 should be applied to soil that is in a dry and non-plastic state. The aim is to create a large core of dry soil, and to restrict the amount of water that can get into the stockpile during the storage period. Dry soil that is stored in this manner can remain so for a period of years and it is reuseable within days of respreading.
10. Method 2 should be applied if the construction programme or prevailing weather conditions result in soil having to be stockpiled when wet and/or plastic in consistency. This method minimises the amount of compaction, while at the same time maximising the surface area of the stockpile to enable the soil to dry out further. It also allows the soil to be heaped up into a 'Method 1' type stockpile, once it has dried out.

### Soil stockpiling

Soil should be stored in an area of the site where it can be left undisturbed and will not interfere with site operations. Ground to be used for storing the topsoil should be cleared of vegetation and any waste arising from the development (e.g. building rubble and fill materials). Topsoil should first be stripped from any land to be used for storing subsoil.

#### Method 1 – Dry non-plastic soils

The soil is loose-tipped in heaps from a dump truck (a), starting at the furthest point in the storage area and working back toward the access point. When the entire storage area has been filled with heaps, a tracked machine (excavator or dozer) levels them (b) and firms the surface in order for a second layer of heaps to be tipped. This sequence is repeated (c & d) until the stockpile reaches its planned height. To help shed rainwater and prevent ponding and infiltration a tracked machine compacts and re-grades the sides and top of the stockpile (e) to form a smooth gradient.

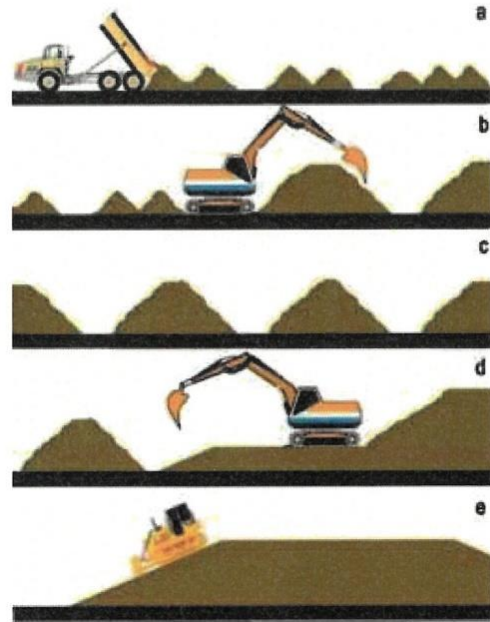


## Soil management during construction

### Method 2 – Wet plastic soils

The soil is tipped in a line of heaps to form a 'windrow', starting at the furthest point in the storage area and working back toward the access point (a). Any additional windrows are spaced sufficiently apart to allow tracked plant to gain access between them so that the soil can be heaped up to a maximum height of 2m (b). To avoid compaction, no machinery, even tracked plant, traverses the windrow.

Once the soil has dried out and is non-plastic in consistency (this usually requires several weeks of dry and windy or warm weather), the windrows are combined to form larger stockpiles, using a tracked excavator (d). The surface of the stockpile is then regraded and compacted (e) by a tracked machine (dozer or excavator) to reduce rainwater infiltration.



### Stockpile location and stability

11. Stockpiles should not be positioned within the root or crown spread of trees, or adjacent to ditches, watercourses or existing or future excavations. Soil will have a natural angle of repose of up to 40° depending on texture and moisture content but, if stable stockpiles are to be formed, slope angles will normally need to be less than that. For stockpiles that are to be grass seeded and maintained, a maximum side slope of 1 in 2 (25°) is appropriate.

### Stockpile protection and maintenance

12. Once the stockpile has been completed the area should be cordoned off with secure fencing to prevent any disturbance or contamination by other construction activities. If the soil is to be stockpiled for more than six months, the surface of the stockpiles should be seeded with a grass/clover mix to minimise soil erosion and to help reduce infestation by nuisance weeds that might spread seed onto adjacent land.
13. Management of weeds that do appear should be undertaken during the summer months, either by spraying to kill them or by mowing or strimming to prevent their seeds being shed.



Clearly defined stockpiling of different soil materials



Long term stockpile of stripped topsoil left with only weed vegetation



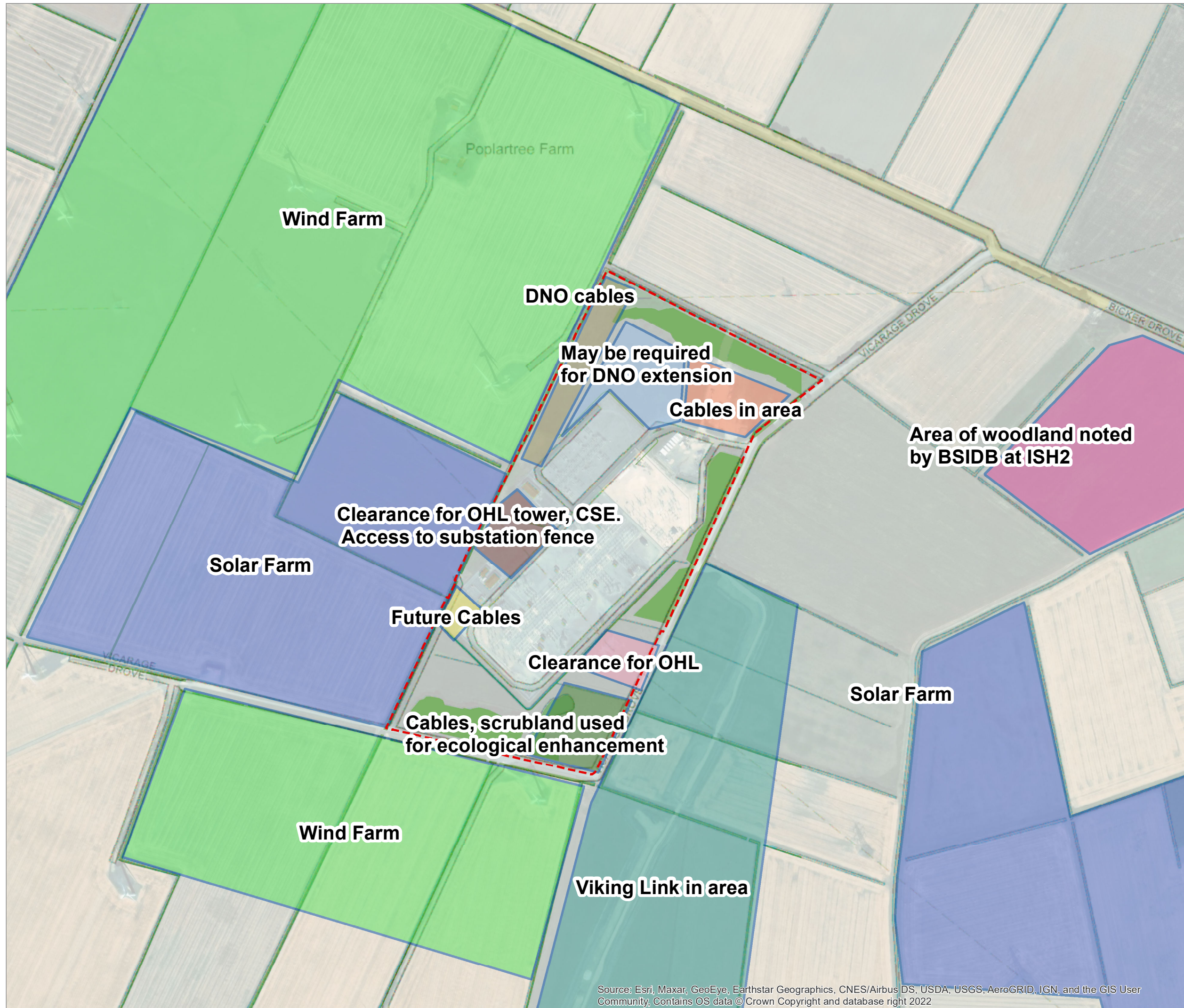
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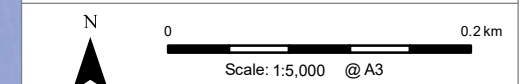


## **Appendix 4 – Q BIO 1.2 ii : Bicker Fen Substation Overview Plan**



- Legend**
- National Grid Title
  - Area of woodland noted by BSIDB at ISH2
  - Cables in area
  - Cables, scrubland used for ecological enhancement
  - Clearance for OHL
  - Clearance for OHL tower, CSE. Access to substation fence
  - DNO cables
  - Future Cables
  - May be required for DNO extension
  - Solar Farm
  - Viking Link in area
  - Wind Farm
  - Existing Woodland

**Figure:** Bicker Fen Substation Overview  
**Title:** Appendix 4 - Examining Authority Questions - BIO 1.2 ii Deadline 2



Drawn by: MW	Checked by: LW	Approved by: LW
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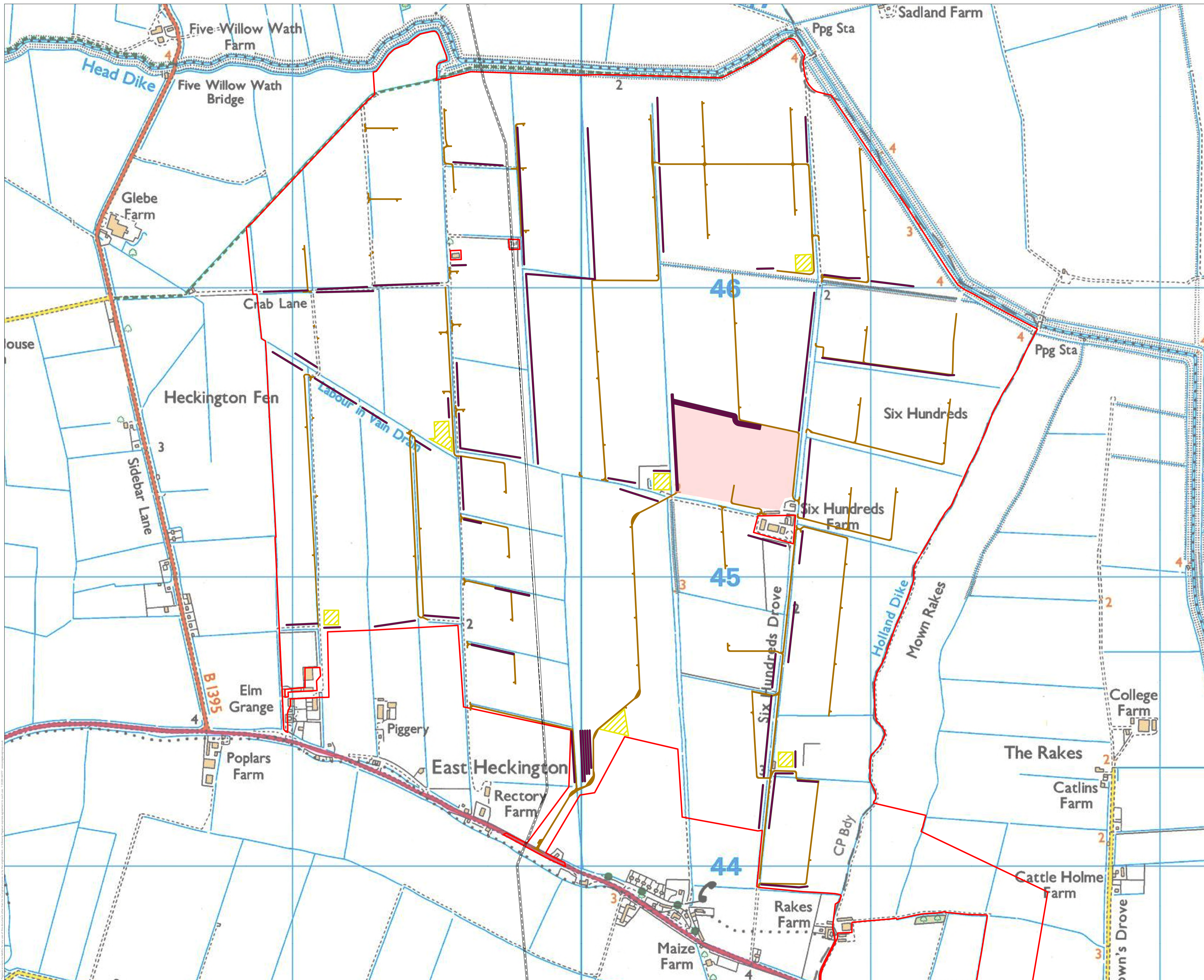
**Ref:** 6945\_T0122\_01     **Date:** October 2023

**Heckington Fen**

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Contains OS data © Crown Copyright and database right 2022



## **Appendix 5 – Q LUS 1.4 ii: Location of Soil Stockpiles Plan**



- KEY**
- Order Limits
  - Indicative Stockpile Locations - max height 3m
  - Indicative Construction Compounds
  - Indicative Track Locations
  - Site Main Substation / Energy Storage Compound
  - Gas Pipeline

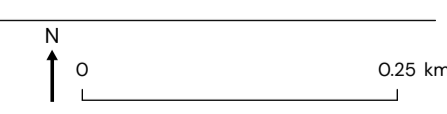
NOTES:  
 REVISIONS:

DCO Document Reference: xx  
 APFP Regulation: xxx

**Stockpile Locations**

DATE	SCALE	SHEET	REVISION
03/11/2023	1:6,000@A1	-	VI

DRAWING NUMBER: P20-2370\_110



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