

**Tillbridge Solar Project
EN010142**

**Applicant's Response to Examining Authority's
First Written Questions**
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**Planning Act 2008
The Infrastructure Planning (Examination Procedure) Rules 2010**

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0. Introduction

0.1.1 This report responds to the Examining Authority's (ExA) first written questions, issued on 19 November 2024 **[PD-009]**. This report responds to each of the questions posed to the Applicant, and where the Applicant considered it could provide assistance to the ExA, it has also responded to some questions addressed to other parties.

0.1.2 The following sections of this report are tabularised to include the ExA's questions and a response to each question as follows:

- General and cross-topic questions (29 questions);
- Biodiversity and ecology (16 questions);
- Climate change (11 questions);
- Compulsory acquisition, temporary possessions and other land or rights possession (3 questions);
- Cumulative and in-combination effects (3 questions);
- Draft Development Consent Order (DCO) (5 questions);
- Heritage (14 questions);
- Human health, safety, accidents and major incidents (7 questions);
- Landscape and visual impacts (21 questions);
- Noise and vibration (20 questions);
- Socio-economic effects (14 questions);
- Transport and access (6 questions);
- Water environment including flood risk (12 questions); and
- Other planning matters (9 questions).

1. General and cross-topic questions

Table 1-1: General and cross-topic questions

ExQ1	Questions to:	Question:	Applicant's Response:
Q1.1.1	Applicant	<p>Framework Management Plans</p> <p>Can the Applicant please update all Framework Management Plans to the extent that they are based on the same wording as those submitted (and in two cases, consented) for other Solar NSIPs in the local area.</p> <p>To cite one example, The Construction Environmental Management Plan (CEMP) in respect of the Cottam Solar Project was revised several times. Revision B includes wording relating to HDD and subsurface drainage. Revision C includes wording relating to a substation fire action plan. Revision D includes wording relating to impacts from EMF. None of this revised wording is included in the Tillbridge Framework CEMP (FCEMP) [REP1-055].</p> <p>It is accepted that these are different projects but the wording of the Tillbridge Solar Project management plans is often identical to that used in the equivalent documents for other projects. It makes sense to update all management plans to reflect the most up-to-date consented versions on other projects (Cottam and West Burton). Particularly given that revisions to these documents presumably arose as a result of consultation and representations from Local Authorities, other Statutory Consultees and Interested Parties.</p> <p>Taking this approach will avoid unnecessarily going over the same issues which have been addressed previously. Particularly where they relate to shared aspects of the cable route. Where changes are not made, can an explanation please be provided.</p>	<p>The Applicant has reviewed the latest versions of the Gate Burton Energy Park [EN010131], Cottam Solar Project [EN010133] and West Burton Solar Project [EN010132] management plans, and made updates to the following management plans as a result, in order to align the management measures:</p> <ul style="list-style-type: none"> • Framework Construction Environmental Management Plan (CEMP) [EN010142/APP/7.8(Rev02)]; • Framework Operational Environmental Management Plan (OEMP) [EN010142/APP/7.9(Rev02)]; • Framework Decommissioning Environmental Management Plan (DEMP) [EN010142/APP/7.10(Rev02)]; • Framework Construction Traffic Management Plan (CTMP) [EN010142/APP/7.11(Rev03)]; • Framework Public Rights of Way (PRoW) Management Plan [EN010142/APP/7.16(Rev01)]; and • Framework Landscape and Ecology Management Plan (LEMP) [EN010142/APP/7.17(Rev03)]. <p>No updates were required to the Framework Soil Management Plan [REP1-051], as it already aligned with the Outline Soil Management Plans for Gate Burton Energy Park, Cottam Solar Project and West Burton Solar Project.</p> <p>The Applicant considers that the Scheme's management plans now include the same management measures as included within Gate Burton Energy Park, Cottam Solar Project and West Burton Solar Project management plans, albeit the drafting of the documents somewhat varies, as they have been written by different authors. Where management plans differ in their commitments, it is with regards to any site-specific proposals and receptors.</p>
Q1.1.2	Applicant	<p>Commonality with other NSIPs</p> <p>Could the Applicant please identify exactly which parts of the cable route, Cottam substation development and any other development are identical to that for which consent has already been obtained in respect of other schemes. In addition, where statutory and interested parties have raised issues with regard to those common elements of the Proposed Development, could the Applicant please set out (in tabulated form) whether those concerns/ effects have already been considered and addressed by the Secretary of State (SoS) or previous ExAs in relation to other schemes.</p>	<p>Appendix A to the Applicant's Response to ExA's First Written Questions [EN010142/APP/9.27] (this document) includes Figures 1a, 1b and 1c which show where the Order limits for the Tillbridge Solar Project overlap with the Gate Burton Energy Park and Cottam Solar Project consented schemes. The areas that overlap fall within the shared cable route and Cottam Substation.</p> <p>In respect of these areas of overlap, the Applicant has agreed protective provisions with Gate Burton Energy Park and Cottam Solar Project, which are included in the draft DCO [EN01010142/APP/3.1(Rev04)]. Equivalent provisions, for the benefit of the Tillbridge Solar Project, have been agreed and included in the made DCOs for Gate Burton Energy Park and Cottam Solar Project.</p> <p>The Applicant has also prepared a table, which can be found at Appendix A of this report which sets out where Statutory Consultees and Interested Parties have raised concerns with regard to the identical areas,</p>

ExQ1	Questions to:	Question:	Applicant's Response:
Q1.1.3	Applicant	<p>Shared cable route Grid Connection Statement [APP-214] Paragraph 2.1.4 defines the 'shared cable route corridor' as <i>“an area within which the Applicant, the Gate Burton undertaker, and the Cottam undertaker will all locate their connections to the National Grid Cottam Substation; and, in part, the West Burton undertaker will locate its connection to the National Grid West Burton Substation”</i>. Taking this into account, why does the Cottam cable route appear to deviate from that of the Proposed Development as shown on Environmental Statement (ES) Figure 4-6 [APP-149]? Is the Cottam route (shaded blue) on Figure 4-6 reflective of the development approved under the recent Development Consent Order (DCO)?</p>	<p>and whether these concerns have already been considered and addressed by the Secretary of State and previous Examining Authorities for Gate Burton Energy Park and Cottam Solar Project.</p> <p>As explained in Chapter 4: Alternatives and Design Evolution of the ES [APP-035] and illustrated on Figure 4-7 of the ES [APP-150] as well as the new figures prepared in response to Q1.1.2 and provided at Appendix A to the Applicant's Response to ExA's First Written Questions [EN010142/APP/9.27] (this document) whilst the overall Cable Route Corridor is predominantly a shared cable route corridor, there is a need to retain some minor flexibility within the Order limits to ensure that no one project prevents another coming forward should all DCOs be made (i.e. if there was not sufficient space for all four projects cabling to be laid, because the area of the corridor was too narrow). In this regard, there are some pinch points within the Cable Route Corridor where three proposed areas of optionality are sought:</p> <ul style="list-style-type: none"> • Two alternative routes at land to the south of Marton due to concerns associated with space for all four Schemes and concern associated with land acquisition rights that has emerged through the Gate Burton Energy Park examination; • Two alternative routes to land to the east of Marton due to the need to cross a live railway line using a trenchless crossing, to protect an existing woodland, to protect a gas pipeline owned by Uniper and where the Cottam Solar Project also crosses the railway line at this point; and • Two alternative routes to land to the east of Willingham-by-Stow where the eastern option is required to extend through the proposed Solar PV area of the Cottam Solar Project thereby retaining an alternative option to the west given this constraint. This is the area identified in the question as shown on Figure 4-6 – the alternative route proposed is where the Scheme's cable route corridor may deviate from Cottam's cable route corridor as referenced in this question. <p>The Scheme's final cable route alignment in these locations may deviate from the shared cable route corridor with the Cottam Solar Project due to the reasons set out above.</p> <p>For clarity on the second question raised, it is confirmed that the Order limits shown in Figure 4-6 [APP-149] for the Cottam Solar Project aligns with the Order limits as made by the granting of development consent of the Cottam Solar Project in September 2024 and as shown in Works Plan [EN010133/APP/C2.4] Revision C January 2024.</p>
Q1.1.4	Applicant	<p>Central Lincolnshire Local Plan (2023) Policies Table 4-1 of West Lyndsey District Council's (WLDC) Local Impact Report (LIR) [REP1A-005] identifies the following Central Lincolnshire Local Plan (2023) policies which do not appear to have been included in Appendix B of the Applicant's Planning Statement [AS-029]: S2, S17, S20, S28, S29, S31, S43 and S66. Could the Applicant please provide a response on the relevance and implications of these policies?</p>	<p>The Applicant does not consider that all the policies listed in Table 4-1 of West Lindsey District Council's LIR are important or relevant to the consideration of the Scheme, other than Policies S20 and S66 of the Central Lincolnshire Local Plan (2023) (Ref 1-5).</p> <ul style="list-style-type: none"> • Policy S66: Trees, Woodland and Hedgerows was already included in Appendix B of the Planning Statement [EN010142/APP/7.2(Rev02)] on pages 71 to 75 of Table 2: Central Lincolnshire Local Plan (2023) (Ref 1-5) setting out how the Scheme is in accordance with this policy. • An update has been made to Appendix B of the Planning Statement [EN010142/APP/7.2(Rev02)] submitted at Deadline 3 setting out the relevance and implications of Policy S20: Resilient and Adaptable Design of the Central Lincolnshire Local Plan (2023) (Ref 1-5). <p>The reasons as to why those policies listed below are not considered relevant are set out on page 11 and 12 in the Applicant's Response to the Local Impact Reports [EN010142/APP/9.26].</p> <ul style="list-style-type: none"> • Policy S2: Growth Levels and Distribution relates to the distribution of housing and employment development across the District in accordance with the spatial strategy set out by Policy S1, which is not relevant to the Scheme as it comprises solar development.

ExQ1	Questions to:	Question:	Applicant's Response:
			<ul style="list-style-type: none"> • Policy S17: Carbon Sinks relates to the protection of peat soils. The soils within the Principal Site are mainly heavy clay and sandy clay therefore this policy is not relevant. • Policy S28: Spatial Strategy for Employment relates to the spatial strategy for the distribution of employment related development proposals and does not directly relate to the Application for a renewable energy generating station, albeit the Scheme will have beneficial impacts in terms of employment generation both during construction and operation. • Policy S29: Strategic Employment Sites (SES) sets out the location of SES to meet the plans employment related growth during the plan period and is not relevant to the Application. The Order limits do not conflict with any allocated land for employment purposes within the CLLP. • Policy S31: Important Established Employment Areas (IEEA) identifies existing employment areas to be protected and is not relevant to the Application. The Order limits do not conflict with any established employment land identified within the CLLP. • Policy S43: Sustainable Rural Tourism relates to development proposals within villages named in the Settlement Hierarchy in Policy S1 that will deliver high quality sustainable visitor facilities including visitor accommodation, sporting attractions and events and festivals. The Scheme does not deliver visitor facilities therefore this policy is not relevant.
Q1.1.5	WLDC and Applicant	<p>ES v LIR assessment</p> <p>Could WLDC please provide a Table setting out how the conclusions contained within its LIR [REP1A-005] - with regard to the environmental effects of the Proposed Development - differ from those reached in the Applicant's ES? This should also be included in the SoCG [REP1-042]. The Applicant is invited to undertake the same exercise and may wish to liaise with WLDC in this regard.</p>	<p>The Applicant can confirm that it continues to regularly engage with WLDC with respect to the Application and has submitted an updated SoCG at Deadline 3 [EN010142/APP/9.8(Rev01)]. The updated SoCG sets out the main areas of disagreement between the parties. WLDC seek clarification in relation to baseline survey data and methodologies in relation to soils/agriculture and ecology. The Applicant continues to discuss these matters with WLDC. The SOCG submitted and updated at Deadline 3 sets out the main areas of disagreement in relation to environmental effects.</p>
Q1.1.6	WLDC and Applicant	<p>Cumulative construction period</p> <p>The WLDC LIR [REP1A-005] refers to a 'decade' long construction period (see for example paragraph 8.14). Could WLDC please explain how it has concluded that cumulative construction could take up to a decade, with specific reference to the Applicant's assertions to the contrary? Could the Applicant please provide a response as to whether a 10-year cumulative construction period is a realistic worse-case scenario?</p>	<p>As detailed in paragraph 3.2.3 (a) of Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev02)], the construction phase of the Scheme would be over a minimum of 24 months (2 years) and a maximum of 36 months (3 years). The Cottam Solar Project [EN010133], West Burton Solar Project [EN010132] and Gate Burton Energy Park [EN010131] projects each have a construction phase which would cover a maximum of 36 months (3 years). The Applicant understands that WLDC may have inferred a decade long cumulative construction period by adding up these individual construction periods, as if the construction of these projects were to occur consecutively, then this could amount to a 12-year cumulative construction period.</p> <p>It is considered unlikely that works across the four cumulative schemes would be drawn out over a 12-year period, as this would mean delaying the start of construction on three of the schemes by years following consent (with the last one starting construction 9 years after consent). The DCO consents, if granted, will expire if construction has not started within 5 years of consent. An extended, drawn out cumulative construction programme would also be contrary to the urgent need to implement the projects to deliver low-carbon and renewable energy.</p> <p>The Applicant has been collaborating with the developers of Cottam Solar Project [EN010133], West Burton Solar Project [EN010132] and Gate Burton Energy Park [EN010131] to identify areas in which they can work together, including for the construction of the shared Cable Route Corridor, as can be evidenced by the Cooperation Agreement included within Appendix C of the Joint Report on Interrelationships between Nationally Significant Infrastructure Projects Part 2 of 3 [APP-216]. As set out within Table 2-1 of the</p>

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>Joint Report on Interrelationships between Nationally Significant Infrastructure Projects Part 1 of 3 [EN010142/APP/7.6(Rev01)], the predicted dates for the start of construction are between Q4 2024 and Q4 2025 across the four projects. This suggests that the worst case scenario is unlikely to occur, not the developers' intention, not in the developers' interests and that construction of the projects is likely to overlap. As such, the Applicant considers that an overlapping construction period across all of the projects is the most likely scenario.</p> <p>Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] has considered two scenarios within the assessment, as set out within paragraph 8.4.28:</p> <ol style="list-style-type: none"> a) "Scenario 1: All projects' ducts and cables are installed within a construction programme of 24-36 months. It is assumed all the ducts will be installed at once and launch and reception pits and trenches will be backfilled so the area can then be re-instated. The sequence and schedule for each project is not confirmed, therefore, as a worst case, four lots of separate cable-pulling activities were assumed. The access points, haul routes and compounds would remain in place for 24-36 months to enable the cable pulls. b) Scenario 2: The sequential installation of all projects' ducts and cables over a maximum 5-year period. The access points, haul routes and compounds would remain in place for up to 5 years." <p>The same scenarios were also considered within the cumulative effects assessments of Cottam Solar Project [EN010133], West Burton Solar Project [EN010132] and Gate Burton Energy Park [EN010131] Environmental Statements.</p> <p>Each of the technical sections (Sections 18.7-18.18) within Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] then identify which of the scenarios present a worst-case for the impacts of that topic, where relevant.</p>
Q1.1.7	Applicant and LCC	<p>Neighbourhood Plans Lincolnshire County Council's (LCC) LIR [REP1A-001] indicates that the following neighbourhood plan policies are relevant:</p> <ul style="list-style-type: none"> • '(Sturton by Stow, and Stow) Policy 5: Delivering Good Design'. • '(Hemswell Cliff) Policy 2: Delivering Good Design'. <p>Could LCC please elaborate on which Neighbourhood Plans these polices are contained within and provide copies of these policies?</p> <p>Could the Applicant respond on the relevance and implications of these policies? These policies do not appear to be referred to in the Applicant's Planning Statement [AS-029]?</p>	<p>Sturton by Stow, and Stow Neighbourhood Plan Policy 5: Delivering Good Design The Applicant has already considered the Scheme against its compliance with the made Sturton by Stow and Stow Neighbourhood Plan (March 2022) (Ref 1-6) including Policy 5: Delivering Good Design. Table 14, pages 50 to 54 of Appendix B of the Planning Statement [EN010142/APP/7.2(Rev02)] sets out how the Scheme accords with Policy 5: Delivering good design. This is also considered and set out within some specific sections of the Planning Statement in relation to air quality (page 72), noise and vibration (page 89) and waste (page 129).</p> <p>Hemswell Cliff Policy 2: Delivering Good Design As the Scheme is located outside the Hemswell Cliff Neighbourhood Plan area the Applicant does not consider the policies within this plan to be of relevance to the Scheme and therefore these have not been considered within the Planning Statement [EN010142/APP/7.2(Rev02)].</p>
Q1.1.8	Applicant	<p>LCC policies Can the Applicant please update Appendix B of the Planning Statement [AS-029] to address the policies referred to at paragraphs 5.14, 5.16 and 5.17 of LCCs LIR [REP1A-001],</p>	<p>The Applicant has considered the policies raised by LCC within sections 5.14, 5.16 and 5.17 of its LIR. The Applicant confirms that the following policies from those sections are already considered within Table 1 of Appendix B of the Applicant's Planning Statement [APP-211] as submitted:</p>

ExQ1	Questions to:	Question:	Applicant's Response:
		or alternatively (if not considered relevant) explain why they are not relevant?	<ul style="list-style-type: none">• Policy M11: Safeguarding of Mineral Resources of the <i>Lincolnshire Minerals and Waste Local Plan Core Strategy and Development Management Policies (2016)</i> (Ref 1-7) <p>It is noted that while Appendix B of the Applicant's Planning Statement [EN010142/APP/7.2(Rev02)] does not include reference to West Lindsey District Council Strategic Flood Risk Assessment (SFRA) Final Report - July 2019 (Ref 1-8), this report was considered in the site-specific Flood Risk Assessment undertaken to inform the potential flood risk associated with the Scheme did consider and reference this to inform the baseline position as set out in Appendix 10-3 – Flood Risk Assessment of the ES [EN010142/APP/6.2(Rev01)]. It is therefore considered that the Application appropriately considered this Report.</p> <p>The Applicant does not consider the remaining policies as raised within sections 5.14, 5.16 and 5.17 of LCC's LIR are relevant to the Scheme:</p> <ul style="list-style-type: none">• Policies DM1, DM4, DM6 and DM12 of the Lincolnshire Minerals and Waste Local Plan, Core Strategy and Development Management Policies (adopted June 2016) (Ref 1-7). This is because these comprise development management policies for considering how proposed minerals and waste applications will impact on environmental matters including the historic environment, landscape and best and most versatile agricultural land. These policies do not apply to non-mineral and waste developments. As such, the Applicant does not consider that these policies are important and relevant in the context of a non-mineral and waste development, such as the Scheme.• Policy W1 of the Lincolnshire Minerals and Waste Local Plan, Core Strategy and Development Management Policies (adopted June 2016) (Ref 1-5). This is because the Scheme will commence commercial operation in 2028 and with the earliest replacement parts likely to be at around 5-10 years, or between 2033 to 2038. This would fall beyond and outside of the current plan period of the adopted Lincolnshire Minerals and Waste Local Plan, Core Strategy and Development Management Policies (adopted June 2016) (Ref 1-7). This therefore confirms that based on the reasonable worst-case scenario set out within Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev02)] and Chapter 7: Climate Change of the ES [APP-038] that the Scheme is unlikely to have implications with respect to the future requirement for new waste facilities during the current plan period. This confirms that Policy W1 does not apply. Paragraph 3.2.3 of Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev02)] sets out the indicative timescale for the construction, operation and decommissioning of the Scheme, Table 3-1 of Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev02)] sets out the indicative design life of the Scheme's components and Chapter 7: Climate Change of the ES [APP-038] sets out at paragraph 7.3.24 the reasonable worst-case assumptions on when replacements parts will be required. <p>In respect of the final two documents raised in the LIR, the Applicant notes that these are not planning policy that is part of the development plan and are not a supplementary planning document. They are instead position statements or strategies published by the Councils setting out their position on certain topics. It is on this basis that they have not been included within the Planning Statement.</p> <p>However, it is noted in respect of both documents that:</p> <p>The Lincolnshire County Council Energy Infrastructure Position Statement (December 2023) (Ref 1-10) publicly sets out the position that it will take on NSIP projects. This confirms that:</p> <ol style="list-style-type: none">1) Solar should be installed as a priority on rooftops, car parks and new builds rather than on agricultural land.2) Cabling should be underground in relation to new grid infrastructure.

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>3) LCC will object to any proposals on Grade 1, 2 and 3a land given the strategic importance of the agricultural sector to Lincolnshire and the UK's economy with the Council using the protection of agricultural land as a starting point for the consideration and acceptability of NSIP proposals that includes significant land take.</p> <p>Should the ExA consider that the Lincolnshire County Council Energy Infrastructure Position Statement (December 2023) is both important and relevant to the decision on the Application, the Applicant responds to points 1) to 3) listed above as follows:</p> <ol style="list-style-type: none">1) Planning policy does not place a moratorium on the development of ground mounted solar on agricultural land. It seeks to minimise the impact on best and most versatile agricultural land with the preference for the use of poorer quality land first before utilising land of a higher quality. It requires an Applicant to demonstrate that the use of agricultural land is necessary and that the use of best and most versatile land is justified. The development of ground mounted solar arrays is not prohibited on best and most versatile agricultural land. There is an urgent need to deploy solar on both rooftops, car parks and new builds in addition to ground mounted solar on agricultural land. However, on its own, smaller scale solar like this is not likely to deliver the capacity required to meet legally binding net zero targets. The Applicant's Responses to Relevant Representations [REP1-028] contains numerous responses on why there is a need for both roof-top as well as ground mounted solar. This is also set out in the Statement of Need [APP-210] confirming that <i>"large-scale solar is needed alongside rooftop solar because without increasing capacities of both types of solar generation, the UK will fall short of its solar capacity aims and therefore its climate change targets"</i>. (paragraph 10.1.14).2) The cabling associated with the Cable Route Corridor connecting to the National Grid Cottam Substation will be underground and therefore in accordance with the position statement.3) The Scheme must be determined in accordance with the energy NPSs as the primary consideration for decision-making. Chapter 4: Alternatives and Design Evolution of the ES [APP-035] sets out the methodology adopted in relation to site selection. This confirms that the use of agricultural land for the Scheme is necessary and demonstrates how the use of best and most versatile agricultural land has been minimised. The effect of the Scheme on agricultural land with regards to food production is set out in the Applicant's Responses to Relevant Representations [REP1-028] (pages 248 to 250) confirming that the potential impact on food production would be temporary and reversible allowing the Principal Site to be brought back into agricultural use following decommissioning. <p>The West Lindsey Sustainability, Climate Change and Environment Strategy (Ref 1-9) is a strategy published by West Lindsey District Council which sets out their strategic target to become a net zero council by 2050 and to enable the wider district through its role as community steward to achieve the same objective. Their key aims are to:</p> <ul style="list-style-type: none">• take action to reduce carbon emissions across all aspects of our operations to achieve a net zero council by 2050• enable and support residents, businesses and local communities to reduce carbon emissions across the West Lindsey district• deliver positive communications and sign posting, including our "small steps, big impact" campaign

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>The strategy recognises that “<i>the increase in generation of renewable energy in the form of wind, wave and solar power is a major advance in combatting emissions across the UK</i>” and state that “<i>As a council, we must keep abreast of developments and maximise and realise the potential for low carbon and renewable energy generation and storage, using our own assets and across the district, whilst taking account of major constraints to deployment such as the Lincolnshire Wolds AONB. The Central Lincolnshire Local Plan will be a major consideration in determining the scope for renewable energy production and storage across the district.</i>”</p> <p>Should the ExA consider that the West Lindsey Sustainability, Climate Change and Environment Strategy (Ref 1-9) is both important and relevant to the decision on the Application, the Applicant notes that the Applicant’s Planning Statement [APP-211] and updated Planning Statement [EN010142/APP/7.1(Rev02)] (Table 2 of Appendix B Local Policy Accordance Tables) sets out how the Applicant has considered the Central Lincolnshire Local Plan in its appraisal and planning balance, which as identified by the West Lindsey Sustainability, Climate Change and Environment Strategy (Ref 1-9) is a consideration in determining the scope for renewable energy production and storage across the district.</p>
Q1.1.9	LCC	<p>Planning balance The Examining Authority (ExA) notes LCCs conclusions contained in its WR [REP2-012]. However, could LCC please outline how it considers these conclusions and the alleged ‘impacts’ should be balanced in light of National Policy Statement (NPS) EN-1 Paragraph 4.1.7?</p>	No response required from the Applicant.
Q1.1.10	WLDC	<p>Planning balance The Examining Authority (ExA) notes WLDCs conclusions with regard to the planning balance at Section 8 of its Written Representation [REP2-016]. However, could WLDC please outline how it considers these conclusions and the alleged ‘impacts’ should be balanced in light of National Policy Statement (NPS) EN-1 Paragraph 4.1.7?</p>	No response required from the Applicant.
Q1.1.11	All parties	<p>Good design All parties should be aware that Nationally Significant Infrastructure Projects: Advice on Good Design was published on 23 October 2024. All parties (in particular the Applicant and Local Authorities) are invited to submit representations on the implications of the advice note. In addition, could the Applicant please explain whether, and if so how, the Application complies with this advice?</p>	<p>In accordance with s104 of the Planning Act 2008 (Ref 1-4), the Scheme is to be determined in accordance with the designated energy NPS.</p> <p>Section 4.7 of NPS EN-1 (Ref 1-1) sets out the criteria for good design for Energy Infrastructure and the approach that the Applicant is expected to take to ensure that good design is embedded within the Scheme. This includes:</p> <ul style="list-style-type: none"> • The establishment of design principles to guide the development from conception to operation. • Demonstration of good design in terms of siting relative to existing landscape character, land form and vegetation. • Embed opportunities for nature inclusive design. • Demonstrate in application documents how the design process was conducted and the how the design evolved.

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>Paragraphs 2.10.18 to 2.10.48 of NPS EN-3 (Ref 1-2) then sets out specific policy in relation to site selection and design relating to solar including:</p> <ul style="list-style-type: none">• Irradiance and site topography.• Network connection.• Proximity of site to dwellings• Agricultural land classification and land type• Accessibility• Public rights of ways• Security and lighting <p>The Nationally Significant Infrastructure Projects: Advice on Good Design Ref 1-11) published on 23 October 2024 does not change the existing national policy on design for infrastructure but provides additional advice and guidance for Applicants on how to adopt good practice and ensure that good design outcomes are achieved when a Scheme is implemented.</p> <p>A Design and Access Statement [AS-031] is submitted in support of the Application, Chapter 4: Alternatives and design evolution of the ES [APP-035] sets out the site selection process and design evolution of the Scheme from scoping through to submission and Section 6.3 of the Planning Statement [EN010142/APP/7.2 (Rev02)] set out how the Scheme accords with the designated energy NPS and important and relevant local planning policy in terms of good design.</p> <p>These documents demonstrate how good design has been embedded into the Scheme. The supporting documentation listed above, alongside Chapter 4: Alternatives and design evolution of the ES [APP-035], demonstrate how the design process has been carried out, how the design has evolved and how the design objectives/principles adopted at the outset of the project have fed through to achieve the best possible design solution whilst recognising both opportunities and constraints.</p> <p>Annex A of Nationally Significant Infrastructure Projects: Advice on Good Design (Ref 1-11) sets out how an Applicant should consider good design before submitting an NSIP for examination.</p> <p>The Application is supported by a Design and Access Statement (DAS) [AS-031]. Whilst there is now a change in terminology with future applications to be supported by a Design Approach Document (DAD), the Applicant considers that the submitted DAS achieves the same outcome. It sets out the design process that has been followed and the design principles adopted and embedded into the Scheme.</p> <p>The Scheme design and masterplan was led by a project design champion as described in paragraphs 4.2.7 to 4.2.9 of the Design and Access Statement (DAS) [AS-031]. The DAS sets out how the Scheme was iterated and evolved through the pre-application phase to improve design outcomes and to manage effects as far as practicable. The DAS sets out the design response at each stage and illustrates how the final design will be delivered through securing mechanisms built into the draft DCO to achieve good quality for climate, place, people and value.</p>

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>The publication of the Nationally Significant Infrastructure Projects: Advice on Good Design in October 2024 does not mean that the Applicant's approach to design is out of date, with the approach taken still being in accordance with NPS EN-1 and EN-3 and relevant local planning policy and guidance.</p>
Q1.1.12	NCC	<p>Policies Could Nottinghamshire County Council (NCC) please provide a copy of policies (including the title page of the relevant development plan document) referred to in its LIR [REP1A-002]?</p>	<p>No response required from the Applicant.</p>
Q1.1.13	Applicant	<p>FCEMP The Framework Construction Environmental Management Plan (FCEMP) [REP1-055] commits to the preparation of further monitoring plans but does not explain what these would contain. Please confirm the list of additional plans and monitoring that the Applicant will include within its FCEMP and an outline of what they may contain.</p>	<p>The term 'monitoring plan' is not used in the Framework CEMP [EN010142/APP/7.8(Rev02)]. However, Tables 3-1 to 3-15 of the Framework CEMP [EN010142/APP/7.8(Rev02)] set out monitoring requirements for each environmental topic area, which would be included as a minimum in the detailed CEMP. In addition, paragraph 4.1.2 of the Framework CEMP [EN010142/APP/7.8(Rev02)] lists the following suite of environmental plans and procedures which would be prepared for the construction phase alongside the detailed CEMP, which include monitoring requirements and will be further developed based on the detailed design following consent:</p> <ul style="list-style-type: none"> • Emergency Response Plan (ERP). As detailed in Section 2.10 of the Framework CEMP [EN010142/APP/7.8(Rev02)], the ERP will detail the procedures for responding to incidents and emergencies on site, and any reporting and will include details of the evacuation plans for the site on receipt of a flood warning. The content will be developed in consultation with the relevant local authority emergency planning officers, emergency services, including the local fire service, and the Environment Agency in relation to responding to flood warning and events. Table 3-5 further states that the Principal Contractor will sign up to Environment Agency flood warning alerts and describe in the ERP the actions it will take in the event of a flood event occurring. These actions will be hierarchical, meaning that as the risk increases the Principal Contractor will implement more stringent protection measures, • Dust Management Plan (DMP). Measures to be included within the DMP are set out within Table 3-1 of the Framework CEMP [EN010142/APP/7.8(Rev02)] and Section 6.7 of Chapter 6: Air Quality of the ES [APP-037], which include dust mitigation and monitoring measures for a 'high risk' site in accordance with the Institute of Air Quality Management (IAQM) (2024) Guidance on the assessment of dust from demolition and construction. The DMP would include site and work specific measures to control dust emissions from the construction works, as well as the monitoring of dust deposition, real-time PM₁₀ continuous monitoring and/or visual inspections. • Archaeological Mitigation Strategy. An Archaeological Mitigation Strategy (AMS) [REP1-025] was submitted into examination at Deadline 1. The AMS presents the scope and guiding principles for the planning and implementation of archaeological investigation and mitigation works during the construction phase, and was produced in consultation with Lincolnshire County Council, Nottinghamshire County Council and Historic England. • Water Management Plan (WMP). As detailed in Table 3-5 of the Framework CEMP [EN010142/APP/7.8(Rev02)] and paragraph 10.7.5 of Chapter 10: Water Environment of the ES [EN010142/APP/6.1(Rev01)], the WMP would include site and work specific pollution prevention measures to prevent adverse effects to the water environment during construction, as well as details of pre-construction, construction and post-construction phase water quality monitoring. This will

ExQ1 Questions to: Question: Applicant's Response:

- consider both visual observations and review of the Environment Agency's water quality monitoring network.
- Water Framework Directive (WFD) Mitigation and Enhancement Strategy. As detailed in Table 3-5 of the **Framework CEMP [EN010142/APP/7.8(Rev02)]** and paragraph 10.7.24 of **Chapter 10: Water Environment** of the ES **[EN010142/APP/6.1(Rev01)]**, the WFD Mitigation and Enhancement Strategy would include detail on the reinstatement and enhancement of trenched channels to provide improved channel form with enhancement works to be carried out (where relevant and appropriate to do so) between 5 and 10 m upstream and downstream of any open trench. It is anticipated that enhancements will consist of soft engineering techniques and improvements to the riparian corridor to improve channel diversity and biodiversity which will be detailed in the WFD Mitigation and Enhancement Strategy.
 - Silt Management Plan (SMP). The SMP would confirm the site and work specific measures to be adopted to prevent silt from entering watercourse, on the basis of the generic measures included within Table 3-5 of the **Framework CEMP [EN010142/APP/7.8(Rev02)]**.
 - Arboricultural Method Statement. In accordance with Table 3-7 of the **Framework CEMP [EN010142/APP/7.8(Rev02)]** and paragraph 4.5.7 of **Appendix 12-7: Arboricultural Impact Assessment** of the ES **[APP-107]**, an Arboricultural Method Statement will be developed to address the detailed design, to set out the phasing of site operations, the finalised tree protection measures for the Scheme, and to provide detail on how sensitive elements of work are to be achieved in proximity to retained trees. A preconstruction tree survey will be undertaken which will inform the content of the Arboricultural Method Statement, so it can consider detailed construction works and trees at that time. **Annex D of Appendix 12-7: Arboricultural Impact Assessment** of the ES **[APP-107]** includes the outline tree protection measures.
 - Construction Resource Management Plan (CRMP) or Site Waste Management Plan (SWMP). As detailed in **Table 3-15** of the **Framework CEMP [EN010142/APP/7.8(Rev02)]** and Section 17.8 of **Chapter 17: Other Environmental Topics** of the ES **[APP-048]**, a CRMP will be developed by the Principal Contractor once appointed and will include detail on waste streams that will be generated, how the waste hierarchy will be applied to waste, good practice measures for managing waste and the roles and responsibilities for waste management.

Q1.1.14 Applicant

Shared Management Plans

The Report on the Interrelationships with Other NSIPs [APP-215], at paragraphs 5.41 to 5.44, refers to a joint Construction Traffic Management Plan (CTMP). Can the Applicant provide an update on commitments to shared mitigation strategies such as the Joint Construction Traffic Management Plan? The 'Report on the Interrelationships with Other NSIPs' indicates that no commitment is made to produce one as a result of the lack of certainty that the other projects will be consented. Now that DCOs have been made for Cottam and Gate Burton could the Applicant provide an update position?

The Applicant assumes the ExA is referring to paragraphs 5.4.1 to 5.4.4 of the **Joint Report on the Interrelationships with Other NSIPs [EN010142/APP/7.6(Rev01)]**, which relate to traffic and transport matters including the potential for a joint Construction Traffic Management Plan (Joint CTMP). While the Gate Burton Energy Park [EN010131] and Cottam Solar Project [EN010133] have now been granted development consent, the West Burton Solar Project [EN010132] is still awaiting decision, and the Scheme is currently in examination. It therefore remains the case that, as set out at paragraph 5.4.3 of the **Joint Report on the Interrelationships with Other NSIPs [EN010142/APP/7.6(Rev01)]** at present there is no certainty that all four projects will be consented and that a Joint CTMP would be required. Uncertainty regarding grant of consent is also only one of the reasons set out in paragraph 5.4.3 as to why a firm commitment cannot be made to prepare and agree a Joint CTMP at this stage. Even if the West Burton Solar Project [EN010132] and the Scheme are both consented, for example, they may be subject to different requirements on construction traffic or timescales to the Cottam Solar Project [EN010133] and Gate Burton Energy Park [EN010131], which may make production of one document across all projects challenging. No single party has authority over another and each DCO only controls the activities for that project.

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>However, notwithstanding the above, as set out in the Statement of Common Ground with Other Solar Developers [REP1-037], the four solar projects are currently in discussions regarding a further cooperation agreement. While the scope and content of this further agreement are still under discussion, it will likely relate to (amongst other things) how the four projects will work together in the discharge of their respective DCO requirements. This could include, for example, the preparation and approval of a Joint CTMP in the discharge of the construction traffic management plan requirement (Requirement 14 in Schedule 2 of the draft DCO [EN010142/APP/3.1(Rev04)]). The Joint Report on the Interrelationships with Other NSIPs [EN010142/APP/7.6(Rev01)] has been updated to include reference to the further cooperation agreement.</p>
Q1.1.15	Applicant	<p>ES Update Appendix A of the Applicant's Response to Relevant Representations [REP1-028] appears to comprise an update of the existing cumulative effects assessment in the ES. As such, could the Applicant either supplement or update ES Chapters 18 and 17?</p>	<p>Appendix A of the Applicant's Responses to Relevant Representations [REP1-028] provides a quantitative cumulative waste assessment. Since Chapter 17: Other Environmental Topics of the ES [APP-048] provides a project-specific waste assessment, rather than a cumulative waste assessment, the Appendix does not directly relate to the assessment provided within Chapter 17: Other Environmental Topics of the ES [APP-048] and as such, the Applicant has not updated Chapter 17: Other Environmental Topics of the ES [APP-048].</p> <p>However, the Applicant has updated Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] to reference the findings of Appendix A of the Applicant's Responses to Relevant Representations [REP1-028] and a revised chapter has been submitted into examination at Deadline 3.</p> <p>Furthermore, the Applicant has updated Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] to reference the findings of Appendix B of the Applicant's Responses to Relevant Representations [REP1-028], which provides a report on the cumulative impacts of solar projects on Best and Most Versatile (BMV) land in Lincolnshire.</p> <p>It is noted that neither of the appendices of the Applicant's Responses to Relevant Representations [REP1-028] change the conclusions of the cumulative effects assessment with regards to likely significant effects, but they validate the previous assessment.</p>
Generating Capacity			
Q1.1.16	Applicant	<p>Import The ExA notes that the Applicant has provided a screenshot of the bilateral connection agreement with the National Electricity System Operator at Appendix A of its Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046]. However, does this apply to import as well as export?</p>	<p>The Applicant confirms that the bilateral connection agreement with the National Electricity System Operator (NESO) applies to both import and export capacities, each being 500MW. This was confirmed during the Issue Specific Hearing 1 and is detailed in point 4.1 of the Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046].</p>
Q1.1.17	Applicant	<p>Future changes Is it possible that the bilateral connection agreement could be altered in the future? Over what period does it take effect? Can the Applicant please provide a copy of the agreement?</p>	<p>Yes, it is possible for the bilateral connection agreement to be altered in the future, subject to the agreement of the parties (NESO and Tillbridge Solar Ltd). Regardless of the export capacity in the bilateral connection agreement, the Scheme, if consented, could only be operated within the parameters and controls set by any made Order (i.e. what is described at Section 1.5 of the Explanatory Memorandum [REP1-009] as the "consent envelope", that is, the measures that control the impacts of the Scheme during construction,</p>

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>operation and decommissioning). This is consistent with EN-3 paragraph 2.10.56 and reflects that the impacts of a solar farm are not directly related to its generating capacity.</p> <p>The agreement takes effect over the operational lifespan of the project..</p> <p>The Applicant is unable to provide a public copy of the agreement due to confidentiality and commercial sensitivity. In any event, the terms of the grid connection agreement are not relevant to the determination of the Scheme's compliance with relevant policy nor the Scheme's benefits and impacts, and the Applicant is not aware of the grid connection agreement needing to be provided in relation to any other solar DCO applications to date. The Applicant understands its position with respect to providing the connection agreement to be consistent with that of National Energy System Operator (NESO) and is aware that NESO has declined to provide copies of such agreements to the public in light of concerns around confidentiality of commercial information.</p>
Q1.1.18	Applicant	<p>Overplanting</p> <p>Paragraph 5.2.1 at Appendix B of the Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046] outlines that the Proposed Development would be overplanted at a ratio of 1.57 (157%). Could the Applicant please provide evidence to demonstrate what ratios typically apply to other schemes (either consented or in the process of being consented – for example Gate Burton, West Burton and Cottam) and justify any difference in the ratio of overplanting proposed? Please note footnote 92 of NPS EN-3 requires a justification to be provided for overplanting.</p>	<p>The proposed overplanting ratio is specifically tailored to the Scheme's DC-coupled configuration, which allows for direct integration of solar generation with the Battery Energy Storage System (BESS), enhancing efficiency by reducing conversion losses and maximising the utilisation of available solar energy (as explained in Appendix B, Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046], see in particular Sections 5.2 and 7.1).</p> <p>Due to these design differences, direct comparisons with other schemes such as the Cottam Solar Project [EN010133], West Burton Solar Project [EN010132] and Gate Burton Energy Park [EN010131] —which utilise AC-coupled systems—are not meaningful. AC-coupled systems involve separate connections for solar generation and storage, which influence their overplanting ratios and operational strategies differently to a project that makes use of a DC-coupled system.</p> <p>Each project's overplanting ratio is inherently influenced by its design, technology, and operational requirements, making the comparison of ratios between different configurations inaccurate. Therefore, the difference in the ratio of overplanting for the Scheme is justified by the distinct characteristics of its DC-coupled-design and technology.</p> <p>With respect to the justification for over-planting, this was explained as recorded in the Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046] at agenda item 4.1 and then in more detail at Appendix B to that document, in particular section 5.2).</p>
Q1.1.19	Applicant	<p>Overplanting</p> <p>Could the Applicant please confirm whether panel replacement has been factored in when considering the degree of overplanting required/ deemed necessary? If so, please confirm the assumed rate of Panel replacement over the lifetime of the project?</p>	<p>The Applicant confirms that panel replacement has been factored into the calculations when considering the degree of overplanting required. However, the primary factor influencing the overplanting ratio, as detailed in at paragraph 5.2.2 of Appendix B of the Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046], is the need to maximise the grid connection capacity and utilise the land most efficiently. The estimated panel replacement is defined by the manufacturer warranty on the panels themselves. Currently, it is estimated that the panels will be replaced once during the lifetime of the Scheme, although should additional replacements be required to damaged or faulty panels, this work would also be carried out. Panel replacement is addressed further in the questions under the heading "Operational lifetime".</p>
Q1.1.20	Applicant	<p>Overplanting</p>	<p>Relevant extracts from the ExA's recommendation report on Mallard Pass are below:</p>

ExQ1	Questions to:	Question:	Applicant's Response:
		<p>Paragraph 8.2.12 at Appendix B of the Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046], states in full: "The Mallard Pass Solar Farm [EN010127] has an overplanting ratio with a range of 1.3 to 1.5 times multiplied by the grid connection agreement. In his decision letter, the Secretary of State concluded that the overplanting ratio was justified and reasonable. This decision is important and relevant given that this Scheme falls within a similar range." Please could the Applicant direct the ExA to the evidence contained within the SoS Decision Letter and ExA Recommendation Report to support this? Please also confirm what proportion of land would be overplanted for the Mallard Pass Scheme, with specific reference to the ExA Recommendation Report.</p>	<p><i>"3.2.103. In addition [to the ExA having set out its agreement that in terms of scale, the acres per MW for the project where within that envisaged by the then draft NPS EN-3], the ExA accepts the case made for overplanting made by the Applicant, recognising the support for this approach also expressed in 2023 draft EN-3.</i></p> <p>...</p> <p><i>[Under the heading "Conclusion"]</i></p> <p><i>s3.2.159. The Proposed Development is of a substantial scale but not significantly proportionately larger in terms of acres per MWp when compared with other NSIP solar projects. It also falls within the range of 2 to 4 acres per MW as identified in draft NPS EN-3. Overplanting is proposed and this does have the consequence of increasing the size of the Order limits and PV array area. However, the concept of overplanting is supported by draft NPS EN-3. The potential effects associated with the scale of the development are considered later in this report, including Section 3.5 and 3.6.s...</i></p> <p><i>[Under the heading Examination of the CA and TP Case" and the sub-heading "General considerations regarding alternatives and site selection"]</i></p> <p><i>6.5.10. We also acknowledge the flexibility sought within the Proposed Development at this time, the benefits of overplanting and the Applicant's justification on overplanting not being a substitute for the absence of storage in this case, as considered in further detail in Chapter 3. We agree that a smaller scheme would not deliver the same generation capacity and therefore have a lesser overall benefit. Thereby any reduction in the size of the scheme would not be reasonable in this context."</i></p> <p>The Secretary of State's decision letter records at paragraph 4.18:</p> <p><i>"The ExA notes that concerns were raised regarding the large scale of the Proposed Development by the host local authorities in their respective LIRs and this was a major concern raised by many IPs, including MPAG [ER 3.2.93]. The ExA acknowledges that the Proposed Development is of substantial scale but not significantly larger in terms of acres per megawatt peak when compared with other solar NSIPs [ER 3.2.159]. The ExA notes overplanting of solar panels is proposed and this does have the consequence of increasing the size of the Order limits and photovoltaics ("PV") array area, however, the concept of overplanting is supported by 2023 draft EN-3 [ER 3.2.159]."</i></p> <p>The SoS' conclusion at the end of this section, which also considered other factors all under the heading of "The principle of the development" (for example, scale and generating capacity (as informed by the consideration of overplanting) and the contribution of the scheme towards the UK's energy needs).</p> <p><i>"4.22. The Secretary of State notes that paragraph 3.2.3 of NPS EN-1 states that "the weight which is attributed to considerations of need in any given case should be proportionate to the anticipated extent of a project's actual contribution to satisfying the need for a particular type of infrastructure". The Secretary of State has, therefore, considered whether there is any reason why the Secretary of State should not attribute substantial weight to the Development's contribution to meeting the identified need in this case. The Secretary of State concludes that the Proposed Development will make a substantial contribution to the urgent need for utility scale solar PV, and will generate up to 350 MW, and therefore agrees with the ExA's assessment that there is an urgent need for the Proposed Development and attributes this matter substantial positive weight, inclusive of considerations relating to climate change."</i></p>

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>The ExA's recommendation report on Mallard Pass also sets out at paragraph 3.2.52 that it was "estimated by the Applicant that 132ha of the 420ha PV array area (Works No 1) would be occupied by overplanting", and at paragraph 3.2.99 that calculations with respect to the area and number of PV modules associated with the overplanting there was "an implied overplanting of 110MW out of the 350MW of installed capacity as the available grid capacity and connection agreement is 240MW". At paragraph 3.2.100 it is recorded that "The overplanting ratio proposed is considered by the Applicant to lie within the zone in which the benefits of overplanting are maximised (1.3– 1.5x grid capacity)".</p> <p>It is noted that Mallard Pass is not directly comparable to the Scheme, as it is a standalone solar project. Consequently, its technical reasoning for overplanting differs significantly from that of the Scheme, which integrates both solar generation and a Battery Energy Storage System (BESS) within a DC-coupled configuration. The difficulty with direct comparisons with schemes such as Mallard Pass are also explained in response to Question 1.1.18 above.</p>
Q1.1.21	Applicant	<p>Lifetime Generation Please provide an assessment of a typical annual output from the development proposal to the grid, how this relates to the grid connection capacity and its utilisation ratio, how this ratio changes day to night, seasonally and over the life of the development taking into account panel degradation and climate change.</p>	<p>The Applicant notes that this question has been addressed in Appendix B of the Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046]. We kindly refer you to this document for a detailed assessment of the typical annual output, its relationship to the grid connection capacity and utilisation ratio, and how these factors change, seasonally, and over the project's lifetime, taking into account panel degradation and climate change.</p> <p>For an assessment of this purpose, irradiation is considered rather than night-time, as outlined in Section 6.1 of REP1-046. When referring to night-time, if it is treated as "non-irradiance" hours, the generating station naturally does not produce electricity during this period, and the grid connection is therefore not utilised by the generating station.</p> <p>As stated in 6.1.14, climate change is considered but it has not been included in the modelling due to the challenges of predicting long-term climate changes. However, the report notes that climate change is positively influencing irradiation hours, potentially resulting in higher annual energy generation. Consequently, excluding climate change from the assessment provides a more conservative estimate.</p>
Associated Development – Battery Energy Storage Systems (BESS)			
Q1.1.22	Applicant	<p>BESS – 'possible services' Section 7.2 at Appendix B of Written Summary of the Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046] briefly outlines the 'possible services and contractual arrangements' for the BESS. Could the Applicant please confirm the following:</p> <p>a) During times when the BESS is providing these services and those referred to in paragraphs 6.11.22 to 6.11.25 of the Statement of Need [APP-210], would the BESS be functionally separate to the co-located solar (i.e. is it the case that the BESS could not provide these services at exactly the same time as</p>	<p>In response to point (a), the Applicant confirms that the BESS is primarily designed to support the generating station's functionality. When this functionality is not applicable, such as during grid curtailment or overnight periods, the BESS could potentially import energy and provide services to the grid.</p> <p>The information requested in points (b) and (c) requires the Applicant to disclose commercially sensitive information which the Applicant does not consider is relevant to planning matters, in particular the question of how the BESS meets the tests for associated development. As the Applicant has stated in Appendix B, while the BESS may have the potential to import electricity from the grid and store it (with the 500 MW import capacity), this is not its primary purpose. The BESS is constructed as part of the overall Scheme to enhance the efficiency and reliability of the solar PV operation, and its co-location with the solar stations emphasises its subordinate role. The ability to import electricity is to provide grid balancing and ancillary services that have traditionally been provided by more conventional generating stations, which are being</p>

ExQ1	Questions to:	Question:	Applicant's Response:
		<p>importing and exporting electricity generated from the co-located solar)?</p>	<p>displaced by renewable energy generation stations, such as the Scheme. In this regard, the ancillary grid balancing services address an impact of the Scheme.</p>
	b)	<p>Is it more profitable to provide the services mentioned above or to solely export electricity produced by the co-located solar? Can the Applicant please provide evidence to demonstrate typical unit prices (£/MW) for electricity exported from the co-located solar and unit prices for provision of other services not related to co-located solar?</p>	<p>With respect to point (d), the Applicant is not aware of other ways that the BESS could be utilised other than those ways that are set out in the application documents, which also align with the examples given in sub-paragraph (d) of the question. All such contracts or services would be subject to agreements with National Grid and adherence to any applicable regulations.</p>
	c)	<p>If it is more profitable to provide contracted or other services, then is it plausible that the undertaker would seek to maximise the proportion of time which the BESS provides these contracted or other services?</p>	<p>For points (e), (f), and (g), these pertain to specific contracts that have not yet been signed for the Scheme. Such contracts are of a commercial nature and, as a result, are confidential and not intended for public disclosure, and again fall outside of the scope of the planning matters to be determined with respect to the Application.</p>
	d)	<p>Are there any other ways, not already described in the application documents, which the BESS could be utilised independently of the co-located solar, for example wholesale market participation, balancing mechanism, capacity market, ancillary services?</p>	<p>The BESS as associated development has been extensively detailed in the Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046] (as well as in the Applicant's Explanatory Memorandum [REP1-009] at paragraphs 2.1.4 – 2.1.8 and at Section 2.2 of the Planning Statement [EN010142/APP/7.2(Rev02)], in particular paragraph 2.2.9). The Applicant re-states and further expands upon the position here, for complete clarity.</p>
	e)	<p>Can the Applicant please provide examples of Ancillary (Balancing) Service contracts, Reserve Service Contracts and Response Contracts?</p>	<p>Pursuant to section 115 of the Planning Act 2008, a development consent order may be granted for "associated development", being development that is associated with development that requires development consent (that is, the nationally significant infrastructure project, in this case, the PV generating station).</p>
	f)	<p>In addition, could the Applicant please confirm whether any of these contracts would require the BESS to remain effectively dormant, for example through firm service contracts?</p>	<p>NPS EN-3, with respect to solar PV generation, provides at paragraph 2.10.16 that energy storage is the type of infrastructure that may be associated development:</p>
	g)	<p>Could the Applicant also please explain what periods such contracts typically require such services to be provided over?</p>	<p><i>"Associated infrastructure may also be proposed and may be treated, on a case by case basis, as associated development, such as energy storage (FN83), electrolyzers associated with the production of low carbon hydrogen, or security arrangements (which may encompass flood defences, fencing, lighting and surveillance)."</i></p>
			<p>Footnote 83 references paragraphs 3.3.4 – 3.3.7 in EN-1. That section of EN-1 is entitled "The need for different types of electricity infrastructure" and sets out that whilst new generating plants can deliver a low carbon and reliable system, the increased flexibility provided by new storage (and interconnectors) is also needed. Paragraphs 3.3.6 of EN-1 then sets out how storage helps address the impacts of renewable energy generation:</p>
			<p><i>"Storage and interconnection can provide flexibility, meaning that less of the output of plant is wasted as it can either be stored or exported when there is excess production. They can also supply electricity when domestic demand is higher than generation, supporting security of supply. This means that the total amount of generating plant capacity required to meet peak demand is reduced, bringing significant system savings alongside demand side response (up to £12bn per year by 2050).⁴⁰ Storage can also reduce the need for new network infrastructure. However, neither of these technologies, as with demand side response, are</i></p>

ExQ1	Questions to:	Question:	Applicant's Response:
			<p><i>sufficient to meet the anticipated increase in total demand, and so cannot fully replace the need for new generating capacity.”</i></p> <p>The role for electricity storage is expanded upon further in paragraphs 3.3.25 – 3.3.31 of EN-1. Extracts from those paragraphs are included below, where relevant to establishing the need for and role of electricity storage, both of which are a direct response to the intermittent nature of renewable energy generation, including from generating stations such as the Scheme:</p> <p><i>“3.3.25 Storage has a key role to play in achieving net zero and providing flexibility to the energy system, so that high volumes of low carbon power, heat and transport can be integrated.</i></p> <p><i>3.3.26 Storage is needed to reduce the costs of the electricity system and increase reliability by storing surplus electricity in times of low demand to provide electricity when demand is higher. ...</i></p> <p><i>3.3.27 Storage can provide various services, locally and at the national level. These include maximising the usable output from intermittent low carbon generation (e.g. solar and wind), reducing the total amount of generation capacity needed on the system; providing a range of balancing services to the NETSO and Distribution Network Operators (DNOs) to help operate the system; and reducing constraints on the networks, helping to defer or avoid the need for costly network upgrades as demand increases.”</i></p> <p>It is also worth noting that when electricity storage was removed from the definition of nationally significant energy generating stations in the Planning Act 2008 by the Infrastructure Planning (Electricity Storage Facilities) Order 2020 (as recorded in EN-3 paragraph 3.3.29), the Explanatory Memorandum accompanying those regulations recorded the ability for energy storage to still be consented under the Planning Act 2008 regime as associated development:</p> <p><i>“Where storage is co-located alongside another form of generation, the storage element of such a project will no longer trigger the MW capacity thresholds set out in the NSIP regime (currently 50MW in England and 350MW in Wales). However, developers may be able to include storage within a Development Consent Order as associated development if, in a composite scenario, the other form of generation has fallen into the NSIP regime.”</i></p> <p>The Government has issued guidance (Planning Act 2008: Guidance on associated development applications for major infrastructure projects, DCLG, April 2013) to which the Secretary of State (SoS) must have regard in deciding whether development is associated development. The guidance records that it is for the SoS to decide whether development is associated development on a case-by-case basis, taking into account core principles. The principles for associated development are set out below, along with the Applicant's response, demonstrating how the BESS accords with them:</p> <ul style="list-style-type: none">(i) The definition of associated development ... requires a direct relationship between associated development and the principal development. Associated development should therefore either support the construction or operation of the principal development or help address its impacts. - When the sun shines cannot be controlled, nor can solar generating stations control when the power they generate will be needed. The purpose of the BESS is to support the operation of the solar PV by storing energy from the solar farm and increasing efficiency. The solar farm would

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>deliver substantial benefits without the BESS, but such benefits would be enhanced if the BESS is able to store energy when generated and then release energy when it is needed. This benefit is recognised in the energy NPSs.</p> <ul style="list-style-type: none">•• The BESS has a clear and direct relationship with the principal development of the Scheme, being the solar PV generating station. This relationship is emphasised by the use of DC coupling, which requires the BESS to be distributed across the Principal Site and co-located with the solar PV arrays and Solar Stations (see Section 7.1 of Appendix B of [REP1-046]). By reducing the number of times that the electricity needs to be converted from DC to AC, the overall efficiency of the energy generation and storage process associated with the Scheme is improved, which is the key aim of the BESS.•• In addition, the ability to import electricity is for the purposes of providing grid balancing and ancillary services that have traditionally been provided by more conventional generating stations. The need for BESS to provide such services is in response to those conventional generating stations being displaced by renewable energy generation stations, such as the Scheme, and in this way, the ancillary grid balancing services of the BESS address an impact of the Scheme. <p>(ii) <i>Associated development should not be an aim in itself but should be subordinate to the principal development.</i> - The BESS is subordinate to the solar PV development because its primary function is to store and manage the energy generated by the solar panels. Its operation is dependent on the generation capacity of the solar PV array and the existence of the generating station itself, as it is co-located with the Solar Stations dispersed throughout the Principal Site rather than being in a single location (due to its DC-coupled design) and is designed specifically to handle the energy output of the Scheme. The supporting role of the BESS is further emphasised by the approaching to DC coupling, aimed at improving the overall efficiency of the energy generated by the solar PV arrays. Further explanation is provided in Section 7.1 of Appendix B of [REP1-046].</p> <ul style="list-style-type: none">•(iii) Development should not be treated as associated development if it is only necessary as a source of additional revenue for the applicant, in order to cross-subsidise the cost of the principal development. This does not mean that the applicant cannot cross-subsidise, but if part of a proposal is only necessary as a means of cross-subsidising the principal development then that part should not be treated as associated development. – As set out above with respect to principle (ii) and in Appendix B of [REP1-046] (in particular Section 7.1), the BESS is necessary to help maximise the delivery of energy generated by the solar PV to the grid. The supporting role of the BESS (already established with respect to the centralised AC BESS consented as associated development in other solar NSIPs) is further emphasised by the approach to DC coupling with the Scheme. The BESS will provide additional revenue for the Applicant by virtue of grid balancing and other ancillary services, via contracts it anticipates entering into with National Grid. However, the BESS is not “only” necessary as a source of that additional revenue to cross-subsidise the cost of the PV generating station. As Appendix B of REP1-046 makes clear, the BESS is an added benefit of the Scheme as it maximises its operational efficiency in the generation of renewable energy. The extract from the Examining Authority’s recommendation report from Gate Burton, paragraph 1.3.17 (set out at paragraph 3.1.5 to Appendix B of [REP1-046]), is important and relevant in this respect, and provides:•

ExQ1	Questions to:	Question:	Applicant's Response:
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- “As to whether the BESS would generate additional revenue for the Applicant, there is no detailed financial break down before me, but it is not unreasonable to conclude that providing grid balancing services and accepting the importation and exportation of electricity from the BESS would have a commercial benefit. However, the Guidance advises that development should not be treated as associated development if it is only necessary as a source of additional revenue. Moreover, it goes on to advise that this does not mean that the applicant cannot cross subsidise. Given that there is a reasonable and legitimate benefit associated with the provision of storage, co-location is supported by government, and it is not the case that the BESS is only being proposed as a source of additional revenue I am satisfied that the BESS is appropriately included as associated development.”
- (iv) *Associated development should be proportionate to the nature and scale of the principal development. ...* – The BESS is proportionate in both size and function to the scale of the solar PV. The scale of the BESS and its power capacity are effectively limited by the grid connection, which is 500MW. The solar PV will be capable of exporting 500 MW of power and the BESS will be capable of importing 500MW, meaning the BESS is sized to import all of the power from the solar PV. There is no additional element of power or capacity in this system. The BESS would also be able to import 500MW of power from the National Grid, as and when required by the Grid. This is an entirely appropriate use of the BESS, particularly given that energy storage is going to be required from the Grid to a greater extent in coming years, and it does not take the BESS outside the ambit of associated development. In the Applicant's view, if BESS were to be exclusively charged by solar PV, this would make poor use of the grid connection and would mean that batteries would lie idle when they could instead be servicing the National Grid.

In terms of land-use, the co-located solar stations and BESS would accommodate approximately 24.75ha, or 3% of the 780ha of land required for the generating station and built associated development. The limited land take further demonstrates the subservient nature of the solar stations/BESS alongside the principal purpose of the Scheme as a solar PV generating station. The storage capacity of the BESS—designed for four hours of storage with a total energy capacity of 2,310 MWh—ensures that it is suitably sized to handle the energy output of the solar PV array in times of curtailment. The strategic co-location of the BESS across the Principal Site also minimises electrical losses, making it a proportionate and necessary component of the Scheme.

It is noted that in terms of the principle that the associated development be proportionate to the nature and scale of the principal development, there is no requirement in the guidance on associated development, the energy NPSs, nor the decisions consenting BESS as associated development to date, that the Applicant is required to demonstrate that the associated development would be subordinate to the principal development for a greater proportion of time than it would be used for any other use. The Applicant has been very clear that the BESS has been included in the Scheme in order to maximise the efficiency of the solar PV generating station (and therefore the efficiency of the land use and grid connection); that is, the BESS is not an aim in itself and is included in order to support the NSIP. The Applicant has also been clear that, as envisaged by EN-1, the BESS would have an import capability in order to provide grid balancing services for the Grid. Such services would be in accordance with contracts with National Grid, and in response to the requirements of the National Energy System Operator. The Applicant is not able to confirm at this time how often those services would be called upon, and that is largely outside of the Applicant's control, as provisions of these services would be in response to the requirement of the Grid. In any event, this is not relevant to the consideration of the associated development principles, firstly, because there is no

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>requirement to establish the proportion of time each function of the associated development would be utilised for, and secondly, because in any event, those grid balancing services address the impacts of the Scheme (and other schemes like it) as required by the associated development core principles.</p> <p>Paragraph 6 of the guidance then states that <i>"It is expected that associated development will, in most cases, be typical of development brought forward alongside the relevant type of principal development or of a kind that is usually necessary to support a particular type of project."</i> The inclusion of BESS as associated development in the Application for development consent for the Scheme entirely aligns with the solar generating stations that have been consented by development consent to date. Since BESS has not been an NSIP itself, requiring development consent (that is, since the Infrastructure Planning (Electricity Storage Facilities) Order 2020), the SoS has made orders granting development consent for solar PV generating stations, with BESS as associated development by way of the development consent orders made for Little Crow, Longfield, Sunnica, Gate Burton and Cottam. As supported by EN-1, in particular at paragraph 3.3.37, and as shown by the consented solar generating stations to date, BESS is typical of development brought forward alongside the principal development, and is of a kind that is usually necessary to support a particular type of project. The Applicant is not aware of any the applicants for the made Orders listed above being required to provide detail as to how the BESS would be utilised for grid balancing or other ancillary services in the examination of the applications, in particular the Applicant is not aware of any consideration of the commercial details in relation to how grid balancing services would be commissioned nor their profitability, nor the amount of time the BESS may be used for such services. Certainly neither the recommendations of the ExA nor the decisions of the SoS for those Orders consider such points as being important and relevant to the decision to grant consent for BESS as development that is associated with the solar generating NSIP. BESS has been included with these projects to manage and mitigate the effects of solar as an intermittent energy generator, both by responding to the nature of the individual solar generating station with which the BESS is associated, as well as more generally to a grid where energy generation is expected to increasingly be from renewable and intermittent sources. Section 3 of the Applicant's note at Appendix B to the Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046] sets out in further detail the made orders pursuant to which consent has been granted for BESS as associated development, and makes the point that such decisions are important and relevant to the SoS's decision on this Application.</p>
Q1.1.23	Applicant	<p>BESS – 'possible services' Paragraph 8.3.9 at Appendix B of the Written Summary of the Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046] outlines in part: <i>"Using the current indicative Scheme design, it is estimated that the BESS will be charged by the solar PV array on approximately 30% of the days in a year."</i> If that is the case, then what function is the BESS fulfilling for the majority of the year (70%)?</p>	<p>The Applicant confirmed that the BESS is anticipated to support the generating station approximately 30% of the time, and the remainder of the paragraph continued to say: <i>"This does not mean that the BESS would not be in use the rest of the time. The rest of the time its use will be dependent upon weather conditions, and the extent to which it is used for grid balancing services which will be dictated by the needs of the grid. For this reason, it is not possible to put a definitive figure on how often the BESS will take energy from the grid. However, the Applicant can confirm that the approximate 30% figure is a higher figure than would be expected of solar schemes with AC-coupled BESS. Due to weather and seasonal factors, this charging will primarily occur during Spring, Summer and Autumn, when solar irradiance is highest."</i></p> <p>Outside of the 30%, the BESS can either remain dormant or provide other services, as previously outlined. As is made clear in response to Question 1.1.22, these potential activities and the proportion of time that the BESS is engaged in them, do not influence whether the BESS is associated development, given that (1) the BESS is necessary to help maximise the delivery of energy generated by the solar PV to the grid and this is the key and primary reason it is included as part of the Scheme; (2) there is no requirement to establish the proportion of time each function of the associated development would be utilised for (for example, junction</p>

ExQ1	Questions to:	Question:	Applicant's Response:
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improvements, road widening or the creation of passing places are all well established as associated development, however, whilst they are often permanent and remain as a legacy benefit of the development, they are likely only needed to support the NSIP over a specific period, such as its construction period of, say, 2-4 years, and thereafter will be used by other road users for purposes entirely unconnected to the NSIP. Whilst this example is not entirely analogous to the BESS, the example goes to illustrate that there is no requirement to demonstrate what proportion of the time the associated development is used in support of the NSIP); and (3) in any event, the grid balancing services address the impacts of the Scheme (and other schemes like it) as required by the associated development core principles.

The BESS as associated development has been addressed thoroughly in Appendix B to the **Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046]**.

Operational lifetime

Q1.1.24 Applicant **Maintenance**
 Section 4.3 of the Written Summary of the Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046] states in part:
"Wholesale replacement of all Scheme components is not authorised under Article 5(1), with assumptions around HGV traffic in the Framework OEMP and Chapter 16: Transport and Access of the ES [APP-047] reflecting this approach."
 Could the Applicant confirm whether the indicative design life of "scheme components" (as set out in Table 2-2 of the Framework Operational Environmental Management Plan (FOEMP) [REP1-019]) has directed assumptions which have been assessed under every ES topic?

The Applicant notes that the indicative design life of 'Scheme Components' is presented within Table 3-1, of **Chapter 3: Scheme Description** of the ES [EN010142/APP/6.1(Rev02)] in addition to Table 2-2, page 6 of the **Framework OEMP [EN010142/APP/7.9(Rev02)]**.

As described within **Chapter 5: EIA Methodology** of the ES [APP-036], the description of the Scheme as detailed within **Chapter 3: Scheme Description** of the ES [EN010142/APP/6.1(Rev02)] has been used to inform the assumptions for all technical assessments presented within **Chapters 6 to 18** of the ES [APP-037 to 049]. This includes the indicative design life of all 'Scheme Components' and each assessment has determined and included component replacement within their assessments if appropriate to form a reasonable worst-case scenario.

Q1.1.25 Applicant **Maintenance**
 Section 4.3 of the Written Summary of the Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046] indicates that the FOEMP [REP1-019] would control maintenance operations and in particular; replacement panels and batteries. It states in part:
"Paragraph 2.3.10 [of the Framework OEMP] provides the minimum information that must be included as a matter of course, while paragraph 2.3.11 requires the Applicant to provide further notification to the relevant local planning authorities in respect of any maintenance undertaken as a result of unforeseen emergencies."
 These appear to be incorrect paragraph references. Nonetheless, could the Applicant please explain where in the DCO or the FOEMP it stipulates that specific details 'must' be submitted for approval in writing prior to that maintenance work being undertaken (i.e. where is the control to prevent the undertaker from omitting details of Panel replacement or battery replacement from the annual maintenance plan)?

The Applicant notes that the correct paragraph references are paragraphs 2.3.1 to 2.3.5 (Section 2.3 Replacement Schedule), of the **Framework OEMP [EN010142/APP/7.9(Rev02)]**.

Paragraph 2.3.2 details that the Applicant "will submit a planned maintenance schedule" for the year ahead to the relevant planning authorities, excluding unforeseen emergencies that require maintenance throughout the year. Paragraph 2.3.3 outlines the details that must be submitted with the planned maintenance schedule as a minimum. These paragraphs will ensure that relevant planning authorities have oversight of the planned maintenance activities. Paragraphs 2.3.2 and 2.3.3 of the **Framework OEMP [EN010142/APP/7.9(Rev02)]** have been updated at Deadline 3 to firm up the requirement to submit details of planned maintenance ahead of the works and the minimum details to be provided.

Paragraph 2.3.4 details that the Applicant will notify relevant planning authorities of unplanned maintenance which has been undertaken as a result of unforeseen emergencies within 14 days of the unplanned maintenance being carried out. This notification will include details of the extent and nature of the unplanned maintenance.

A new paragraph 2.3.5 has been added to confirm that the Applicant will not undertake maintenance activities outside of the planned maintenance schedule, excluding unforeseen emergencies and unless otherwise agreed with the relevant planning authorities.

Implementation of measures outlined the **Framework OEMP [EN010142/APP/7.9(Rev02)]** is secured by Requirement 13 of the **draft DCO [EN010142/APP/3.1(Rev04)]**

ExQ1	Questions to:	Question:	Applicant's Response:
Q1.1.26	Applicant	<p>Maintenance Paragraph 2.3.2 of the FOEMP [REP1-019] refers to “unforeseen emergencies that require maintenance throughout the year”. However, there is no definition of ‘unforeseen emergencies’. Neither is there any definition of activities excluded from ‘unforeseen emergencies’. Could the Applicant please ensure that this is adequately defined such that maintenance activities (including Panel replacement) could not be categorised as an ‘unforeseen emergency’?</p>	<p>The provisions in place ensure that details of panel replacement, battery replacement or any other replacement of Scheme components would be shared with the relevant planning authorities both in the annual maintenance plan or notified after unforeseen emergencies.</p>
Decommissioning			
Q1.1.27	Applicant	<p>Assumptions Appendix C of the Written Summary of the Applicant's Oral Submissions at the Issue Specific Hearing 1 (ISH1) [REP1-046] sets out a “Review of Worst-Case Decommissioning Assumptions and Assessment Conclusions”. Could the Applicant explain why the removal of the substations is considered to be a worst-case scenario in respect of heritage and landscape character (the latter as opposed to visual effects).</p> <p>In relation to heritage, Appendix C of the Applicant's Planning Statement [AS-029] identifies various heritage assets which would be subject to ‘less than substantial harm’. What effect would the removal of the substations have on this level of harm?</p>	<p>The assessment presented within Chapter 8: Cultural Heritage of the ES [APP-039] concludes that the impact on the value of heritage assets resulting from the physical presence of solar infrastructure is considered to result in a negligible to minor adverse (not significant) effect. Table 1, page 4 of Appendix C of the Written Summary of the Applicant's Oral Submissions at the Issue Specific Hearing 1 [REP1-046] explains that additional temporary disruption would be incurred through the removal of on-site substations, which would temporarily affect the setting of heritage assets. Nevertheless, the effect is considered to be no worse than during the construction of the infrastructure, which was assessed as negligible to minor adverse (not significant) within Chapter 8: Cultural Heritage of the ES [APP-039]. As such, both the removal and retention of on-site substations are considered to result in the same significance of effects within the EIA.</p> <p>Table 1, pages 6 and 7 of Appendix C of the Written Summary of the Applicant's Oral Submissions at the Issue Specific Hearing 1 [REP1-046] explains that embedded mitigation measures such as woodland planting would be well established at the point of decommissioning and therefore the on-site substations would be screened and their effect on landscape character limited. The mature planting will reduce the perceptual influence of these features upon the wider landscape character. In addition, there are agricultural barns of a similar scale and form to the proposed substation buildings within the baseline, as well as existing energy infrastructure represented by 33kV overhead lines, a small substation and the Glentworth K oil extraction site. As such, elements associated with the on-site substations are not considered to be wholly without precedent. Temporary disruption would be incurred through the removal of on-site substations which would temporarily affect the perception of change of landscape character. As such this is an ‘additional’ effect to landscape character that would not be incurred if the on-site substations were to remain in situ, hence why the removal of on-site substations is a worst-case scenario. However, because of the increased maturity of vegetation and resultant screening established in accordance with the Framework LEMP [EN010142/APP/7.17(Rev03)], there are no likely significant effects on the landscape character in either scenario.</p> <p>With regards to Table 1 of Appendix C: Heritage Harm Statement of the Planning Statement [EN010142/APP/7.2(Rev02)], as both the removal and retention of on-site substations are considered to result in the same effect category within the EIA, there would be no change to the harm category as a result of either option.</p>

ExQ1	Questions to:	Question:	Applicant's Response:
Need			

Q1.1.28 Applicant **Need**
 Many representations from Interested Parties have challenged the 'need' for the Proposed Development and refer to other technologies or roof-mounted solar development. Notwithstanding the information contained in the Applicant's existing application documents, could it please succinctly set out a response with specific reference to the key policy and legislative differences between the current project and the Cottam, West Burton and Gate Burton NSIPs?

The Gate Burton Energy Project, The Cottam Solar Project and the West Burton Solar Project were all submitted before the designation of the latest energy NPSs (2024) and as such, these did not have effect. At this time, there was no energy specific NPS for solar development with the 2011 NPS remaining in effect. The current energy NPSs which were designated in January 2024, prior to the submission of this Application, were however released in draft format at the time of the application and Examination of the earlier solar NSIPs.

It was the draft versions of the NPSs which were considered important and relevant by the Secretary of State per section 105 of the PA 2008 (Ref 1-4) in granting development consent for the Gate Burton Energy Project and the Cottam Solar Project (the West Burton Solar Project decision is due on 24 January 2025). Despite these documents being in draft, they were afforded considerable/very great weight in decision making given that they set out the latest government policy on energy.

As the January 2024 energy NPS are in effect for this Application, the Secretary of State is subject to a stronger direction by the PA 2008 (Ref 1-4) under s 104(3) which provides that the Secretary of State "must decide the application in accordance with any relevant national policy statement". By comparison, the direction under s 105 (the relevant section for Cottam, Gate Burton and West Burton) is for the Secretary of State to "have regard" to other matters which they consider important and relevant (including draft NPS).

- Paragraphs 3.2.6 to 3.2.8 of NPS EN-1 (Ref 1-1) that the Secretary of State should assess all applications for development consent for the types of infrastructure included by the NPS (including solar) on the basis that there is demonstrated urgent need for them, that substantial weight should be given to this need, and that the Secretary of State is not required to consider the specific contribution of any individual project to be satisfied that need is established.
- Paragraph 4.1.3 of NPS EN-1 (Ref 1-1) goes on to confirm that the Secretary of State will start with a presumption in favour of granting consent to applications for energy NSIPs and goes on to confirm in Section 4.2 of NPS EN-1 (Ref 1-1) that there is a critical national priority (CNP) for the provision of low carbon infrastructure. The definition of CNP infrastructure includes renewable electricity generation that does not involve fossil fuel and therefore applies to solar as set out in Section 6 (glossary of NPS-EN-1).
- Paragraph 4.2.1.5 of NPS EN-1 (Ref 1-1) also applies in the case of the Application confirming that:
"Where residual non-HRA or non-MCZ impacts remain after the mitigation hierarchy has been applied, these residual impacts are unlikely to outweigh the urgent need for this type of infrastructure. Therefore, in all but the most exceptional circumstances, it is unlikely that consent will be refused on the basis of these residual impacts."
- The energy NPSs in relation to the Application are given full weight with s104 of the PA 2008 (Ref 1-4). These means that the Application will be considered against the energy NPSs with the presumption to grant the Scheme due to the urgent need to deploy CNP infrastructure being fully engaged.

Site selection and alternatives			
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Q1.1.29 Applicant **Alternatives**

Paragraph 4.3.9 of NPS EN-1 (Ref 1-1) sets out a general requirement for the consideration of alternatives stating that:

ExQ1	Questions to:	Question:	Applicant's Response:
		Could the Applicant please succinctly set out what it considers to be the policy and legislative requirements in respect of considering alternative sites?	<p><i>“As in any planning case, the relevance or otherwise to the decision making process of the existence (or alleged existence) of alternatives to the proposed development is, in the first instance, a matter of law. This NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option from a policy perspective. Although there are specific requirements in relation to compulsory acquisition and habitats sites, the NPS does not change requirements in relation to compulsory acquisition and habitats sites.”</i></p> <p>However, there are certain circumstances when alternatives do need to be considered in accordance with national policy and as set out in paragraph 4.2.13 of NPS EN-1 (Ref 1-1) where residual impacts relate to HRA (habitats regulations assessment) or MCZ (marine conservation zones) sites and as set out in paragraph 4.3.16 of NPS EN-1 there may be policy specific requirements to consider alternatives. These include the need to consider alternatives if a development causes unavoidable significant harm to National Parks, the Broads and AONBs (paragraph 5.10.32), the need to undertake the Sequential Test where a development is located in Flood Zone 3 (paragraph 5.8.10), the need for development to, in line with the mitigation hierarchy aim to avoid significant harm to biodiversity and geological conservation interests including through consideration of reasonable alternatives (paragraph 5.4.42), and the need to demonstrate alternatives if a project is located near a sensitive receptor or site for air quality (paragraph 5.2.7).</p> <p>In relation to policy specific requirements in the NPS for consideration of alternatives, including the requirement for a derogation case in relation to residual impacts on HRA or MCZ sites, the Scheme is not located near any sensitive receptors or sites for air quality, it avoids significant effects on biodiversity and geological conservation features, and is not located within or in proximity to any National Parks, the Broads or AONBs, and there are no residual impacts on HRA or MCZ sites, therefore no requirement to consider alternatives in relation to these matters. Alternatives in relation to flood risk as part of the Sequential Test have been considered and are set out in Chapter 4: Alternatives and Design Evolution of the ES [APP-035] and Section 6.8 of the Planning Statement [EN010142/APP/7.2(Rev02)].</p> <p>With respect to compulsory acquisition, the Applicant is required to demonstrate that the land is required for the development to which consent relates in accordance with Section 122 of the PA 2008. Paragraphs 8 to 10 of the ‘Guidance related to procedures for the compulsory acquisition of land’ (Ref 1-12) sets out general considerations that an Applicant must have regard to in order to justify the compulsory acquisition of land to accord with Section 122 of the PA 2008. Paragraph 8 of this guidance specifically states that:</p> <p><i>“The applicant should be able to demonstrate to the satisfaction of the Secretary of State that all reasonable alternatives to compulsory acquisition (including modifications to the scheme) have been explored.”</i></p> <p>The Applicant has considered alternatives to compulsory acquisition in accordance with Section 122(3) of the PA 2008. These are set out in Section 5.4 of the Statement of Reasons [REP1-014] and Chapter 4: Alternatives and Design Evolution of the ES [APP-035].</p> <p>In addition to the general planning policy requirements to consider alternatives and the prescribed need to consider alternatives in relation to compulsory acquisition as set out above Regulation 14(2) the Infrastructure Planning (Environmental Impact Assessment) (EIA) Regulations 2017 (Ref 1-13) also requires the Applicant to include in its ES details regarding the main alternatives that have been considered, setting out the main reasons for the chosen option, taking into account effects. This is further reiterated in NPS EN-</p>

ExQ1	Questions to:	Question:	Applicant's Response:
			<p>1, paragraph 4.3.15 which states that “<i>Applicants are obliged to include in their ES, information about the reasonable alternatives they have studied. This should include an indication of the main reasons for the applicant’s choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility</i>”.</p> <p>NPS-EN-1 further clarifies the scope of the Applicant’s assessment of alternatives stating at paragraph 4.3.10 that information on alternatives should be proportionate to the scale of project and that in making a decision, given the level and urgency of need for new energy infrastructure that the Secretary of State should also consider alternatives in a proportionate manner (paragraph 4.3.22).</p> <p>Paragraph 4.3.24 of NPS EN-1 goes on to state that:</p> <p><i>“The Secretary of State should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals.”</i></p> <p>The Applicant has set out the reasons for the choice of the Principal Site in Chapter 4: Alternatives and Design Evolution of the ES [APP-035] and how it was derived following a systematic site selection process and therefore alternatives that were considered. This included amongst other criteria consideration of previously-developed land, agricultural land quality and flood risk. Alternative sites were not reasonably available that had a lower chance of flood risk, with the sequential and exception test having been applied and passed. No previously-developed sites of a suitable size were available that would deliver the project. This demonstrated that the use of agricultural land is justified. In addition, the site selection process sought to minimise impacts on best and most versatile land through excluding Grade 1 and 2 land from the site selection process.</p> <p>The site selection process identified that no reasonable available alternative sites were available that would meet the need for the Scheme and that the site selection process sought to minimise environmental effects as far as practicable whilst still delivering a Scheme that will generate large amounts of renewable energy.</p> <p>The approach to alternative site selection carried out by the Applicant is proportionate. It sets out the reasons for the choice of the Principal Site as well as alternatives considered. It meets specific policy tests relating to alternatives associated with flood risk and the Applicant has considered the availability of previously development land, with this discounted due to a lack of suitable sites.</p> <p>The approach adopted by the Applicant in relation to alternatives as set out in Chapter 4: Alternatives and Design Evolution of the ES [APP-035] is proportionate in accordance with Section 122 of the PA 2008 and Regulation 14(2) of the EIA Regs. Further, Appendix A, Table 1: National Policy Statement EN-1 and Table 2: National Policy Statement EN-3 of the Planning Statement [EN010142/APP/7.2(Rev02)] also sets out how the approach to alternatives is in accordance with national policy.</p>

2. Biodiversity and ecology

Table 2-1: Biodiversity and Ecology

ExQ1	Questions to:	Question:	Applicants Response:
Q1.2.1	Applicant	<p>Species Impacts: Brown Hare (<i>Lepus europaeus</i>) This species has been observed and recorded at the site. What is the likely impact of the scheme on this species and what mitigation is in place to minimise this?</p> <p>Ref: 6.1 Chapter 9 Ecology and Nature Conservation [APP-040].</p>	<p>An assessment of potential impacts to Brown Hare is set out in Table 9-15 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040] and it concludes that there are no potential impact pathways that could result in significant effects. Whilst the Scheme will result in a change of land use from predominantly arable farmland, the construction of the Scheme will seek to retain and avoid habitats used by Brown Hare within the Order limits, such as field margins, and hedgerows. The creation of permanent grasslands across the Order limits, as well as the retention and enhancement of boundary and marginal habitat features, will ensure that there is no long-term effect on Brown Hare. These habitats will provide suitable feeding and breeding resources for Brown Hare. Following the establishment of grassland habitats provided by the Scheme, the effect on Brown Hare is assessed as minor beneficial (not significant) within Table 9-17 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040].</p> <p>As set out in Table 9-13 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040] and the Framework CEMP [EN010142/APP/7.8(Rev02)] a number of measures will be implemented during construction of the Scheme to avoid impacts to Brown Hare. These include gaps in perimeter fencing to allow mammals to continue to be able to move freely across the Order limits, undertaking any vegetation clearance at an appropriate time of year so as to avoid incidental injuring or killing of animals and incorporating measures in works areas to avoid entrapment of mammals.</p>
Q1.2.2	Applicant Environment Agency	<p>Species Impact: Water Vole (<i>Arvicola amphibius</i>) The Environment Agency has requested a riparian survey of the watercourses of the cable corridor impacted by the scheme. Whilst one has been provided for the principal site, has this been undertaken on the cable route corridor and could the details of this be supplied?</p> <p>Ref: 6.2 Appendix 9-10 Baseline Report for Riparian Mammals [APP-091].</p>	<p>As set out in Chapter 9: Ecology and Nature Conservation of the ES [APP-040] and Appendix 9-10 Baseline Report for Riparian Mammals of the ES [APP-091], the Applicant used a combination of field studies (undertaken by the Applicant) and existing comprehensive datasets (based on field surveys) collected by Gate Burton Energy Park, Cottam Solar Project and West Burton Solar Project, which share parts of the Cable Route Corridor with the Scheme, to determine the distribution of Water Vole within the Order limits. Much of the data used to identify potential impacts along the Cable Route Corridor is derived from these datasets. Data were obtained from the other schemes and compiled to form a comprehensive dataset for the Cable Route Corridor. These data are presented in Appendix 9-10 Baseline Report for Riparian Mammals of the ES [APP-091]. Where the Applicant was able to obtain land access then verification surveys were undertaken to confirm conditions presented in the shared datasets.</p> <p>An assessment of potential impacts to Water Vole is set out in Table 9-15 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040]. Watercourses supporting Water Vole will be crossed using non-intrusive methods to avoid physical disturbance to the watercourse and impacts to Water Vole.</p>
Q1.2.3	Applicant Natural England	<p>Species Impact: Skylark (<i>Alauda arvensis</i>) What is the impact on the skylark population of the loss of arable cropland versus the BNG provision and under sowing of the solar panels? During construction the site is likely to be subject to surface significant traffic and disruption. How will this transient impact relate to the displacement of the resident skylark population and its potential for their return to the site following construction?</p>	<p>An assessment of potential impacts to Skylark is set out in Section 9.9, specifically paragraphs 9.9.25-9.9.35, of Chapter 9: Ecology and Nature Conservation of the ES [APP-040]. The Scheme will result in a change of habitat provision from arable farmland to permanent grasslands, for which the quality and suitability for Skylark, will vary. However, the creation of permanent grasslands, including large open areas, will offset the loss of existing arable farmland by:</p> <ul style="list-style-type: none"> • Providing habitat capable of supporting higher densities of territories and nests; • Permanent habitat which is not subject to agricultural rotations, i.e., temporary availability across years;

ExQ1	Questions to:	Question:	Applicants Response:
		Ref: 6.2 Appendix 9-8 Baseline Report for Non-Breeding Birds [APP-089].	<ul style="list-style-type: none"> • Removal of pesticide application which will increase the availability of prey throughout the breeding season, benefiting both skylark nesting within the order limits and those from outside foraging within the Scheme; • Removal of early harvesting and other destructive farming practices, which will reduce nest loss and increase the number of broods possible across the breeding season, i.e., with the possibility of up to three broods per year; and • Measures to reduce predation, which will increase the chances of fledging and maximising recruitment into the population. •
			<p>The effect from habitat loss is assessed as minor adverse to negligible (not significant) to the Skylark population.</p>
			<p>The Applicant notes that Chapter 16: Transport and Access of the ES [APP-047] does not conclude significant effects in the construction period for the Principal Site. However, with regards to displacement, Skylark are known to show site fidelity with individuals returning to previous breeding territories and wintering areas and juveniles also returning to natal areas. Over 200ha of undeveloped land in open 'Biodiversity Zones', along with over 1,000 ha of grassland creation, has been incorporated into the Scheme design, as set out within the Framework LEMP [EN010142/APP/7.17(Rev03)]. These areas will be subject to grassland creation, with a combination of tussocky grass and floristic diverse seed mixes used to maximise both nesting habitat but also invertebrate prey for chicks as well as seeds for adults. These habitats will be established as early as possible, to allow their availability for individuals potentially displaced during construction activities and to ensure that any temporary reduction in habitat availability is minimised. As a result, there will be no change in the effect category as habitats establish. In addition, it is likely that over a 36-month construction period (which is the worst-case scenario in respect of potential impacts on ecology and biodiversity) that not all habitat within the Principal Site will be lost at once (ensuring available habitat around the Principal Site during the construction period). Therefore, whilst there may be some temporary displacement of individuals during a single breeding or wintering season from construction activities and movements across the Principal Site, sufficient areas of the Order limits will remain undisturbed, along with the Biodiversity Zones, to retain the population of Skylark both on site and in the wider landscape. In addition, once habitats establish, the local Skylark population will benefit from the foraging and nesting opportunities provided by the Scheme.</p>
Q1.2.4	Applicant Environment Agency Natural England	<p>Species Impact: Aquatic Invertebrates There is evidence of disruption to the aquatic invertebrate population by the presence of solar panels and also consequently the native bat population who rely on those invertebrates for food source and also mistake solar panels for large bodies of water. What is the likely impact on both of these populations from this scheme? Ref: BSG Ecology Report on Solar Farms impacts on wildlife</p>	<p>As set out in Table 9-6 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040], the Applicant agreed with the Planning Inspectorate that the attraction of aquatic invertebrates to solar panels could be scoped out of the assessment. The basis for this is presented in Appendix 1-1 EIA Scoping Report of the ES [APP-051]. This states that, <i>'although there is limited evidence suggesting, in certain conditions, the attraction of some species of aquatic invertebrates to solar panels, there are no designated sites with aquatic invertebrate species or assemblages as qualifying features within the study area and this potential impact pathway is scoped out of further assessment. Notwithstanding this, appropriate aquatic surveys will be undertaken to assess potential impacts to watercourses.'</i> The Planning Inspectorate agreed with the scoping out of this impact in their EIA Scoping Opinion (refer to Appendix 1-2: EIA Scoping Opinion of the ES [APP-052]).</p> <p>Data collected as part of the baseline characterisation, including that set out in Appendix 9-2 Aquatic Ecology Baseline Report of the ES [APP-082], supported that justification for scoping out impacts to aquatic invertebrates, with no notable concentrations of aquatic invertebrates recorded.</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.2.5	Applicant Natural England	<p>Species Impact: Curlew (<i>Scolopax arquata</i>) What is the significance of the breeding curlew pair noted within the Order Limits and what is the potential impact the proposal may have for the continued return to the site of the species? Ref: 6.2 Appendix 9-7 Breeding Birds Part 1 of 2 [APP-088].</p>	<p>The potential for operational impacts on bats is discussed in Section 9.9, specifically paragraphs 9.9.38-9.9.42 of Chapter 9: Ecology and Nature Conservation [APP-040]. Bats are experts at navigating complex structural environments, so collision with stationary panels is unlikely. In addition, in a predominantly intensive arable landscape (which the Order limits consist of) invertebrates are more likely to be associated with habitats on field peripheries. The Scheme design sets back PV panel arrays from all important habitats used by foraging bats, i.e., hedgerows and woodlands, and with the extensive habitat creation and improvements proposed, it is likely the invertebrate population will increase, offering greater foraging opportunities and prey resources for bats.</p> <p>The significance of observations of Curlew made during surveys is set out in Appendix 9-7 Baseline Report for Breeding Birds of the ES [APP-087], in which paragraph 5.4.4 states, '<i>Field surveys of the Principal Site recorded Curlew throughout the survey period in the south-west of the Principal Site, with single birds noted on most surveys. A male was 'bubbling' (territorial display song) on the western boundary of the Principal Site at the beginning of May 2022, but no evidence to suggest nesting on the Principal Site was recorded at any point during the surveys. It is possible that the Principal Site forms part of a wider breeding territory (home range), with nesting occurring outside of the Order limits. A single breeding pair of Curlew is likely to represent a significant proportion of the Lincolnshire breeding population, however, the Order limits on their own is not considered to represent a significant resource for the species in isolation, but in recognition of forming part of a breeding territory or home range the Order limits are of importance to breeding Curlew at District scale.</i>'</p> <p>Impacts on breeding birds (of up to County importance) are assessed in Chapter 9: Ecology and Nature Conservation of the ES [APP-040]. The Scheme has retained a large area of undeveloped land on the western boundary of the Order limits, incorporating areas where Curlew were recorded. The creation of permanent grassland will offer both foraging and nesting opportunities for Curlew, maintaining suitable habitat to support a breeding territory as well as actual nest sites. The effect on breeding birds, including Curlew, is assessed as moderate beneficial (significant) within Table 9-17 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040].</p>
Q1.2.6	Applicant Natural England	<p>Species Impact: Great Crested Newt (<i>Triturus cristatus</i>) What is the significance of the development on the Great Crested Newt population within the Order Limits? 6.2 Appendix 9-5 Baseline Report for Great Crested Newt [APP-085]</p>	<p>An assessment of potential impacts to Great Crested Newt is set out in Table 9-15 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040].</p> <p>All ponds within the Order limits, including those supporting Great Crested Newt, will be retained, with a minimum undeveloped buffer of 20m applied to all ponds and at least 50 m to those supporting Great Crested Newt, as set out within Table 3-4 of the Framework CEMP [EN010142/APP/7.8(Rev02)]. Construction within the Principal Site and Cable Route Corridor, within 250m of a pond supporting Great Crested Newt, will predominantly be carried out in low value habitats (arable farmland) for this species and will avoid all habitat within 100m of this pond. Reasonable Avoidance Measures (RAMs) are set out within Table 3-4 of the Framework CEMP [EN010142/APP/7.8(Rev02)] for works within 250m of a pond supporting Great Crested Newt. With these measures in place, Table 9-15 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040] concludes that there is no potential for significant effects on the Great Crested Newt population.</p> <p>The creation of new grasslands, hedgerows and woodland, along with restoration and improvements to existing ponds will improve conditions for Great Crested Newt in the medium to long term. Table 9-17 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040] concludes that following the establishment of habitats proposed by the Scheme, the effect is minor beneficial (not significant).</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.2.7	Applicant Environment Agency Natural England	<p>Species Impact: Migratory fish including Lamprey on the River Trent</p> <p>The burial depth of the cable below the river bed assesses there is only risk to migratory aquatic species in the lower water column near the bottom of the river. The Applicant advises that the migratory species can use the full depth of the water column but will they be able to sense this risk and adjust accordingly or should they have to?</p> <p>Ref: 6.1 Chapter 17 Other Environmental Topics [APP-048].</p>	<p>The buried cable will not release air or noise emissions. Cables generate heat but it is at such a low level that it would not be detectable a few centimetres from the cable, and therefore would not be detectable by migratory aquatic species. EMF is emitted by at low levels from electrical cables and the Applicant assumes this to be the subject that the ExA is querying. Chapter 17: Other Environmental Topics of the ES [APP-048], paragraph 17.9.23 states that in accordance with National Grid guidance (Ref 1-14), a 400 kV cable buried at 0.85m depth, the typical magnetic field is 24 microteslas when on top of the cable, and 3 microteslas at 5m, with the maximum known by National Grid being 96 microteslas on top of the cable and 13 microteslas at 5m. These levels comply with ICNIRP guidelines (Ref 1-15) set for the protection of human health and are significantly lower than the EMF emitted by many every day household tools. It is not expected that the migratory fish would detect 13 microteslas or that it would affect their physiology, especially given the transient nature of the fish which would be present above the cable for a very short period of time.</p> <p>Furthermore, given the cables are buried beneath the bed of the River Trent (as opposed to laid on the river bed), it would be likely that only fish occurring in the lower water column would be within a range where the low levels of EMF could be perceptible, and it is there that the risk may occur. However, regardless of this, the burial depth of a minimum of 5m below the bed of the River Trent is sufficient to avoid any impacts on migratory fish from EMF and as such, there is no risk to fish occurring in any part of the water column.</p>
Q1.2.8	Natural England	<p>Species Impact: Ground nesting birds</p> <p>What is Natural England's view on the likely impact on the scheme and whether it results in a net displacement of bird population or encourages ground nesting due to lack of predators?</p> <p>Ref: 6.2 Appendix 9-8 Baseline Report for Non-Breeding Birds [APP-089]</p>	No response required from the Applicant.
Q1.2.9	Applicant Natural England	<p>Species Impact: Bats</p> <p>Is there any evidence to establish the impact on commuting and foraging bats of the presence of large areas of solar panels?</p> <p>Ref: 6.2 Appendix 9-9 Baseline Report for Bats [APP-090].</p>	<p>The potential for operational impacts on bats is discussed in Section 9.9, specifically paragraphs 9.9.38-9.9.42, of Chapter 9: Ecology and Nature Conservation of the ES [APP-040]. This describes how there is limited scientific literature available on the impacts to bats from solar farms, with comparable sized schemes not yet operational. It also sets out how recent studies from small scale solar schemes did not have any significant new tree/hedge planting, and/or grassland creation and so are unlikely to be comparable to this Scheme (and other large-scale DCO schemes) where significant areas of habitat creation and enhancement are provided.</p> <p>The Applicant has concluded that taking into account embedded mitigation measures and a Scheme design which sets back PV panel arrays from all important habitats used by commuting and foraging bats, i.e., hedgerows and woodlands, there is no robust data to suggest that, with the embedded mitigation measures set out in Section 9.8 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040], significant displacement of bats from these habitats will occur.</p>
Q1.2.10	Applicant Natural England	<p>Biodiversity Net Gain:</p> <p>The results of the assessment indicate that the current illustrative design for the Scheme is predicted to result in a net gain of 64.55% for area-based habitat units, 17.33% for hedgerow units, and 22.94% for watercourse units. How does this provision of biodiversity net gain align to the</p>	<p>The creation and enhancement of habitats which have generated the predicted unit gains presented in the Biodiversity Net Gain Report [AS-062], have been informed by the detailed ecological surveys presented in Chapter 9: Ecology and Nature Conservation of the ES [APP-040] which have identified the existing biodiversity present, and with reference and regard to the relevant national and local biodiversity policies as described in Section 1.4 of Biodiversity Net Gain Report [AS-062]. As such, the provision for biodiversity net gain closely aligns with the baseline biodiversity conditions present within the Order limits and national</p>

ExQ1	Questions to:	Question:	Applicants Response:
		<p>biodiversity impacts lost and specifically to those species relying on the existing biodiversity provision.</p> <p>The scheme alludes to providing over 1,000 hectares of new grassland creation. This is presumed to be principally the land area under the proposed solar panels. How will this biodiversity provision compare the biodiversity lost from the existing situation i.e. arable fields; and how will this grassland compare to grassland unencumbered by the overshadowing of solar panels.</p> <p>What are the mechanisms within the DCO for securing BNG creation and ensuring its ongoing maintenance as required. Ref: 7.14 BNG Report [APP-226].</p>	<p>and local biodiversity priorities. For example, in line with national and local policy, the Scheme will improve conditions for a wide range of priority species, such as farmland birds, reptiles and amphibians, and a range of mammal species, such as Badger, bats and Hedgehog. This will be through the creation of species-rich grasslands, hedgerows (as well as enhancements to existing hedgerows), woodland and scrub planting and areas of natural re-generation, all of which will improve existing foraging conditions, as well as providing more extensive resting and breeding/nesting habitats. Details of these measures are set out in the Framework LEMP [EN010142/APP/7.17(Rev03)], along with details of their management and monitoring.</p> <p>Beneficial effects from the establishment of habitat measures provided by the Scheme on important ecological features, are summarised within Table 9-17 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040].</p> <p>As set out in the Biodiversity Net Gain Report [AS-062], the grassland created as part of the Scheme have been categorised based on their location within the Scheme and ability to be able to achieve a certain condition. For grassland within solar PV areas, these have been assigned as modified grassland with a post-development target condition of 'Poor' to acknowledge some areas will be subject to prolonged levels of shading. However, there are suitable seed mixes available for shaded areas and these will still contribute to the overall grassland resource, including providing habitat for invertebrates and as such a prey resource for a wide range of wildlife. Details of these grasslands and their management prescriptions are specified in the Framework LEMP [EN010142/APP/7.17(Rev03)]. For areas outside of the solar PV areas, including the field margins of the solar PV areas, grasslands have been assigned as Other neutral grassland with a post-development target of 'Good', which reflects that they will be unencumbered by any shading and will be of greater floristic diversity. The distribution of different post-development habitats is illustrated in Appendix B of Biodiversity Net Gain Report [AS-062].</p> <p>The Applicant's commitment to delivering a minimum 10% BNG is secured by both requirements 7 (landscape and ecological management plan) and 8 (biodiversity net gain) of Schedule 2 of the draft DCO [EN010142/APP/3.1(Rev04)]. Requirement 8 provides that construction cannot commence until a BNG strategy has been submitted and approved by the relevant planning authority, in consultation with the relevant statutory nature conservation body (being Natural England). The BNG strategy must be substantially in accordance with the Framework LEMP [EN010142/APP/7.17(Rev03)], which states at paragraph 4.6.2 that the Applicant is committed to achieving a minimum of 10% BNG, in accordance with the terms of the Biodiversity Net Gain Report [AS-062]. The Framework LEMP [EN010142/APP/7.17(Rev03)] also includes measures for the monitoring and maintenance of habitats that will deliver BNG. These measures are secured through requirement 7 of Schedule 2 of the draft DCO [EN010142/APP/3.1(Rev04)], which provides that the detailed LEMP must be substantially in accordance with the Framework LEMP.</p>
Q1.2.11	Applicant	<p>ES Chapter 9 [APP-040] and ES Chapter 10 [APP-041] identify the presence of European Eel <i>Anguilla anguilla</i> within the River Till. ES Chapter 10 also identifies that there could be up to four cable route crossings of this watercourse by open cut trench methods. Can the Applicant confirm how this has been taken into account in the assessment of effects on this receptor?</p>	<p>As set out in Chapter 10: Water Environment of the ES [APP-041] and shown on Figure 3-11 Indicative Cable Route Corridor Trenched and Trenchless Crossing Locations of the ES [APP-140], the River Till will be crossed using non-intrusive methods, however, there are unnamed ditches/ordinary watercourses within the Till catchment that will be subject to intrusive crossing. These are unsuitable for European Eel and there is no evidence that the species is present in these watercourses.</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.2.12	Applicant	Can the Applicant confirm when the datasets identified in ES Chapter 9, Table 9-1 [APP-040] were collected? What habitat data have solely come from other projects for the cable route corridor and what areas have been 'ground truthed' by the Applicant?	The datasets presented in Table 9-1 of Chapter 9: Ecology and Nature Conservation of the ES [APP-040] have been collected between 2021 and 2022. Approximately 90% of the habitats within the Cable Route Corridor were subject to ground truthing with only small areas west of Normanby by Stow not accessible.
Q1.2.13	Applicant	Can the Applicant provide details of the target notes identified as points on the Phase 1 habitat maps supplied as Appendix B to the Scoping Report [APP-051]. Where these target notes remain relevant, please provide an updated copy of the phase 1 habitat maps depicted in ES Figure 9-3 [APP-166] which do not identify any target notes. Also please provide a plan demonstrating how the risks of a bentonite breakout during directional drilling would be managed and controlled.	<p>The Applicant can confirm that all the target notes depicted on the original Phase 1 Habitat map included as Appendix B to the Appendix 1-1: EIA Scoping Report of the ES [APP-051] related to initial signs of, or potential for, protected and notable habitats and species (some of which are sensitive to public release), which informed the detailed surveys undertaken. As such, any target notes associated with the original Phase 1 Habitat map have now been superseded by the results of the detailed surveys which are presented in the Appendices [APP-082 to APP-093] which accompany Chapter 9: Ecology and Nature Conservation of the ES [APP-040].</p> <p>With regards to bentonite breakout, as set out within Table 3-5 of the Framework CEMP [EN010142/APP/7.8(Rev02)]:</p> <p><i>"Where any leakage of bentonite water is observed in the watercourse during non-intrusive drilling techniques for the installation of the cable corridor, or there is an increased perceived risk (i.e. lack of drilling mud returns), the cable drilling operation must be suspended, remediation action implemented, and subsequently the methodology for that crossing re-evaluated."</i></p> <p>The Applicant has also updated the Framework CEMP [EN010142/APP/7.8(Rev02)] at Deadline 3 to add the following to Table 3-5: "A site management plan will include measures to deal with a spill as a result of the non-intrusive drilling techniques. Any frack out would be assessed individually to determine the correct course of action. In general, the procedure is; i)Stop drilling, place sand bags and bund; i)Dig out and suck out via a gully sucker tanker lorry; i)Inject additive through drill rods;i)Closely monitor."Detailed measures for the management and control of bentonite breakout would be confirmed by the Principal Contractor in accordance with the Framework CEMP [EN010142/APP/7.8(Rev02)], following the confirmation of site-specific construction methods. This is secured by Requirement 12 in Schedule 12 of the draft DCO [EN010142/APP/3.1(Rev04)], which provides that the detailed CEMP must be substantially in accordance with the Framework CEMP.</p>

Habitats Regulations Assessment (HRA)

Q1.2.14	Natural England	<p>HRA</p> <p>Does Natural England (NE) have any representations in relation to the Applicant's responses to Natural England's Relevant Representation [RR-208] provided in the document titled 'Applicant's Responses to Relevant Representations' (PDF pages 10-28) [REP1-028]? Could NE also please provide a response on updated ES Appendix 9-12: Habitats Regulations Assessment Report [REP1-058] and in particular the conclusions in relation to:</p> <ul style="list-style-type: none"> a) the distances used to screen in European sites to the assessment; b) the rationale for screening out the Golden Plover qualifying feature of the Humber Estuary Ramsar site; 	No response required from the Applicant.
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ExQ1	Questions to:	Question:	Applicants Response:
		<p>c) conclusions in relation to no Likely Significant Effects (LSE) from water quality to the Humber Estuary Ramsar site and Humber Estuary Special Area of Conservation (SAC); and</p> <p>d) the conclusions in respect of in-combination effects with the One Earth Solar and Great North Road solar projects.</p>	
Q1.2.15	Natural England, WLDC, NCC, BDC and LCC.	<p>HRA</p> <p>In its response to Relevant Representations [REP1-028], the Applicant provides further explanation on the reasons for the selection of a minimum 5m depth for the crossing of the River Trent. Are you satisfied with the Applicant's explanation? If not, what do you consider the Applicant needs to do to resolve these matters?</p>	<p>Following further engagement with the Canal and River Trust, the Applicant has updated Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev02)] and the Outline Design Principles Statement [EN010142/APP/7.4(Rev02)] at Deadline 3 to clarify that the requirement of 5m below the lowest surveyed point of the riverbed is to avoid the mobilisation of silt from the riverbed and the risk of scour exposing the cable, which will also avoid impacts on fish and the navigational safety of the River Trent.</p>
Q1.2.16	Applicant	<p>HRA</p> <p>a) The ExA notes that no Figure is supplied to show the Proposed Development in relation to the identified European sites. Table 7 of the Applicant's updated HRA [REP1-058] also appears to omit the additional impact pathways that are considered in response to NE's comments [RR-208] on Golden Plover. Please provide an updated HRA that addresses these omissions.</p> <p>b) Paragraph 4.2.2 of the Applicant's updated HRA has amended the distances used to screen potential sites into the assessment. Please confirm your reasons for these changes?</p> <p>In its relevant representation [RR-208], NE asked for clarification on the rationale for the use of a minimum 5m burial depth beneath the River Trent. Your response [REP1-028] states that the reasons for the depths of the crossings are set out in [AS-058] (Outlined Design Principles Document). This document states that trenchless crossings would be installed at 3m depth '... with the exception of the River Till and the River Trent where cables will be installed at a minimum of 5m below the lowest surveyed point of the riverbed to prevent disturbance to fish species' (ExA emphasis added). Can the Applicant: (with reference to People over Wind and Sweetman v Coillte Teoranta):</p> <p>c) confirm if the proposed 5m depth below the riverbed has been applied as mitigation for effects specifically on qualifying features of the Humber Estuary SAC</p>	<p>The Applicant has continued to engage with Natural England over the HRA and the version submitted at Deadline 1 [REP1-058] reflects amendments requested by Natural England in their relevant representation [RR-208]. The updates made have been agreed with Natural England as recorded within the Statement of Common Ground with Natural England [EN010142/APP/9.18(Rev01)].</p> <p>a) The Applicant has provided an updated HRA [EN010142/APP/6.2(Rev02)] at Deadline 3 which includes a figure showing the European sites referred to in the document.</p> <ul style="list-style-type: none"> In response to discussions with Natural England (and as set out in Natural England's relevant representation [RR-208] the Applicant has included justification in Paragraph 4.3.3 of the HRA [EN010142/APP/6.2(Rev02)] which sets out why there is no potential impact pathway for likely significant effects on Golden Plover associated with the Humber Estuary Ramsar site. As such, there is no potential impact pathway for inclusion in Table 7 and the only qualifying features of the Humber Estuary Ramsar site to be taken forward for screening for LSE are River Lamprey and Sea Lamprey. <p>b) The Applicant had amended the text in paragraph 4.2.2 of the HRA [EN010142/APP/6.2(Rev02)] at Deadline 1 to clarify that the typical maximum foraging distance (i.e., for the purposes of considering 'functionally linked land') for birds, such as geese, is 20km, with sites designated for bats extended to 30km.</p> <p>c) and d) The Applicant notes the wording in the Outline Design Principles Statement [EN010142/APP/7.4(Rev02)] suggests that the buried depth is in place to prevent disturbance to fish species. The Applicant has amended the wording in the Outline Design Principles Statement [EN010142/APP/7.4(Rev02)] to clarify that the primary driver for the buried depth of a minimum of 5m below the River Till and River Trent is to avoid the mobilisation of silt from the riverbed and the risk of scour exposing the cable, with a benefit of this depth being that it also effectively negates the potential for any impacts from EMF to fish species and also any detrimental impacts on navigational safety. The Applicant understands that the minimum 5m depth originated from discussions with the Environment Agency on the Gate Burton Energy Park [EN010131] but that it was a voluntary commitment made by the developer rather than a specific mitigation measure set for a specific impact. Subsequently, the same design parameter was adopted for the Cottam Solar Project [EN010133] and the West Burton Solar Project [EN010132] and has also been adopted by the Scheme.</p>

ExQ1	Questions to:	Question:	Applicants Response:
		<p>both alone and in-combination with other plans and projects; and</p> <p>d) if that is so, provide an updated assessment of LSE during operation from disturbance to the Humber Estuary SAC River lamprey and Sea lamprey qualifying features.</p> <p>The ExA notes the explanation provided in ES Chapter 17 [APP-048] on the detectability of EMF including a reference to guidance from National Grid in this regard. It also notes the feedback on this matter in the Environment Agency's RR ([RR- 093]. Does this evidence also have relevance to the conclusions of the potential for LSE on the River Lamprey and Sea lamprey features of the Humber Estuary Ramsar site?</p>	

3. Climate Change

Table 3-1: Climate Change

ExQ1	Questions to:	Question:	Applicants Response:
Q1.3.1	Applicant	<p>Data</p> <p>Is the data used to establish embodied carbon for various scheme components up to date? For example, ES Chapter 7 [APP-038] cites “<i>Ref 7-15 EPD International AB (2020). Environmental Performance Declaration (EPD) for Jolywood N-type Bifacial Double Glass Photovoltaic Modules</i>” and “<i>Ref 7-16 ICE, 2019. Embodied Carbon - The ICE Database, s.l.: s.n</i>”.</p>	<p>At the time of the assessment all emissions factors used were based on the most up to date available datasets (Ref 1-16, Ref 1-17). It is noted that the latest version of the ICE database is expected to be released in December 2024. However, this is not expected to significantly alter the findings of the assessment as the majority of emissions associated with the Scheme relate to the embodied carbon of components where EPD or similar sourced emissions factor was used (i.e. batteries and solar PV panels).</p> <p>AECOM (the authors of the GHG impact assessment) undertook a recent review of the latest solar panel EPDs, which found no significant difference in embodied carbon between the Jolywood EPD (Ref 1-16) and others published (Ref 1-18, Ref 1-19).</p>
Q1.3.2	Applicant	<p>Replacement</p> <p>ES Paragraph 7.3.24 [APP-038] states that it has been assumed that panels will be replaced just once over the lifetime of the development. Is this a worse-case scenario? Please provide evidence to support this assertion.</p>	<p>IEMA guidance on greenhouse gas emissions (Ref 1-20) recommends that a ‘reasonable worst case’ be defined for an assessment.</p> <p>The estimated lifespan of between 25-40 years for the solar PV modules is set out in Table 3-1 in Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev02)].</p> <p>In accordance with Requirement 20 of the draft DCO [EN010142/APP/3.1(Rev04)], the decommissioning of the Scheme must start no later than 60 years following the date of final commissioning.</p> <p>Considering the range of predicted lifespans in published solar panel EPDs (25-40 years), the middle of the range, 30 years, was selected as a representative figure for the lifespan. It is considered most likely the panels will only be replaced once over the 60 year operational phase that is being applied for within the draft DCO [EN010142/APP/3.1(Rev04)]. If the panels were to be replaced more frequently (i.e. a second time before decommissioning at the end of the 60-year operational period), this would result in panels being removed as part of decommissioning when they are only part way through their design life. This would not be an efficient use of panel technology and no reasonable undertaker would install panels with a design life that extends that far beyond the operational phase. Therefore, the embodied carbon to energy generation ratio presented in Chapter 7: Climate Change of the ES [APP-038] is considered to be a realistic worst case scenario that is consistent with IEMA guidance (Ref 1-20). It is a reasonable worst-case to assume that panels will be replaced no more than once in a 60 year design life. Additionally, it is likely that solar technology will improve in the future, potentially increasing the lifespan of PV modules.</p> <p>The Applicant would also note that a 30 year lifespan for solar panels has been assumed for the GHG impact assessments for similar solar schemes, such as the recently consented Gate Burton Energy Park [EN010131].</p>
Q1.3.3	Applicant	<p>Transport of components</p> <p>ES paragraph 7.3.12(b) [APP-038] states in full: “<i>Items procured from Europe are assumed to have a road transport distance of 1,770 km (based on half of the reasonable maximum distance equipment might be transported within Europe, plus the distance between Dover and the Scheme).</i>”</p>	<p>IEMA guidance on greenhouse gas emissions (Ref 1-20) recommends that a ‘reasonable worst case’ be defined for an assessment. Half of the maximum distance refers to an average distance for transportation of materials from Europe. The maximum distance was estimated as the distance from Calais (France) to the Eastern boundary of Europe (2,800 km), plus a 350 km allowance for transport within the UK. As European sourced components are likely to come from various parts of the continent, half of this distance was chosen to represent an average journey of European sourced components and materials. This is considered a reasonable worst-case as many components sourced from Europe are likely to travel a shorter distance.</p>

ExQ1	Questions to:	Question:	Applicants Response:
		Why has 'half the reasonable maximum' been chosen? Is this a worst-case scenario? What is a 'reasonable maximum' and how has it been calculated?	
Q1.3.4	Applicant	<p>Diesel ES paragraph 7.3.18 [APP-038] states in part: "Emissions from use of plant and machinery during construction have been calculated based on an assumption of a total of 602,555 litres of diesel used throughout the construction project. This is based on the usage of similar solar projects".</p> <p>Which similar projects are being referred to and can the Applicant provide evidence?</p>	<p>The emissions relating to construction activities have been estimated by the Applicant, based on experience and considering other, similar, consented schemes such as Gate Burton Energy Park [EN010131] and Sunnica Energy Farm [EN010106].</p> <p>For this assessment, the quantity of diesel required for the construction of the Sunnica Energy Farm (determined based on project team estimate and design information) was used to produce a ratio for litres of diesel required per MW of installed solar capacity. This ratio was then used to estimate the required diesel for Tillbridge, reflecting the increased generation capacity of the Scheme. This ratio equated to 700L of diesel per MW of installed capacity.</p>
Q1.3.5	Applicant	<p>Water ES paragraph 7.3.19 [APP-038] states in full: "Consumption of water is estimated at 12 litres/day/person for staff. A further usage of 3m³/MW_p of panels is also required. Emission factors for water supply are taken from the 2023 conversion factors for company reporting published by the UK Government (Ref 7-20). As a conservative estimate, it is assumed that all water supplied is removed for treatment via the wastewater network."</p> <p>Does this include water used to clean the panels? What wastewater network is being referred to?</p>	<p>Water to clean the panels throughout their lifecycle is estimated as 3m³/MW_p as stated in the Assumption and Limitations Section 7.3 of Chapter 7: Climate Change of the ES [APP-038]. This is included in the assessment.</p> <p>Wastewater from cleaning panels would not be contaminated and will be discharged into surface water drainage, with no additional water treatment required.</p> <p>All emissions factors relating to water supply and wastewater have been sourced from the annual Department of Energy Security and Net Zero (DESNZ) dataset (Ref 1-21). Due to the limited amount of water required and wastewater generated, emissions relating to water consumption are not anticipated to form a significant proportion of the Scheme's carbon impact.</p>
Q1.3.6	Applicant	<p>Baseline ES paragraph 7.3.26 [APP-038] states: "A without-project baseline for the Scheme assumes that lifetime electricity output would otherwise be generated by Combined Cycle Gas Turbines (CCGT), which have a typical operational carbon intensity of 0.354 kgCO₂e/kWh. It is assumed the energy expected to be generated by the Scheme over its lifetime (52.1 TWh) would instead be required to be supplied by CCGT in this baseline without-project scenario."</p> <p>Why has this assumption been made as opposed to a baseline where lifetime electricity output is generated by an offshore windfarm for example?</p>	<p>IEMA guidance states that a comparable baseline must be used as a reference point against which the impact of a new project can be assessed, which may be "GHG emissions arising from an alternative project design for a project of this type" (Ref 1-20).). Currently, marginal load-following generation capacity is generally provided by existing unabated gas-fired Combined Cycle Gas Turbine (CCGT) installations. The benefit of any renewable electricity scheme is to displace the use of fossil fuelled power sources. It is reasonable to assume that as additional renewable energy generation capacity becomes available, such as from developments like the Scheme, it will reduce demand for the marginal generator, i.e., directly displace the use of CCGT.</p> <p>This approach of assessing benefits is consistent with the position taken in paragraph 150 of the Supreme Court Judgement in the case of Finch, on behalf of the Weald Action Group (Appellant) v Surrey County Council and others (Respondents) (Ref 1-22). This case reiterated the need for the relevant planning authority to consider the beneficial indirect effects of a project on the climate, as well as adverse effects, as a material planning consideration: "Just as beneficial indirect effects of a project on climate - for example, the "green" energy that would be generated by a project to develop a wind farm or solar farm - are clearly a relevant matter for the planning authority to consider, so corresponding adverse effects are also a material planning consideration".</p> <p>For these reasons CCGT is seen as a reasonable baseline, whereas it is unlikely that solar would be displacing other low carbon energy sources considering the need for scaling up of grid electricity generation</p>

ExQ1	Questions to:	Question:	Applicants Response:
			and decarbonisation of the grid. Paragraphs 7.8.19 to 7.8.25 of Chapter 7: Climate Change of the ES [APP-038] provide further details on the consideration of a CCGT without-project baseline.
Q1.3.7	Applicant	<p>Replacements</p> <p>The rate of replacement outlined in ES paragraph 7.3.24 [APP-038] assumes a midpoint for the ranges provided. For example, BESS cells are said to have a life cycle of 5-15 years but a midpoint of 10 years has been used. How does using midpoints represent a worst-case scenario and what evidence is there that these midpoints are more likely than the lower end of the ranges provided.</p>	<p>IEMA guidance on greenhouse gas emissions recommends that a 'reasonable worst case' be defined for an assessment (Ref 1-20). The midpoint represents a 'reasonable worst case' as a representative value for a component's lifespan. It is a more conservative estimate than the maximum value and provides a realistic estimate of replacement rates across the Scheme. This selected lifespan also does not factor in improvements in technology which will likely occur during the Scheme's 60-year design life which may extend the design life of components beyond that considered in the assessment.</p> <p>In respect of BESS cells, a reasonable worst case of 10 years has been selected based on the information available at the time of the assessment. It was not considered reasonable to assume that a 5-year life cycle would happen across the 60 year assessment, as it is likely that BESS technology will develop further into the future. The assumption of 10 years is also more conservative than values found in literature for independent studies, with National Renewable Energy Lab assuming 15 years in their study of grid scale storage (Ref 1-23).</p>
Q1.3.8	Applicant	<p>BESS</p> <p>ES Paragraphs 7.8.27 to 7.8.30 [APP-038] address the carbon savings resulting from the use of the BESS. Paragraph 7.8.30 states in part: "...these additional savings from the use of the BESS are not considered in the overall GHG assessment below". Could the Applicant please confirm whether this statement applies to the BESS in all of its functions (including storage of electricity from the co-located solar) or just the additional 'independent' services?</p>	<p>All considered beneficial functions of the BESS are described in paragraphs 7.8.27 to 7.8.30 of Chapter 7: Climate Change of the ES [APP-038], though do not form part of the presented GHG impact figures for the Scheme. Any storage of energy or input into the UK grid is not considered in the overall assessment. This is in the interest of providing a reasonable worst-case scenario and due to the uncertainty around the operational procedures of the BESS.</p>
Q1.3.9	Applicant	<p>Baseline</p> <p>Paragraph 7.8.37 states: <i>"The Scheme has very low emissions relative to the sectoral carbon budget (Ref 7-30) totals, and while the Scheme will result in residual emissions post 2050, as with the UK carbon budgets, it will achieve substantial emissions reductions relative to the without-project baseline."</i></p> <p>Would there be any emissions reductions relative to a without-project baseline which assumed similar generation from an offshore wind, other renewable scheme or nuclear, as opposed to CCGT?</p>	<p>The energy output of the from the Scheme is expected to directly displace energy from gas-fired marginal generators (most commonly unabated CCGT within the UK), rather than energy from other low-carbon energy sources such as offshore wind or nuclear. While the UK continues to utilise CCGT generation, this will be the form of energy generation displaced, and as it is unlikely that the carbon intensity of energy from unabated CCGTs will vary over time, this is considered a reasonable comparison. Please refer to paragraphs 7.8.19 through 7.8.25 of Chapter 7: Climate Change of the ES [APP-038] and the Applicant's response to ExQ 1.3.6 for further details on the consideration of a CCGT without-project baseline.</p>
Q1.3.10	LCC	<p>Climate Change</p> <p>Could LCC please clarify how the assertions relating to Climate Change and GHG emissions in its WR [REP2-012] accord with the conclusion at Paragraph 7.17 of its LIR [REP1A-001] that <i>"The Council's position is therefore that,</i></p>	<p>No response required from the Applicant.</p>

ExQ1	Questions to:	Question:	Applicants Response:
		<i>adopting a 'whole life' approach to GHG emissions, there are no negative and neutral impacts and that significant positive impacts would accrue"?</i>	
Q1.3.11	LCC	Alleged Harm The Council's WR [REP2-012] states in part: <i>"The Councils view is arguably there is no reason why a list of connected projects could not be drawn up upon sensible parameters and the clustering of solar schemes in Lincolnshire would form a sensible list for such an assessment, particularly given this is the list of projects considered for other cumulative effects."</i> Could the Council please elaborate on this point and explain what it means when it suggests that a list of connected projects could be drawn up? Could the Council also please confirm whether it is alleging any harm in relation to Climate Change and if so, what harm and associated policy conflicts are there?	No response required from the Applicant.

4. Compulsory Acquisition, Temporary Possession and Other Land or Rights Considerations

Table 4-1: Compulsory Acquisition, Temporary Possession and Other Land or Rights Considerations

ExQ1	Questions to:	Question:	Applicants Response:
Q1.4.1	Applicant	<p>Compulsory Acquisition</p> <p>Can the Applicant explain why it is seeking powers of compulsory acquisition over land it is actively negotiating rights with the landowners for, and should mutual agreement be reached during the course of the examination would such CA rights still be necessary within the DCO?</p>	<p>The Applicant believes that, in the absence of compulsory acquisition (CA) powers, the Order land may not be assembled and there could be uncertainty with regard to the project's delivery. The Statement of Reasons [REP1-013] provides further information in that regard and further sets out the Applicant's position with regard to the need for the CA of land and rights.</p> <p>The Applicant has been seeking to acquire the relevant freehold interests, new rights and temporary use of land by private agreement with affected parties, in order to ensure implementation of the Scheme. However, it has not yet been possible to acquire all of these by agreement. Whilst seeking CA powers, the Applicant will continue to seek to acquire the land, the temporary use of land, the rights and other interests by agreement, as well as secure the removal of matters affecting the Order land that may impede the Scheme, wherever possible. This approach of seeking CA powers through the DCO and, in parallel, conducting negotiations to acquire land by agreement, accords with page 6 of the CA Guidance, and is the same approach that has been adopted by other recently consented solar DCOs.</p> <p>In summary, the Applicant seeks to retain CA rights over the land where agreement has been reached in order to guarantee that the land is available to deliver the Scheme.</p>
Q1.4.2	Applicant	<p>Cable Route</p> <p>Can the Applicant advise at what stage of the Examination they will have clarity as to the option chosen for the cable route and if it can be confirmed early on to allow focus within the examination to allow affected persons and land to be assessed.</p>	<p>The Applicant has defined the proposed works areas in the Works Plans [REP2-004]. The Applicant is intending to maintain optionality within the Cable Route Corridor of the Works Plans [REP2-004] throughout the Examination, as the confirmation of options to the cable route alignment is subject to detailed design (which will occur post consent, should the Scheme receive consent). It is common practice to allow limited flexibility inside the Order limits at this stage of the project lifecycle with further refinement undertaken at detailed design stage. Similar flexibility has also been allowed for within the Gate Burton Energy Park and Cottam Solar Project Orders (refer to Figure ExQ1.1.2c included within Appendix A of this document).</p>
Q1.4.3	Applicant Network Rail	<p>Railways</p> <p>Can the Applicant and Network Rail confirm their current position with regards to the agreement reached on the land that both parties seek an interest in and the relevance and context of the RR received from Network Rail. Ref: [RR-211]</p>	<p>The Applicant is currently working towards reaching three separate agreements with Network Rail:</p> <ul style="list-style-type: none"> • Heads of Terms for Option to Take Easements: The Applicant has passed the property and technical clearance processes required by Network Rail and is in the process of agreeing Head of Terms for two options for easement. The Applicant is considering the terms provided by Network Rail and will revert formally in due course. • Statement of Common Ground: The Applicant has had regard to the RR submitted by Network Rail on 1 August 2024 and is working towards agreeing a Statement of Common Ground to address the points raised. A first draft was shared with Network Rail and their legal representatives on 11 November 2024. Network Rail confirmed receipt on 12 November 2024 and a response is awaited. • Protective Provisions: Network Rail's standard protective provisions are included in the draft DCO [EN010142/APP/3.1(Rev04)], with agreement reached on amendments to the protective provisions that will be attached to a separate Framework Agreement. A draft Framework Agreement is currently being negotiated by the Parties. The contents of this Framework Agreement are substantively agreed, subject to a few outstanding matters to be finalised.

5. Cumulative and in-combination effects

Table 5-1: Cumulative and in-combination effects

ExQ1	Questions to:	Question:	Applicants Response:
Q1.5.1	Applicant	<p>Other projects</p> <p>WLDCs Written Representation [REP2-016] refers to the “Spherical Tokamak for Energy Production” project. Could the Applicant please explain whether this project was considered as part of the cumulative assessment? If it wasn't, please explain why?</p>	<p>The Applicant can confirm the “Spherical Tokamak for Energy Production” (or STEP as it is known) project was not considered within the cumulative assessment within Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]. The STEP project is a nuclear fusion energy generation project which is currently at early concept design stage (Ref 1-24, Ref 1-25).</p> <p>As detailed in paragraph 18.4.12, page 18-19 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], a long list of cumulative schemes was developed by reviewing relevant planning databases (at the time of writing) using the following criteria:</p> <ul style="list-style-type: none"> • DCO applications for NSIPs in England, contained in the Register of Applications on the National Infrastructure Planning website; • Local authority planning applications that represent ‘major developments’, the definitions and thresholds for which are set out in The Town and Country Planning (Development Management Procedure) (England) Order 2015 (Ref 1-26); • Any major development projects being progressed through other statutory procedures; • Allocations identified in the adopted and emerging development plans of the local planning authorities; and • Other relevant development plans and projects. <p>This criterion is derived from the Planning Inspectorate's Advice Note 17: Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Ref 1-27) and was also set out within the EIA Scoping Report (refer to Appendix 1-1 of the ES [APP-051]).</p> <p>The STEP project does not have a current DCO application or a planning application to any planning authority, nor is it being progressed through planning via any statutory instrument or development plan. No public consultation on the project has been launched to date. As the STEP project does not fulfil any of the above criteria, it was not included within the long list of cumulative schemes considered within the cumulative assessment. The cumulative developments long list, presented in Appendix 18-1 of the ES [APP-124], was consulted on with the local authorities, who did not request the assessment of this project at the time.</p> <p>Furthermore, there is not sufficient information available in the public domain at this stage to complete a robust cumulative assessment with this project. Any assessment would therefore be speculative, based on little or no information, negating the ability to come to an accurate conclusion on cumulative effects.</p>
Q1.5.2	Applicant Environment Agency LLFA IDB	<p>Pluvial Risk</p> <p>What are the cumulative impacts resulting from the change of the ground cover from agricultural fields to solar arrays for the totality of the solar farm developments in the region. What impact will this have on the local water table, time to peak response for watercourses and the general hydrological cycle of the area?</p>	<p>An outline drainage strategy for the DCO Application is included within Appendix 10-4: Outline Drainage Strategy of the ES [APP-098]. The drainage strategy will mimic the natural existing drainage regime within the Order limits and also restrict new impermeable areas to the greenfield runoff rate. SuDS features within the solar PV panel fields will incorporate edge swales which will intercept peak runoff and allow infiltration, reducing flood risk off-site. New impermeable areas will attenuate runoff at source and discharge at greenfield rates. Therefore, it is considered there would be no impact on the water table and the general hydrological cycle; although the peak runoff from the Order limits will be reduced through use of the proposed SuDS features. Based on the above, there will be no cumulative impact from this Scheme as a</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.5.3	Applicant	<p>Cumulative</p> <p>Can the Applicant confirm how the two different scenarios for cumulative effects, presented in ES paragraph 18.4.28, have been considered in all aspect assessments presented in ES Chapter 18 [APP-049]? Please provide an explanation where these scenarios have not been taken into account.</p>	<p>result of the proposed drainage strategy; i.e., it is not feasible for the Scheme to contribute to a cumulative effect when it itself has no effect on the water table and the general hydrological cycle.</p> <p>Furthermore, as set out within paragraph 18.11.7 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], it is assumed that all other developments, including other solar DCOs, will adopt an appropriate drainage design/strategy to manage and treat surface water runoff, as described in their applications. This ensures that there is no increase in flood risk, as would be required by planning policy and the Lead Local Flood Authority. It is therefore considered that the cumulative effects during operation would be neutral (not significant).</p> <hr/> <p>As set out within paragraph 18.4.28 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], the following two scenarios have been considered for the assessment of cumulative effects with Gate Burton Energy Park [EN010131], West Burton Energy Park [EN010132] and the Cottam Solar Project [EN010133]:</p> <ul style="list-style-type: none"> • Scenario 1 - Concurrent 24-36 month (2-3 year) programme across the projects; or • Scenario 2 - Sequential 5-year programme across the projects. <p>Scenario 1 was considered to present the worst-case scenario for the following topic assessments:</p> <ul style="list-style-type: none"> • Section 18.7 Air Quality; • Section 18.14 Noise and Vibration; • Section 18.15 Socioeconomics and Land Use; and • Section 18.17 Transport and Access. <p>For air quality, noise and vibration and transport and access, this represents the scenario where the peak cumulative traffic flows would occur. For socio-economics and land use, this represents the scenario where the peak demand on local accommodation would occur from construction employment.</p> <p>Section 18.13 Landscape and Visual Amenity considered worst-case effects from both Scenarios 1 and 2 within Tables 18-12 and 18-16 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)].</p> <p>The different scenarios were not considered to change the magnitude of cumulative impacts assessed within Section 18.9 Cultural Heritage, Section 18.10 Ecology and Nature Conservation, Section 18.11 Water Environment, Section 18.16 Soils and Agriculture and Section 18.18 Other Environmental Topics, and the assessment provided would capture the different durations of cumulative effects across the two scenarios.</p> <p>Sections 18.8 Climate Change explained that a cumulative assessment is not relevant to this topic area.</p> <p>Section 18.12 Human Health referred to the cumulative assessment conclusions drawn for air quality, climate change, landscape and visual amenity, noise and vibration, socio-economics and land use and transport and access assessments.</p>

6. Draft Development Consent Order (DCO)

Table 6-1: Draft Developments Consent Order (DCO)

ExQ1	Questions to:	Question:	Applicants Response:
Q1.6.1	Applicant	<p>Trees</p> <p>It is noted that the Applicant has advised of the need for a right to potentially fell trees subject to a tree preservation order which may have come into effect since the date of the application for this scheme. Can the Applicant advise on the issuing of any such orders to date and also if so, the justification for the new order placement and the likely impact of the proposed works on any trees so identified.</p>	<p>The Applicant can confirm that no tree preservation orders (TPOs) have been issued to date. The intention of Article 40 is to capture those TPOs which may be applied to trees within the Order limits over the lifetime of the Scheme. As the Scheme will be in operation for 60 years, there is the potential that existing trees could grow to develop values such that local residents or the local planning authority may seek to apply TPOs over them. While the Applicant would have the ability to make submissions on any applications for TPOs sought to be applied within the Order limits, the decision-making power lies with the local planning authority as to the grant of any such TPO under the Town and Country Planning Act 1990. In order to guarantee the ongoing ability for the Undertaker to manage vegetation on site such that it does not interfere with operation, this power is considered necessary to protect the Scheme against any such future TPOs.</p>
Schedule 2 - Requirements			
Q1.6.2	Applicant	<p>Requirement 19 does not include a clause ensuring maintenance over the lifetime of project, such as '(4)... and maintained throughout the operation of the relevant part of the authorised development to which the plan relates.'</p> <p>Why is the maintenance requirement not for the life of the development?</p>	<p>The Applicant confirms that the version of the draft DCO as presented at Deadline 1 [REP1-007], as well as the latest version of the draft DCO presented for Deadline 3 [EN010142/APP/3.1(Rev04)] includes wording which requires the maintenance of the skills, supply chain and employment plan (to which Requirement 19 applies) to be maintained throughout the operation of the parts of the authorised development to which the plan relates.</p> <p>Specifically, clause (4) of Requirement 19 already provides “(4) <i>The skills, supply chain and employment plan must be implemented as approved and maintained throughout the operation of the relevant parts of the authorised development to which the plan relates.</i>” This is the same language as used throughout the rest of the requirements to ensure maintenance through the life of the development, and adopts the wording used in the Gate Burton Energy Park Order 2024 and the Cottam Solar Project Order 2024.</p> <p>The Applicant therefore considers the maintenance requirement included for Requirement 19 within the draft DCO [EN010142/APP/3.1(Rev04)] will apply for the life of the development.</p>
Q1.6.3	Applicant	<p>Requirement 20 sets a date of decommissioning of 60 years. Can the Applicant explain how this length of development duration has been reached and an impact assessment of lessening or lengthening of the proposal? If it is envisaged that the infrastructure will be replaced, upgraded or repowered during the lifetime of the development, why has the longer design life be adopted, how will this coincide with the decommissioning timeline and what will be the triggers for decommissioning to take place?</p>	<p>Basis for length of development</p> <p>As noted in NPS EN-3 (Ref 1-2), the Secretary of State should consider whether applications for solar developments are time limited, and if so, that they have set appropriate outline plans for decommissioning. EN-3 (Ref 1-2) notes at 2.10.149 that while an upper limit of 40 years is typical, "<i>applicants may seek consent without a time period [ie - indefinite / permanent operation] or for differing time-periods for operation.</i>" This allows applicants to propose an operational time period they consider appropriate. EN-3 otherwise notes at 2.10.151 that the Secretary of State should ensure the assessment of the landscape and visual effects (including the setting of heritage assets and designated landscapes) considers the length of time the project will be in place. The Applicant can confirm the landscape and visual assessment within ES Chapter 12 Landscape and Visual Amenity [EN010142/APP/6.1(Rev01)] has assessed impacts across the full operational and decommissioning period for the Scheme.</p> <p>The Applicant considers the above policies provide the main policy direction for the consideration of the operational time period set for the Scheme. The focus should therefore be on whether the Applicant has sufficiently assessed likely significant impacts over the full time period applied for. The Applicant considers this assessment has been made for the Scheme. It otherwise has proposed a 60 year operational period, and considers this appropriate, given:</p>

ExQ1 **Questions to:** **Question:**

Applicants Response:

- The critical national priority for the provision of renewable energy, as expressed within NPS EN-1 (Ref 1-1). The Applicant considers there will remain demand for renewable energy generated from the site for the full operational period sought. Providing for this 60 year operational period maximises the benefits in the amount of renewable energy provided, as against the largely construction related likely significant impacts of the Scheme.
- A 60 year period also enables flexibility for the improvement in design life or nature of solar technology from that currently available. While existing solar panels indicate a design life of approximately 40 years before it may be necessary for panels to be replaced, panels produced by the time of construction may have increased operational periods, or the panels installed may still provide sufficient energy at the end of their expected design life to enable continued use.
- All other DCOs recently applied for (and in the case of Cottam Solar Project and Gate Burton Energy Park, made) in the Lincolnshire region have sought a 60 year operational period. The application is consistent with those schemes, and has assessed the cumulative impact of these DCOs operating together over this period.

Comparison of impacts for different operational periods

A separate impact and benefit assessment has not been undertaken for the Scheme to compare the impacts of a 60 year operational period to shorter or longer operational periods (eg 40 years or 80 years). The Applicant is aware this exercise was carried out for the Cottam and West Burton solar projects, as accessible at [EN010133/EX2/C8.2.7] and [EN010132/ DEC/WB8.2.3_A] respectively. This was prepared at the request of the Examining Authority on those projects, as the original ES submitted with both applications only assessed the impacts and benefits of a 40 year operational period, despite the draft DCOs providing for a 60 year operational period. The further separate impact assessment was therefore required to ensure the ES appropriately assessed all likely significant impacts of the two projects.

By comparison, the ES for Tillbridge Solar has assessed all of the likely significant impacts for a 60 year period. **Chapter 3 Scheme Description** of the ES [EN010142/APP/6.1(Rev02)] confirms this assessment period at paragraph 3.6.7, and this has been adopted throughout the technical assessments of the operational period. There is therefore no gap in the ES assessment for Tillbridge requiring clarification, as in the Cottam or West Burton projects. It is not considered there is any other policy requirement for such a comparison to be undertaken within the Energy NPSs. NPS EN-1 (Ref 1-1) confirms at 4.3.9 that it does not include "any general requirement to consider alternatives or to establish whether the proposed project represents the best option from a policy perspective". Neither NPS EN-1 nor EN-3 set out any requirement for comparative assessments of likely significant impacts for alternative operational lifetimes of a project to be considered.

It is noted, in reference to the West Burton and Cottam Solar Projects assessments (given their proximity and similarity to the Scheme) that for the large majority of assessed impacts there was no change assessed between a 40 and 60 year lifetime. This reflects the majority of likely significant effects being assessed to occur during the construction period (for example, vegetation removal or buried archaeological impacts that occur during construction do not worsen over the course of the project lifetime or result in greater impacts if the operational period is increased). Those impacts which required further assessment in the documents [EN010133/EX2/C8.2.7] and [EN010132/ DEC/WB8.2.3_A] largely related to further modelling to ensure that any climate-related increases in flood modelling had been properly accounted for. However, by extending the operational period the benefits of the projects did increase significantly, by providing for the benefits of renewable energy generation for a further 20 years.

ExQ1	Questions to:	Question:	Applicants Response:
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Replacement timeline and decommissioning triggers

The specific replacement timeline of solar PV or other site components is not known at this time, as it will ultimately depend on the condition and performance of components through the operational period of the Scheme. The indicative design life of components as set out at Table 3-1 of **Chapter 3 Scheme Description** of the ES [EN010142/APP/6.1(Rev02)] provides an estimation of when components may need to be replaced, but components may continue to perform at sufficient levels to meet commercial requirements past the expected design life, or require maintenance or replacement earlier. Any replacement will ultimately be a commercial decision by the operator at the time, and also take into account the remaining operational period left for the Scheme.

The application documents and **draft DCO [EN010142/APP/3.1(Rev04)]** however set clear parameters for both the replacement of components and the decommissioning period, including:

- The controls on maintenance powers and replacement rates and impacts captured within Article 5(1) of the **draft DCO [EN010142/APP/3.1(Rev04)]**, the ES and OEMP, as explained in full within the response provided at pages 10 and 11 of the **Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 [REP1-046]**
- The clear operational limit of 60 years from the date of final commissioning as set within Requirement 20 of the **draft DCO [EN010142/APP/3.1(Rev04)]**. Regardless of the operational status of project components, the undertaker will be triggered to commence decommissioning of the Scheme by this deadline.
- The additional definition added for the "date of decommissioning" to the **draft DCO [EN010142/APP/3.1(Rev04)]** at Deadline 1 per the request of West Lindsey District Council. This provides that decommissioning is triggered for those parts of the authorised development when they permanently cease to generate electricity. This would require the Undertaker to remove scheme components once they ceased operation - for example, if the commercial decision to not replace a component in the 50th year of operation was made, then the Applicant would need to decommission that part of the Scheme. This is explained further at pages 19 and 20 of the **Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 1 [REP1-046]**.

Schedule 3 – Legislation to be disapplied

Q1.6.4	Network Rail	What is Network Rail's view of the disapplication of the relevant railway legislation and potential impact on their continued operation and maintenance of the existing railway network?	No response required from the Applicant.
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Schedule 15 – Protective Provisions

Q1.6.5	All Statutory Undertakers	Can All Statutory Undertakers with Protective Provisions included within Schedule 15 of the Draft Development Consent Order advise if they are content with the provisions or challenge any parts included or missing, in particular providing detail where those items have been drawn out as outstanding and not yet subject to agreement within the relevant Statements of Common Ground?	<p>While the Applicant acknowledges this question is directed towards statutory undertakers, the Applicant provides the following response to assist the ExA.</p> <p>There are currently 10 sets of bespoke protective provisions in the draft DCO [EN010142/APP/3.1(Rev04)]. Of those 10, eight are agreed between the Applicant and the relevant statutory undertaker:</p> <ul style="list-style-type: none"> • Canal & River Trust – protective provisions were agreed in August 2023 between Canal & River Trust, the Applicant, Gate Burton Energy Park, Cottam Solar Project and West Burton Solar Project.
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ExQ1	Questions to:	Question:	Applicants Response:
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- **Lincolnshire Fire and Rescue** – the protective provisions included in the draft DCO were agreed between the Applicant and Lincolnshire Fire and Rescue prior to submission of the Application.
- **Cottam Solar Project, Gate Burton Energy Park and West Burton Solar Project** – the Applicant and the three other solar developers have agreed a set of reciprocal protective provisions, in accordance with their Cooperation Agreement, and are now fully agreed following minor amendments to the Gate Burton and Cottam provisions included as part of the Applicant's Deadline 1 submissions.
- **Cadent Gas** – the Applicant and Cadent Gas have reached agreement on protective provisions, with the agreed set of provisions included in the draft DCO submitted at Deadline 3.
- **Network Rail** – protective provisions are agreed between the Applicant and Network Rail. The protective provisions included in the draft DCO are Network Rail's standard set of protective provisions. Amendments sought by the Applicant and agreed by Network Rail will be provided for as part of a separate Framework Agreement that is being negotiated privately between the parties.
- **Anglian Water** – the Applicant can confirm that the protective provisions included in the draft DCO for the benefit of Anglian Water are agreed between the parties. The Applicant acknowledges that other aspects of Anglian Water's position on the Scheme remain unresolved, and these are the subject of ongoing discussions between the parties as reflected in the **Anglian Water SoCG [REP1-036]**. The Applicant and Anglian Water will be in a position to provide the ExA with an update on these elements, by way of an updated SoCG, at Deadline 4.

In terms of the protective provisions that are included in the **draft DCO [EN010142/APP/3.1(Rev04)]** but not yet agreed, the Applicant can provide the following update:

- **Environment Agency** – the Applicant has been advised by the Environment Agency that their review of their standard protective provisions is now anticipated to be complete by the end of December 2024. The EA have confirmed that they do not anticipate any fundamental disagreement regarding the protective provisions and the parties are confident agreement can be reached.
- **Northern Powergrid** – the protective provisions in the draft DCO represent the Applicant's preferred drafting at the time of submission of the Application, however discussions between the Applicant and Network Rail remain ongoing. These are progressing well, with the protective provisions substantively agreed with the exception of a few outstanding matters. The Applicant anticipates an agreed set of protective provisions will be able to be provided at Deadline 4.

The Applicant is engaged in discussions with other statutory undertakers regarding protective provisions where a draft set of provisions has not yet been included in the **draft DCO [EN010142/APP/3.1(Rev04)]**. These are Uniper, National Grid, EDF and Exolum. These provisions are substantively agreed, but there are a number of aspects that require further discussion before full agreement can be reached.

ExQ1 **Questions to:** **Question:**

Applicants Response:

There are also statutory undertakers who have confirmed they are comfortable with the standard protective provisions included in the **draft DCO [EN010142/APP/3.1(Rev04)]**, such that no bespoke provisions are required. These are Scunthorpe and Gainsborough Drainage Board and Upper Witham Drainage Board. The Applicant has provided Trent Valley Drainage Board with a copy of its standard protective provisions for drainage boards for review and comment and is awaiting a response.

7. Heritage

Table 7-1: Heritage

ExQ1	Questions to:	Question:	Applicants Response:
Q1.7.1	Applicant, LCC and Historic England	<p>Assets scoped out ES paragraph 8.9.7 [APP-039] states: “<i>The DBA identified assets which would not experience any impacts or effects as a result of the construction, operation, or decommissioning of the Scheme and were scoped out of assessment within this ES Chapter.</i>” Are LCC, NCC and/ or Historic England (HE) satisfied with the approach taken and the identified assets which have been scoped out?</p>	<p>The Applicant considers that the scoping of heritage assets in Appendix 8-2 Cultural Heritage Desk-based Assessment (DBA) of the ES [APP-059] is robust and reasonable, as it removes assets from the assessment that would experience no effect and focusses the assessment on assets that may experience an effect. The Relevant Representations from LCC [RR-165] note that they welcome the approach and methodology set out in the DBA (Appendix 8-2 of the ES [APP-059]), stating they “<i>Agree with much of the assessment for built heritage set out in the ES. This includes the decision to scope several farmsteads from the DBA to the ES.</i>” The Applicant has received no comments from NCC or Historic England on the scoping of heritage assets to date. The Applicant will review LCC, NCC and Historic England’s responses to this question once available.</p>
Q1.7.2	Applicant	<p>Methodology As noted in LCCs RR [RR-165], the assessment in the ES - in relation to some non-designated historic farmsteads [ES paragraphs 8.9.125 - 8.9.248] - concludes that the magnitude of impact is 'low' or 'very low'. Taking the assessment of Harpswell Low Farm as an example, ES Paragraph 8.9.134 [APP-039] concludes in part that “<i>the asset’s setting would be altered but this would have minimal effect on the ability to understand the asset’s heritage interests, with existing field boundaries and field patterns retained</i>”. This appears to be the only rationalisation of the conclusion on magnitude of impact. On that basis, is it the Applicant’s position that the 'ability to understand the assets’ heritage interests' is the key or only factor in determining the magnitude of impact? If not, then why has a more detailed explanation not been provided for concluding a 'low' magnitude of impact. What role does the change in the function of the surrounding land (away from agriculture) have on the magnitude of impact?</p>	<p>The Applicant provided detailed responses to the comments received in LCC’s Relevant Representation [RR-165] on non-designated historic farmsteads at pages 89 to 99 of the Applicant’s Responses to Relevant Representations [REP1-028]. Chapter 8: Cultural Heritage of the ES [APP-039], paragraphs 8.9.128 to 8.9.135 set out the full assessment in relation to Harpswell Low Farm. The magnitude of impact has been assessed as ‘low’ based on the Impact Assessment Methodology set out earlier in the chapter, with the Magnitude of Impact methodology set out in paragraphs 8.4.26 to 8.4.27 including Table 8-2 which sets out the criteria for determining the magnitude of impact. The criteria for a low magnitude of impact has been applied such that there is a ‘...<i>slight change to its setting affecting the ability to understand and appreciate the asset</i>’.</p> <p>The assessment criteria for assigning the value of heritage assets, magnitude of impact and significance of effect in EIA terms was agreed with PINS as part of the EIA Scoping process (refer to Appendix 1-1: EIA Scoping Report [APP-051] and Appendix 1-2: EIA Scoping Opinion [APP-052]). Using the example of Harpswell Low Farm, an assessment of its value is given in the preceding paragraphs to 8.9.134 which includes consideration of, <i>inter alia</i>, its loss of historic fabric, the presence of large modern sheds which diminish its immediate setting, as well as mature tree planting around the farmstead which largely screen views to and from the asset. The impact from the Scheme upon the non-designated farmstead was then identified, constituting a change to the asset’s setting, which takes account of the change in the function of the surrounding land, set out in paragraph 8.9.131 with reference to Field 55¹ (BZ6 in Figure 3-1 [AS-055]) as a biodiversity enhancement zone, with solar infrastructure to the west in Field 50 (Fields 44/45 in Figure 3-1 [AS-055]), other infrastructure proposed to the south, and the use of the small lane to the west of the farm as an access track for site use.</p> <p>The level of impact then takes into account mitigation which has been embedded in the design, which is considered against the factors affecting the asset’s value to then determine the magnitude of that impact. This is summarised in the concluding paragraph of 8.9.134 which states that ‘<i>The asset’s setting would be altered but this would have minimal effect on the ability to understand the asset’s</i></p>

¹ Field numbers used within **Chapter 8: Cultural Heritage** of the ES [APP-039] are those applied by Magnitude Surveys and Wessex Archaeology for the Scheme fieldwork reporting, based on landownership. These have been applied in **Chapter 8: Cultural Heritage** of the ES [APP-039] and in the heritage appendices of the ES [APP-059 to APP-079] to ensure consistency for cross-referencing with the fieldwork reports, as identified in **Figure 8-7: Heritage Field Numbers** of the ES [APP-163]. These field numbers are different to those included on the Indicative Principal Site Layout Plan (**Figure 3-1** of the ES [AS-055]). A table comparing the heritage and Indicative Principal Site Layout Plan field numbers is presented within **Appendix 8-8** of the ES [APP-080].

ExQ1	Questions to:	Question:	Applicants Response:
			<p><i>heritage interests, with existing field boundaries and field patterns retained, with the presence of large modern farm buildings having already partially diminished the setting of the asset' such that the magnitude of impact is determined in this instance as low.</i></p> <p>In addition, the assessment to determine the magnitude of impact also takes into consideration relevant legislation, policy and guidance as stated in paragraph 8.4.14 of Chapter 8: Cultural Heritage of the ES [APP-039] referring to Appendix 8-1 of the ES [APP-058] including:</p> <ul style="list-style-type: none"> • A proportionate level of detail to the importance of the asset (a non-designated heritage asset) which was sufficient to understand the potential impact upon the value (significance) of the asset – NPS EN-1, paragraph 5.9.10 (Ref 1-1); • Applying a staged approach to assessing the setting and the effects of the proposed development on the ability to appreciate its significance, set out in Historic England's Good Practice Advice in Planning 3 (GPA Note 3) on the Setting of Heritage Assets (Ref 1-28) ; • Historic England's Advice Note 15, 'Commercial Renewable Energy Development and the Historic Environment' (Ref 1-29), which suggests that visual impacts on the settings of heritage assets from solar parks can be avoided or reduced through sensitive design and layout and mitigation measures including tree and hedge planting to screen the development. <p>The same assessment methodology was also adopted for the consented Gate Burton Energy Park [EN010131].</p>
Q1.7.3	Applicant, WLDC, LCC	<p>Corringham Windmill Setting The ES [APP-039] considers the effect of the Proposed Development on Corringham Windmill (Grade II listed building) at paragraphs 8.9.82 to 8.9.89. In considering the setting of the building, ES Paragraph 8.9.85 states in part: <i>"Its setting, which has been diminished by the loss of the mill buildings which contributed to its value and understanding, comprises the field in which it is located alongside the road and relationship to Corringham".</i> Bearing in mind the historic function of the building, is the Applicant, WLDC and LCC confident that its setting is confined to <i>"the field in which it is located alongside the road and relationship to Corringham"</i> as asserted in the ES?</p>	<p>The Chapter 8: Cultural Heritage of the ES [APP-039] is cross-referenced with Appendix 8-2: Cultural Heritage Desk-based Assessment (DBA) of the ES [APP-059], stating in paragraph 8.9.3 that the assessment draws upon the baseline set out in the DBA. The setting of Corringham Windmill is described further in the DBA (paragraph 5.4.214), defined by its location and its historical association as a wayfinder to the village of Corringham to the west, within the rural landscape, which contributes to its significance.</p> <p>Chapter 8: Cultural Heritage of the ES [APP-039] discusses Corringham Windmill further, acknowledging its historic relationship with other windmills in the area as well as its recognition as a local landmark in the landscape. The setting of the structure therefore relates to the field in which it is located with nearby field boundaries alongside the road, along with its relationship and proximity to Corringham as a wayfinder. Its wider agricultural setting, as noted in paragraph 8.9.88, has been taken into account in assessing the impact of the Scheme upon it.</p> <p>The assessment therefore does not limit the asset's setting to the confines of the field in which it is located but, rather, the field constitutes its <i>immediate</i> setting. Hence the consideration of views, with VP20 looking towards the Scheme taken east of the windmill, are included in the assessment in respect of the windmill's wider setting across the landscape.</p>
Q1.7.4	Applicant	<p>Cumulative Effects Could the Applicant please identify and provide evidence to confirm which, if any, of the heritage assets identified within the ES [APP-039] or DBA [APP-059] include settings which are affected by the Proposed Development and any other identified plan or project?</p>	<p>Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], paragraph 18.9.6 identifies groups of assets in locations where the settings of designated assets may potentially be affected by the cumulative schemes. This takes into account the cumulative visual effects identified in Section 18.13 of this chapter in relation to the identified locations, including VP21, VP8 and the theoretical combined visibility depicted in the ZTVs (Figures 18-2 to 18-4 of the ES [APP-204 to APP-206]).</p>

ExQ1 Questions to: Question: Applicants Response:

The locations identified where settings of heritage assets may experience cumulative impacts are set out in the following Table:

Heritage assets subject to potential cumulative effects	Part of the Scheme which may impact the setting of the heritage assets	Relevant cumulative schemes which may contribute to a cumulative impact
Listed buildings within the settlement of Corringham	Principal Site	Cottam Solar Project
Listed buildings within the settlement of Fillingham	Principal Site	Cottam Solar Project
Listed buildings within Willingham by Stow	Cable Route Corridor	Cottam Solar Project
Designated assets in relation to Stow Park	Cable Route Corridor	Cottam Solar Project West Burton Solar Project
Designated assets in Cottam	Cable Route Corridor	Cottam Solar Project Gate Burton Energy Park ID 50. Application Reference: 19/00167/SCR & 21/01661/DEM. Demolition of Cottam Power Station

In relation to the listed buildings within the settlement of Corringham, which includes the Grade I listed Church of St Lawrence [NHLE 1064162] and four Grade II buildings, the Scheme does not contribute to their setting or value having no impact on how they are experienced or understood. The cumulative impacts upon these assets took account of Viewpoint 21 identified in the Landscape and Visual Amenity assessment for cumulative visual effects of theoretical glimpses in views which were minor adverse, as set out within Section 18.13 of **Chapter 18: Cumulative Effects and Interactions** of the ES [EN010142/APP/6.1(Rev01)]. The combined impacts with the Cottam Solar Project would not introduce a cumulative effect on assets where no impact has been identified from the Scheme.

In relation to the listed buildings within the settlement of Fillingham, these include those within the conservation area concentrated on the historic core of the village and the Grade II* listed Church of St Andrew [NHLE 1359847], including five Grade II listed buildings. Another Grade II listed building is located just outside the conservation area but is included within the listed buildings for the settlement of Fillingham. The Scheme does not contribute to the setting of the conservation area or value having no impact on how it, or the listed assets situated within it, are experienced or understood. The setting of the Grade I listed Fillingham Castle [NHLE 1166045] country house includes the Grade II Registered Park and Garden [NHLE 1000977] in which it is located with designed landscape views overlooking the village which contributes to its value. The landscape within the Scheme makes no contribution to the setting or value of Fillingham Castle or the heritage assets associated with it in the park, with no impact on how they are experienced or understood. The cumulative impacts upon these assets took account of Viewpoint 8 identified in the Landscape and Visual Amenity assessment for cumulative

ExQ1	Questions to:	Question:	Applicants Response:
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effects which were not significant, as set out within Section 18.13 of **Chapter 18: Cumulative Effects and Interactions** of the ES [EN010142/APP/6.1(Rev01)]. The combined impacts with the Cottam Solar Project would not introduce a cumulative effect on assets where no impact upon their heritage value has been identified from the Scheme.

For impacts which may be experienced cumulatively in relation to the Cable Route Corridor, the settings of assets scoped for consideration include those designated assets at Willingham by Stow, Stow Park and Cottam (including listed buildings and scheduled monuments) and the non-designated Cottam power station. However, as the Cable Route Corridor is proposed to be shared with the three other solar schemes (where there are areas of overlap between their respective order limits), with the cables being laid anywhere within the same corridor, the assessment will remain the same based on a worst-case scenario as that assessed for the Scheme alone which identified no significant effects upon these assets. Therefore, there are no additional considerations in relation to shared settings of heritage assets which would be affected from cumulative effects due to the other cumulative schemes that would raise the level of impact from that already identified.

The assessment of cumulative effects for the Scheme has taken into account assessments by the other three solar schemes (Cottam Solar Project, West Burton Solar Project and Gate Burton Energy Park) to identify which assets were considered by these projects to include settings with reference to their Environmental Statements, further addenda and **Appendix E: Review of Cumulative Effects of the Joint Report on Interrelationships between NSIPs Part 3 of 3 [APP-217]**.

For the Cottam Solar Project, the cumulative assessment within Chapter 13: Cultural Heritage of Cottam Solar Project's Environmental Statement, section 13.10.9, asserted that there could only be combined cumulative effects during operation where views from the Lincoln Cliff contribute to the significance (value) of assets for Roman villa west of Scampton Cliff Farm (NHLE 1005041), Fillingham Castle (NHLE 1166045/NHLE 1000977), Glentworth Hall (NHLE 1063348) and Former stables at Glentworth Hall (NHLE 1166094). The Roman villa is not an asset that falls within the study areas for consideration with the Tillbridge Scheme and so there can be no cumulative impact on this asset as none have been identified from the Scheme. The other heritage assets are included for assessment in relation to the Scheme and these are discussed further in the response to Q.1.7.7 on cumulative effects on built heritage during operation. Following review of further published information in September 2023, the Cottam Solar Project submitted further addenda and updates to **Appendix E: Review of Cumulative Effects of the Joint Report on Interrelationships between NSIPs Part 3 of 3 [APP-217]**. These concluded that no significant cumulative impacts are identified for any heritage assets.

The Gate Burton Energy Park Environmental Statement Chapter 7: Cultural Heritage was issued in January 2023 which did not identify the Tillbridge Scheme at that time for consideration for potential cumulative effects. Further addenda submitted in October 2023, Technical Note: Additional Cumulative Schemes, makes no reference to the Tillbridge Scheme. In a September 2023 update, the setting of assets takes into account cumulative impacts for Cottam and West Burton only in **Appendix E: Review of Cumulative Effects of the Joint Report on Interrelationships between NSIPs Part 3 of 3 [APP-217]**.

ExQ1	Questions to:	Question:	Applicants Response:
Q1.7.5	Applicant	<p>Historic Landscape Character ES Paragraph 8.9.444 [APP-039] states in full: <i>“Construction of the Scheme within the Principal Site would result in the longterm change of land-use from intensive agriculture to solar park renewable energy generation. Despite this, the Scheme preserves the pattern, layout and key boundaries and features of the historic landscape, enabling the grain of the two historic landscape character zones to retain their coherence, time depth and legibility. This is assessed as a low magnitude of impact on historic landscape character zones of medium value, resulting in a long-term minor adverse magnitude of impact, which is not significant.”</i> Could the Applicant please expand or provide further evidence for this conclusion? In reaching this conclusion what comparative value has been assigned to the contribution of the existing fields within the principal site (and their associated agricultural use) towards the historic landscape character and how will the Proposed Development affect this? In addition, what effect would proposed landscaping (screening) measures have on the historic landscape?</p>	<p>The West Burton Solar Project Environmental Statement Chapter 13: Cultural Heritage assessment identified only the Roman villa west of Scampton Cliff Farm (NHLE 1005041) from the Lincoln Cliff during operation as having the potential to experience cumulative effects. The Roman villa is not an asset that falls within the study areas for consideration with the Tillbridge Scheme and so there can be no cumulative impact on this asset as none have been identified from the Scheme. Following review of further published information in December 2023, the West Burton Solar Project submitted further updates to Appendix E: Review of Cumulative Effects of the Joint Report on Interrelationships between Nationally Significant Infrastructure Projects Part 3 of 3 [APP-217]. These concluded that cumulative impacts to the Roman Villa west of Scampton (NHLE 1005041) have been identified between the Cottam and West Burton Schemes only, with any additional cumulative impacts with Gate Burton and the Scheme likely to be negligible.</p> <p>The Applicant has also referred to the Gate Burton Final Decision Letter which states that the Examining Authority was satisfied that, both individually and cumulatively, the harms identified would be less than substantial and the Secretary of State (SoS) agreed with this conclusion. the Cottam Final Decision Letter confirms that the Examining Authority were satisfied with the assessment that no significant cumulative effects were identified for heritage assets and the SoS agreed with this conclusion.</p> <p>The Applicant refers the Examining Authority to the Applicant's response to Question 1.7.8 where there are overlaps in respect of the historic landscape character with the response to that question.</p> <p>Historic landscape characterisation seeks to identify evidence for past land use and development within the modern landscape, with areas that share common traits grouped together into character areas or zones.</p> <p>As described in Appendix 8-2 Cultural Heritage Desk-based Assessment (DBA) of the ES [APP-059] the Lincolnshire historic landscape characterisation defines two broad historic landscape character zones within which the Principal Site is located, HCLZ NCL3: The Northern Cliff (The Cliff Edge Airfields) extending along the scarp slope of the Lincoln Cliff and encompassing the villages of Harpswell and Glentworth on the eastern edge of the Scheme, and HLCZ TVL:1 The Trent Valley (The Northern Cliff Foothills) which extend westwards across the majority of the Principal Site toward the village of Springthorpe and Heapham. The assessment was undertaken at this broad level as it captures the key historic characteristics and patterns across the large area of the Principal Site.</p> <p>The historic landscape character of the Principal Site is influenced by the natural topography of the area with the north-south line of the Lincoln Cliff in the east and flat, open landscape extending west to the River Trent. This laid the foundation for the establishment of the early medieval and medieval settlement pattern and parishes, providing the strong east-west grain to the landscape visible in the main routeways, e.g. Common Lane and Kexby Road, and major boundaries such as the long linear parish boundaries of Harpswell and Glentworth (identified as historic hedgerows H4 and H13 at Section 4.7 of the Appendix 8-2 Cultural Heritage DBA of the ES [APP-059]), between which the medieval open fields would have been arranged.</p> <p>A key element that assists the understanding of the development of the historic landscape character of the Principal Site includes the pattern of small nucleated rural villages situated along the spring line at the base of the Lincoln Cliff, which survive in the modern landscape in the east and in a north-south</p>

ExQ1	Questions to:	Question:	Applicants Response:
			<p>line to the west of the Principal Site. Other isolated remnant features that survive include extant ridge and furrow in two fields, a small number of boundaries with evidence for medieval strip fields and a boundary, which may represent a remnant of the park pale for the former deer park associated with Glentworth Hall. The strong regular and ordered pattern of medium and large rectilinear fields which result from the 18th and 19th century enclosure dominate the landscape, with differences in the enclosure of parishes of Harpswell and Glentworth evident within the eastern and central parts of the Scheme, and Springthorpe and Heapham, to the west, which can be discerned from the size and layout of the existing fields.</p> <p>The dispersed pattern of mostly 19th century farmsteads around the Scheme are representative examples of local vernacular traditional brick buildings which contribute to the post enclosure landscape character. These are principally located along the southern side of the A631 Harpswell Lane, on the northern edge of the Principal Site, along Common Lane through the centre of the Principal Site and Kexby Lane in the south. However, a number of these farms have lost more than 50% of their historic fabric and the farmsteads have had their immediate settings eroded with the later development of modern large barns and sheds alongside them. These modern agricultural buildings, along with mature vegetation, limits views across the surrounding landscape as well as towards farmsteads when moving through the landscape other than those which directly face onto the lanes. The farmsteads which happen to be located close to the Scheme have limited group value with contrasting styles, plan types, loss of fabric and having no association collectively with the same historic manorial estate, parish or architect. It is by virtue of their historic function as working farms of a similar period dispersed across fields that contributes to the appreciation of the spatial patterns and local distinctiveness in the historic landscape.</p> <p>Other scattered elements of the post-medieval landscape that survive include small areas of woodland, coverts and shelter belts, which are visible in views cross the landscape between enclosure fields and on the horizon. Another dominant element is the presence of larger fields, formed by the modern amalgamation of smaller enclosure fields and the result of boundary loss promoted by mechanised farming and 20th century agricultural policy.</p> <p>The Scheme will not remove or alter any of these elements of the historic landscape, preserving evidence for how it has been reorganised through time. The predominant character of the post-medieval enclosure and modern landscape and those, more isolated remnants of the earlier, medieval landscape, will survive with blocks of photovoltaic cells and associated infrastructure located within, and respecting, the regular pattern of medium and large sized rectilinear fields, rather than cutting across them. There will be no significant removal of the straight hawthorn hedgerows or open ditches which bound the existing fields and form a quintessential part of the historic landscape and no changes to their layouts. Between the fields of photovoltaic panels, the linear field boundaries and scattered areas of woodland and 19th and 20th century coverts and shelter belts will still be visible and legible within the flat and open landscape as they are today.</p> <p>Retention of the existing fields, while not in their current agricultural use, within the layout of the Scheme will maintain the strongly regular and ordered character of the historic landscape within the Principal Site.</p> <p>The evidence for the historic patterns of land use and its development through time are often expressed as the time-depth of a historic landscape. Within the Principal Site the survival of the key elements and patterns of the historic landscape will be retained within the Scheme and will still be able</p>

ExQ1	Questions to:	Question:	Applicants Response:
			<p>to be understood and experienced during its lifespan, preserving the time depth of the historic landscape character, which in time could be returned to full-time agricultural use. This retention of the historic patterns and division of the landscape within the Scheme design formed an important consideration when designing the Scheme and assessing the impact of the Scheme on the historic landscape character of the Principal Site.</p> <p>The historic landscape character was assessed as being of medium value within the Chapter 8: Cultural Heritage of the ES [APP-039]. This assessment was based on the coherent survival of the key historic elements of the existing fields which characterise the predominantly post-medieval enclosure with evidence for modern boundary loss within the Principal Site. Post-medieval enclosure with modern boundary is a common historic landscape character within this part of Lincolnshire, reflected in the broad historic landscape character zones within which the Principal Site is located. In assessing the value of the historic landscape character, it was the strong rectilinear and straight boundaries of the medium and large fields and the coherent grain of the enclosure landscape, which provide evidence for the historic agricultural use of the land that were identified as the defining character of the historic landscape, rather than the agricultural use of the land itself.</p> <p>As noted above the Scheme will sit within the pattern and grain of the modern fields preserving the size, rectilinear shape and boundaries of the existing fields. Paragraph 15.8.21 of Chapter 15: Soils and Agriculture of the ES [APP-046] also states that during operation, grass below and between the solar panels will need to be managed. This management can include sheep grazing, where appropriate. As such, the land used for the solar panels can (in part) remain in agricultural use, for grazing.</p> <p>Importantly construction and operation of the Scheme will not change the historic pattern of enclosure visible in the existing fields and linear boundaries between them will not change. The historic landscape character will remain legible to be appreciated and restored back to agricultural use on decommissioning of the Scheme, resulting in the minor adverse magnitude of effect assessed in Chapter 8: Cultural Heritage of the ES [APP-039].</p> <p>The proposed landscaping (screening) measures, secured through the Framework LEMP [EN010142/APP/7.17(Rev03)], have been selected to be in keeping with the layout and vegetation mix of the existing historic landscape and is predominantly laid out along existing field boundaries. This planting will maintain and reinforce the characteristic historic patterns and divisions and the sense of enclosure within the historic landscape. The use of native species, including hawthorn for hedges and screening belts, is also in keeping with existing vegetation and field boundaries. Hedgerow planting alongside Common Lane is also in keeping with the existing hawthorn hedges, which line large sections of this road, and in addition to screening views of photovoltaic panels, will help retain the rural character of areas through the Principal Site.</p> <p>The proposed shelter belts and several small coverts, secured through the Framework LEMP [EN010142/APP/7.17(Rev03)], are in keeping with and reflect the 19th and 20th century development of the historic landscape. Overall, the proposed screening is in keeping with and does not detract from the historic landscape character and rural appearance of the Principal Site.</p>
Q1.7.6	Applicant	'Less than substantial harm'	The Heritage Harm Statement in Appendix C of the Planning Statement [EN010142/APP/7.2(Rev02)] sets out the rationale to assigning harm to the heritage assets, applying the same tests set out in the National Planning Policy Framework (NPPF). The Planning Practice

ExQ1	Questions to:	Question:	Applicants Response:
		<p>Planning Statement Appendix C Table 1 [AS-029] identifies the level of harm which would be caused to Heritage Assets as a result of the Proposed Development (i.e. 'less than substantial' in some cases). Could the Applicant please direct the ExA to the reasoning/ justification for assigning 'less than substantial harm' - as opposed to a greater quantum of harm - to these assets?</p>	<p>Guidance (2019) clarifies the tests further in paragraph 018 including '<i>Where potential harm to designated heritage assets is identified, it needs to be categorised as either less than substantial harm or substantial harm (which includes total loss) in order to identify which policies in the NPPF (paragraphs 200-202) apply</i>'. Paragraph 018 emphasises that substantial harm is a 'high test' which needs to consider if the impact seriously affects a key element of an asset's interest, stating it is '<i>the degree of harm to the asset's significance rather than the scale of the development that is to be assessed</i>'.</p> <p>Paragraph 206 of the NPPF clarifies that substantial harm to the significance of a designated heritage asset should be exceptional for Grade II listed heritage assets and wholly exceptional for designated assets of the highest value. For non-designated heritage assets, paragraph 209 of the NPPF states that a balanced judgment is required having regard to the scale of harm and the significance of the asset.</p> <p>The Heritage Harm Statement sets out (in paragraphs 1.1.4 and 2.2.5) the assessment of harm that the Scheme may have upon designated assets and those assets considered to be demonstrably of national significance, as required under the NPS EN-1. Paragraph 2.1.3 of the Heritage Harm Statement states that '<i>For the majority of assets, the effect presented in the ES has been assessed as being not significant (negligible to minor adverse effects) due to the scale of the impact. As such, it is concluded that the harm caused to these assets falls within the less than substantial category and at the lower level of the spectrum, or that no harm is caused</i>'.</p> <p>The level of harm assesses the impact taking into account embedded mitigation but excludes mitigation which does not reduce the harm. No designated assets have been identified as experiencing a significant adverse effect in Chapter 8: Cultural Heritage of the ES [APP-039], therefore, any harm caused by the proposals is considered to be less than substantial.</p>
Q1.7.7	Applicant	<p>Cumulative Effects ES Paragraph 18.9.11 [APP-049] seeks to address the cumulative effects on built heritage during operation. It states in full: <i>"In terms of built heritage, operational impacts would be in relation to lighting, glint or glare, and noise and vibration. Review of the cumulative schemes suggests it is possible that cumulative effects during operation may arise due to the increased number of solar schemes, but cumulative impacts would not exceed those already assessed as not significant. While non-significant effects may be caused on an individual basis through changes to the setting of assets, the minor level of these effects and the wide geographical spread of the schemes means that these will not cumulatively increase the effects to such a level as to make them significant. As such, no significant cumulative effects on built heritage are considered likely during the operation of the Scheme."</i> This appears to be a very limited assessment and no further qualitative elaboration for the conclusions reached is provided. In particular, the rationale that "<i>the minor level of these effects</i></p>	<p>A cumulative assessment upon the settings of heritage assets was provided in Section 18.9 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]. This takes into account the cumulative visual effects identified in Section 18.13 of this chapter in relation to the identified locations, including VP21, VP8 and the theoretical combined visibility depicted in the ZTVs (Figures 18-2 to 18-4 of the ES [APP-204 to APP-206]). Further evidence for the assessment has been provided by the Applicant in response to Q.1.7.4</p> <p>In Chapter 8: Cultural Heritage of the ES [APP-039] the long-term operational impacts of the Scheme were assessed in paragraphs 8.9.454 to 8.9.459. These conclude that:</p> <ul style="list-style-type: none"> • Permanent security lights with motion detectors will be used for security purposes around the electrical infrastructure, emergency access points to facilities within the Scheme and potentially at other pieces of critical infrastructure. No areas are proposed to be permanently lit. No impacts to heritage assets are therefore identified from lighting during the operational phase of the Scheme. • In respect of noise and vibration, the nearest non-residential heritage asset to the Scheme which are particularly sensitive to noise due to the tranquil setting is the scheduled monument Harpswell Hall [NHLE 1019068] and the Grade I listed Church of St Chad [NHLE 1309029], assessed in the noise chapter as NR2 concluding with non-significant effects from permanent

ExQ1	Questions to:	Question:	Applicants Response:
		<p><i>and the wide geographical spread of the schemes means that these will not cumulatively increase the effects to such a level as to make them significant</i>” requires a much more detailed explanation based on evidence. For instance, it does not appear that any detailed assessment has been provided of the cumulative effect of the project and other developments on the settings (which may include surrounding agricultural land) of heritage assets.</p> <p>The same logic applies to the Applicant’s response on the cumulative impacts on historic farmsteads contained in the Applicant’s Response to Relevant Representations (PDF Page 93) [REP1-028]. Could the Applicant please provide a response?</p>	<p>noise emissions from the Scheme infrastructure. Therefore, no long-term setting impacts from noise intrusion is predicted on these heritage assets.</p> <ul style="list-style-type: none">• Glint and glare from solar panels during the operation of the Scheme would not be incurred as assessed in Chapter 17: Other Environmental Topics of the ES [APP-048] and in Appendix 17-2 of the ES [APP-120]. No impacts to heritage assets are therefore identified from Scheme related glint and glare during the operational phase. <p>The assessment of cumulative impacts on built heritage during operation of the Scheme was based on proportionality, due to the nature of the anticipated impacts during operation and the geographic spread of the developments from the assets which takes account of the distance between the Scheme and Cottam Solar Project. The combined impacts on the settings of heritage assets are identified in the response to Q.1.7.4 and for cumulative operational impacts, these are assets within the settlements of Corringham and Fillingham where the Cottam Solar Project may contribute to cumulative impacts. The other solar schemes, specifically Gate Burton Energy Park and West Burton Solar Project, are too far geographically from the Scheme to incur cumulative operational impacts that would result in any effects to heritage assets taking account of the combined ZTVs (Figure 18-2 [APP-204] and Figure 18-4 [APP-206] of the ES). In respect of the Cottam Solar Project, the cumulative impacts from lighting, glint or glare and noise and vibration are not anticipated to raise the level of impact above that already identified and would not be significant.</p> <p>The conclusion as quoted in paragraph 18.9.11 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] acknowledges that the other developments may contribute to cumulative impacts on the settings of heritage assets, but there would be no greater cumulative level of impacts and effects that would increase those already assessed as not significant in Chapter 8: Cultural Heritage of the ES [APP-039]. This is the same conclusion reached by the three other solar NSIPs presented in Appendix E: Review of Cumulative Effects of the Joint Report on Interrelationships between NSIPs Part 3 of 3 [APP-217]. Within Chapter 13: Cultural Heritage of Cottam Solar Project’s Environmental Statement, slight adverse effects were identified from the Cottam Solar Project for four assets where cumulative effects may be experienced with the Tillbridge Scheme during operation, specifically the registered park and garden of Fillingham Castle (NHLE 1000977), the Grade I Fillingham Castle (NHLE 1166045), Glentworth Hall (NHLE 1063348) and the Former stables at Glentworth Hall (NHLE 1166094). These were all assessed as slight adverse based on impacts from the Cottam Solar Project alone but with the potential for the effect to increase from the cumulative impacts with other schemes during operation. This was later clarified in an update in December 2023 to Appendix E: Review of Cumulative Effects of the Joint Report on Interrelationships between NSIPs Part 3 of 3 [APP-217], once further details of the Tillbridge Scheme were known, that no significant cumulative impacts were identified for any heritage assets from the four solar schemes. Therefore, a combined impact upon the settings of these assets affecting their value from both the Tillbridge Scheme and the Cottam Solar Project will not raise the level of impact above that already identified.</p> <p>A response to the comments made in LCC’s relevant representation [RR-165] was provided within the Applicant’s Responses to Relevant Representations [REP1-028], page 92-99. The Applicant’s understanding of the RR made by LCC which states ‘<i>Note that the cumulative effects of other solar projects are addressed in Chapter 18 (EN010142/APP/6.1); however, details on the cumulative impact of the scheme for particular asset types (in this case, farmsteads)</i>’ is in relation to the Scheme only</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.7.8	Applicant	<p>Cumulative Effects ES paragraph 18.9.11 [APP-049] concludes that the Tillbridge Project would not lead to cumulative effects on the setting of heritage assets above those already assessed as non-significant. ES Chapter 8 [APP-039] notes a minor adverse (not significant) effect on historic landscape character from the Principal Site. Can the Applicant provide evidence to support the conclusions, with reference to the data gathered from other cumulative projects?</p>	<p>and 'cumulative impacts' on farmsteads does not mean in this context the cumulative assessment in respect of other schemes. The response in Applicant's Responses to Relevant Representations [REP1-028], page 92, includes '<i>The cumulative impact of the solar panels on the Scheme itself upon the agrarian landscape has been assessed under the Historic Landscape Character section paragraphs 8.9.434 – 8.9.445 in Chapter 8: Cultural Heritage of the Environmental Statement [APP-039]</i>'.</p> <p>The Applicant refers the Examining Authority to the Applicant's responses to Questions.1.7.4 and 1.7.7 above, which contain information that is also relevant to this question in respect of the cumulative effects on the setting of heritage assets and the assessments that have been carried out in that regard. The Applicant also refers the Examining Authority to the Applicant's response to Question 1.7.5 where there are overlaps in respect of the historic landscape character with the response to that question.</p> <p>The historic landscape character assessment in Chapter 8: Cultural Heritage of the ES [APP-039] paragraphs 8.9.434 to 8.9.445 follows on from that presented in the Appendix 8-2 Cultural Heritage Desk-based Assessment (DBA) of the ES [APP-059], concluding that construction and operational phases of the Scheme within the Principal Site would have a minor adverse magnitude of impact, which is not significant. The Principal Site along its eastern side, along the scarp and spring line of the of the Lincoln Cliff, falls within historic landscape character zone (HLCZ) NCL3: The Northern Cliff (The Cliff Edge Airfields) whereas the majority of the Principal Site lies within HLCZ TVL1: The Trent Valley (The Northern Cliff Foothills).</p> <p>For comparison, the assessments made for historic landscape character for the three other NSIP solar schemes (Cottam Solar Project, Gate Burton Energy Park and West Burton Solar Project) are summarised below:</p> <ul style="list-style-type: none"> • For the Cottam Solar Project, the three Cottam principal solar sites fall within the same historic landscape character zones as those for the Scheme. Chapter 13: Cultural Heritage and Appendix 13.8 Cultural Heritage Impact Assessment Tables of Cottam Solar Project's Environmental Statement provide overall assessment across the three solar sites for Cottam 1, 2 and 3 as no more than slight adverse during construction which would all be short-term and reversible. During operation, assessments were undertaken for individual fields ranging from neutral up to large adverse for Cottam 1, from slight adverse to moderate adverse for Cottam 2 and slight adverse to moderate adverse for Cottam 3. Mitigation measures including new planting and reinforcement of existing vegetation were considered to have an overall beneficial effect as these would reinforce the historic landscape character although this did not change the assessment conclusions for effects. • The Gate Burton Energy Park falls within the Trent Valley Regional Character Area and, within that, the Northern Cliff Foothills HLCZ. Chapter 7: Cultural Heritage and Appendix 7-A: Cultural Heritage Desk Based Assessment of the Gate Burton Energy Park Environmental Statement include the assessments on historic landscape character which took into account embedded mitigation including the retention of existing field boundaries and hedgerows. Overall, it was considered that the ability to view and understand the historic landscape areas would not be altered having little effect on historic landscape legibility within the site. The assessment for historic landscape character concluded a very low magnitude of impact, for the lifespan of the project, resulting in a negligible significance of effect.

ExQ1	Questions to:	Question:	Applicants Response:
			<ul style="list-style-type: none"> The three solar sites for West Burton Solar Project are all situated within Regional Character Area6: The Trent Valley, and within HLCZ TVL1: The Trent Valley (The Northern Cliff Foothills). Paragraph 13.6.10 of Chapter 13: Cultural Heritage of the West Burton Solar Project Environmental Statement asserts that no embedded mitigation measures to reduce the impacts upon the historic landscape character are required as the changes to the historic landscape character are necessary for the project and are an intrinsic part of it. However, paragraph 13.8.9 states that it is considered that the new planting and reinforcement of existing vegetation would have an overall beneficial effect by reinforcing the historic landscape character. Appendix 13.8 Cultural Heritage Impact Assessment Tables of the West Burton Solar Project Environmental Statement provides overall assessment across the three solar sites for West Burton as no more than slight adverse during construction. During operation, assessments for individual fields range from neutral up to slight adverse for West Burton 1, from neutral to moderate adverse for West Burton 2 and neutral to moderate adverse for West Burton 3. <p>All of the four NSIP solar schemes fall within the same Trent Valley Regional Character area but differ in respect of some of the character zones, with only the Scheme and the Cottam Solar Project sharing the same character zones. However, considering the embedded mitigation for the Scheme and the Cottam Solar Project, no significant cumulative effect on these character zones has been identified. It is also noted that the assessment approaches and conclusions for the effects for historic landscape character vary for all four solar schemes in part due to the wide range of effects assessed with the differing nature of the land parcels and assets with which they are associated for each scheme.</p>
Q1.7.9	Applicant	<p>Cumulative Effects Can the Applicant explain the difference between the Landscape and Visual Impact Assessment Cumulative Effects Assessment (ES Chapter 18 [APP-049]) - which concludes likely cumulative effects in relation to views associated with the Glentworth Oil Well – and the heritage assessment, which concludes that these views are not significant to heritage assets?</p>	<p>Historic England's Advice Note 15, 'Commercial Renewable Energy Development and the Historic Environment' (Ref 1-29), highlights that LVIA's differ from that for heritage assessments. In the LVIA context, the visual impact of development is considered in terms of the viewer as receptor. For heritage, however, associated views are assessed in terms of the value of the heritage asset itself. Historic England's Good Practice Advice in Planning 3 (GPA Note 3) on the Setting of Heritage Assets (Ref 1-28) also highlights that landscape assessment differs from that for heritage (paragraph 14).</p> <p>The heritage assessment in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], when considering the cumulative impacts with the proposed Glentworth Oil Well, applied the principles set out in Historic England's Good Practice Advice in Planning 3 (GPA Note 3) on the Setting of Heritage Assets. Views towards the proposed oil well are not key views which comprise a major component of their setting that would contribute to their value as heritage assets where a cumulative effect may be experienced. The conclusion for the heritage assessment that effects '<i>will be limited to additional changes within their setting, which will not be significant when considered cumulatively</i>' therefore differs from that reached in Chapter 12: Landscape and Visual Effects of the ES [EN010142/APP/6.1(Rev01)] as the views would not appreciably alter the degree to which they allow the value to be appreciated.</p> <p>The assessment of significant cumulative visual effects is a reflection of the high sensitivity accorded to representative viewpoint 9 (illustrated in Figure 12-14 of the ES [APP-187], arising from the open, rural views for residential receptors in dwellings along the north side of Kexby Road.</p>

ExQ1	Questions to:	Question:	Applicants Response:
Archaeology			
Q1.7.10	Applicant, LCC and NCC	<p>Survey extent – cable route LCC has noted that further archaeological survey work is required along parts of the cable route [RR-165]. The Applicant has identified that certain areas of the cable route have not been surveyed where it 'has not been possible' to access individual land parcels (ES Table 8-5 [APP-039]). What is the Applicant's/ LCC's / NCC's latest position on whether sufficient archaeological investigation has been carried out?</p>	<p>The further archaeological survey noted by LCC in their relevant representation [RR-165] within the Lincolnshire section of the Cable Route Corridor refers to 27.5ha, spread across 14 individual land parcels, not accessible for geophysical survey prior to submission of the DCO Application.</p> <p>For these land parcels, the results of the desk-based assessment (Appendix 8-2 of the ES [APP-059]), aerial photographic and LiDAR assessment (Appendix 8-4 of the ES [APP-064]) and geophysical surveys undertaken for the Scheme (Appendices 8-5-1 to 8-5-3 of the ES [APP-065 to APP-067]) and adjacent Cottam Solar Project have been used to assess the archaeological potential of the unsurveyed land parcels. Consequently, three of the unsurveyed land parcels were identified as either containing previously unknown archaeological features or archaeological potential requiring further archaeological evaluation.</p> <p>The Archaeological Mitigation Strategy [REP1-025] sets out a staged approach to archaeological mitigation measures, Stage 1 of which comprises 'archaeological trial trench evaluation of a small number of areas within the Principal Site and Cable Route Corridor for the Tillbridge Solar Scheme where non-intrusive archaeological survey (e.g. geophysical survey, aerial photography and LiDAR assessment) has identified a potential for possible archaeological remains and which have not previously been accessible'.</p> <p>The three unsurveyed land parcels assessed as having potential for the survival of previously unknown archaeological remains are included within the Stage 1 archaeological trial trench evaluation as Site 14 and part of Site 19.</p> <p>Table 1 of the Archaeological Mitigation Strategy [REP1-025] also sets out the proposed archaeological mitigation methods to be implemented by the Scheme. These methods include archaeological trial trench evaluation of several areas within the Cable Route Corridor, but not further geophysical survey. This approach was discussed with LCC's Senior Historic Environment Officer on 27 September 2024 during a review of the draft Archaeological Mitigation Strategy and it is understood that the strategy and scope of mitigation measures set out in the Archaeological Mitigation Strategy [REP1-025] were acceptable.</p> <p>With regards to the Nottinghamshire section of the Cable Route Corridor, paragraph 5.17 of NCC Local Impact Report [REP1A-002] states that: 'The level of archaeological evaluation and assessment work undertaken to date is considered sufficient to inform an appropriate Archaeological Mitigation Strategy and the approach the applicant has taken to archaeology is welcomed.'</p>
Q1.7.11	Applicant	<p>Mitigation The ES [APP-039] identifies significant adverse effects to six non-designated archaeological assets [ES paragraph 8.10.1]. ES Section 8.10 sets out additional mitigation which it is alleged reduces these effects to 'not significant'. ES paragraph 8.10.2 states in part:</p>	<p>The statement at paragraph 8.10.2 of Chapter 8: Cultural Heritage of the ES [APP-039] provides suitable provision to manage the risk of potential future changes to the Scheme that could result in unforeseen impacts to either known or previously unknown archaeological remains and which cannot be avoided by embedded mitigation and design measures.</p> <p>Situations where embedded mitigation and design measures cannot be implemented may include:</p>

ExQ1	Questions to:	Question:	Applicants Response:
		<p><i>“Where embedded mitigation or design measures cannot be employed to avoid or protect these heritage assets, and where reasonably practicable, significant adverse effects should be offset through the implementation of a programme of archaeological mitigation measures.”</i></p> <p>However, can the Applicant explain or direct the ExA to evidence which explains how/ why situations would arise where embedded mitigation and design measures could not be ‘employed’?</p>	<p>The discovery of new constraints within the Order limits that were unknown and could not be predicted at the time the ES was prepared, and which would necessitate a future design change resulting in impacts to known archaeological remains that had previously been avoided by embedded mitigation e.g. the Sensitive Archaeological Sites and areas of archaeological preservation defined in the Archaeological Mitigation Strategy [REP1-025]; or</p> <p>The unexpected discovery of previously unknown archaeological remains during construction at which point it may not be possible to implement embedded mitigation and design measures.</p> <p>Section 7 of the Archaeological Mitigation Strategy [REP1-025] sets out procedures for unexpected archaeological discoveries during construction. The scope and specification for any such additional mitigation measures would be agreed in consultation with the relevant Local Planning Authority and defined in either an addendum to an existing Site-Specific Written Scheme of Investigation (SSWSI) or a new SSWSI approved by the relevant Local Planning Authority.</p>
Q1.7.12	Applicant, LCC and NCC	<p>Mitigation</p> <p>Are LCC and NCC satisfied that dDCO Requirement 11 [REP1-057] is sufficient to ensure that the mitigation outlined at ES Section 8.10 is delivered effectively? In relation to this point, do the Councils and the Applicant consider that the dDCO makes provision/ controls the “coordinated programme of archaeological investigation and mitigation” for the cable route, as suggested in ES Paragraph 18.9.5 [APP-49]?</p>	<p>Paragraph 18.9.5 of Chapter 18: Cumulative Effects and Interactions of the ES [EN01010142/APP/6.1(Rev01)] states that the <i>“proposed archaeological investigation and mitigation will be submitted for approval and secured through the requirements of the respective DCOs for the Scheme and each of the overlapping solar DCOs”</i>. While it is the Applicant’s intention that the measures submitted in accordance with requirements 11 (Archaeology) and 12 (Construction environmental management plan) of Schedule 2 of the draft DCO [EN01010142/APP/3.1(Rev04)] will provide for (amongst other things) a coordinated programme of archaeological investigation and mitigation over those areas of the Cable Route Corridor that overlaps with the cable routes for the Cottam Solar Project [EN010133], West Burton Solar Project [EN010132] and/or Gate Burton Energy Park [EN010131], and these requirements are sufficiently broadly worded to allow these matters to be agreed between the four solar developers, the draft DCO [EN01010142/APP/3.1(Rev04)] is not the appropriate mechanism for securing such a programme. The draft DCO [EN01010142/APP/3.1(Rev04)] can only control the activities and associated investigation or mitigation measures for the Scheme – the Applicant does not have authority over the other solar developers.</p> <p>However, notwithstanding the above, as set out in the Statement of Common Ground with Other Solar Developers [REP1-037], the four solar projects are currently in discussions regarding a further cooperation agreement. While the scope and content of this further agreement are still under discussion, it will likely relate to (amongst other things) how the four projects will work together in the discharge of their respective DCO requirements. This could include, for example, the preparation and approval of a coordinated programme of archaeological investigation as part of the discharge of requirements 11 and 12 of Schedule 2 of the draft DCO [EN01010142/APP/3.1(Rev04)].</p>
Q1.7.13	LCC	<p>Viking Winter Camp</p> <p>In relation to the Winter Camp of the Viking Great Army, the Planning Statement Appendix C Paragraph 5.1.4 [AS-029] states in full:</p> <p>“The construction of the Scheme has the potential to result in the disturbance or loss of a small section of surviving archaeological remains, if they survive within the Order limits. This will cause harm to the significance of the asset, but, given the location of the impact towards the periphery of the winter camp and not within the core of settlement activity, as it is</p>	<p>No response required from the Applicant.</p>

ExQ1	Questions to:	Question:	Applicants Response:
		currently understood, that harm will be less than substantial with the asset's heritage significance not being significantly lost or altered." Is LCC satisfied with this conclusion and the basis upon which it has been reached?	
Q1.7.14	Historic England, LCC and NCC	Could the statutory parties please provide representations in relation to the Archaeological Mitigation Strategy [REP1-025] submitted by the Applicant?	No response required from the Applicant.

8. Human health, safety, accidents and major incidents

Table 8-1: Human health, safety, accidents and major incidents

ExQ1	Questions to:	Question:	Applicants Response:
Q1.8.1	Applicant	<p>Health and Mental Health Impacts on surrounding communities</p> <p>Numerous representations have been received stating that members of the community local to the proposed development have suffered health effects during the development of this application and will continue to do so, and potentially increase during the construction period and throughout the life of the development. Could the Applicant address this concern and assess the potential for impact; and highlight any measures put in place to reduce and minimise these impacts. An assessment of the associated impact on mental health of communities adjacent to large scale development should be prepared.</p>	<p>The Applicant recognises that the potential for future environmental changes associated with the Scheme during construction, operation and decommissioning is currently a source of concern for some local residents. To address this concern, the Applicant has undertaken a comprehensive and robust Environmental Impact Assessment (EIA) so that any likely significant effects of the Scheme have been able to be identified and appropriately mitigated or avoided. The results of the EIA are reported within the Environmental Statement (ES). Chapter 11: Human Health of the ES [APP-042] assesses potential effects of the Scheme on health and wellbeing of local residents. The assessment considers elements of the Scheme which could affect mental health (for example changes in landscape and visual amenity, noise, access to open space and employment). No significant adverse effects are identified with regards to human health, as a result of the extensive mitigation proposals included as part of the Scheme.</p> <p>The approach to consultation leading up to the submission of the DCO Application was also assessed within Section 7.2 of the Equality Impact Assessment (EqIA) [APP-227]. Whilst it is recognised that the consultation period can be stressful for some local residents, the EqIA concluded that the Applicant's approach to consultation was inclusive of all groups of the local community and that all groups were able to contribute their feedback to the consultation process. Consultation Report [APP-021] summarises the Applicant's approach to consultation in the pre-application period and how feedback received was taken into account.</p> <p>During construction, operation and decommissioning, the impacts on mental health have been considered through the following health determinants within Chapter 11: Human Health of the ES [APP-042]:</p> <ul style="list-style-type: none"> • Potential changes to community connectivity, access to healthcare and wider community services (including open space), and/or access to employment arising from temporary or permanent closures, diversions or amenity impacts on public rights of way (PRoW) or impacts on the local road network; • Potential temporary or permanent closures, diversions or amenity impacts on PRoW or impacts on the local road network which impact use by cyclists or pedestrians; • Potential temporary or permanent increases in traffic on the local road network; • Potential temporary or permanent increase in employment and training opportunities, directly related to the Scheme, or within the wider supply chain; • Potential temporary changes in local air quality including increased dust and particulate matter emissions arising from the construction and decommissioning of the Scheme; • Potential temporary or permanent changes in noise levels arising from the Scheme; and • Potential temporary or permanent changes to views as a result of the Scheme. <p>As such, the assessment of potential impacts on mental health has been considered throughout the assessment of health determinants presented within Chapter 11: Human Health of the ES [APP-042].</p> <p>In terms of disruption during the construction, operational and decommissioning phases and in recognition of the potential for impacts on mental health that could arise from activities on site, and surroundings, there</p>

ExQ1	Questions to:	Question:	Applicants Response:
			<p>are measures set out in the Framework CEMP [EN010142/APP/7.8(Rev 02)], Framework OEMP [EN010142/APP/7.9(Rev02)] and Framework DEMP [EN010142/APP/7.10(Rev02)] to reduce or avoid human health and wellbeing related impacts. These will inform separate detailed CEMP, OEMP and DEMP that will need to be approved by the Local Planning Authority (/Authorities) prior to construction, and this is secured by Requirements 12, 13 and 20 respectively in Schedule 2 of the draft DCO [EN010142/APP/3.1(Rev04)], each of which require the relevant detailed management plan(s) to be substantially in accordance with the framework plans submitted as part of the DCO Application.</p> <p>The Applicant will work with the Local Authorities to ensure that the local community is affected as little as possible. This could be (for example) by targeting contractors who will make social value commitments during construction. The Applicant is also proposing a community benefits package as part of the Scheme. The intention is that this will be delivered in cooperation with the Lincolnshire and Nottinghamshire community foundations.</p> <p>In addition, Chapter 11: Human Health of the ES [APP-042] finds beneficial impacts on employment and income, prioritisation of walking and cycling routes (through new permissive paths) and climate change (through a substantial emissions reduction relative to the without-Scheme baseline) during operation. These impacts will lead to positive effects on human health, including both physical and mental health.</p>
Q1.8.2	Applicant LCC	<p>Fire Safety</p> <p>What are LCC's and in particular their Fire and Rescue Services views on the adequacy and provisions within the Battery Safety Management Plan and the resources and access arrangements proposed? Does the proposal align with the National Fire Chief Councils (NFCC) guidance to Fire and Rescue Services on Grid Scale BESS?</p> <p>Ref: 6.1 Chapter 10 Water Environment & Framework Battery Safety Management Plan [APP-225].</p>	<p>The Applicant has drafted the Framework Battery Safety Management Plan (FBSMP) [APP-225] to fully align with NFCC guidelines published in 2023 (Ref 1-30). The NFCC issued a consultation document containing draft revisions in July 2024, the official revised guidelines are likely to be published in January 2025. The Applicant will draft additional content or amendments which can be included in the FBSMP to fully align with any new NFCC guidelines, once these have been published. From Applicant's engagement with Lincolnshire Fire and Rescue Services (LFR), the Applicant understands that the LFR is satisfied with this approach, and the Applicant is continuing engagement with LFR throughout the examination.</p>
Q1.8.3	Applicant	<p>Fire Safety</p> <p>What is the probability of a battery safety incident, notably a fire or thermal runaway event, occurring throughout the life of the development; and what would the potential impact from this type of incident be?</p> <p>Ref: 6.1 Chapter 10 Water Environment & Framework Battery Safety Management Plan [APP-225].</p>	<p>The Electric Power Research Institute (EPRI) published a white paper in 2024 (Ref 1-31) analysing identified BESS incident root cause failures between 2018-2023, demonstrating that the overall rate of incidents has sharply decreased. The EPRI data show there are currently (2023 data) 0.3 BESS failure incidents per year per GW of cumulative deployed capacity as lessons learned from early failures have been incorporated into the latest BESS designs and best practices. The battery industry continues to engage in research and development activities to improve prevention and mitigation measures, and global testing and certification bodies are implementing more robust and rigorous standards as the diverse range of causes of BESS failures has become better understood through detailed root cause and failure mode analysis. As training and quality control systems improve for BESS manufacturers and integrators, the probability of BESS failure event is expected to continue to decline.</p> <p>The "BESS Quality Report" (Feb. 2024) published by the Clean Energy Association (CEA) (Ref 1-32) found 26% of inspected BESS had fire suppression system defects and 18% had thermal management system defects, which either caused a thermal runaway incident or seriously exacerbated the incident consequences. Site-specific hazard assessments, monitoring, and adopting rigorous Site Acceptance Testing procedures during commissioning are proposed to minimise the risk of failures. Sections 6 and 7 of</p>

ExQ1	Questions to:	Question:	Applicants Response:
			<p>the FBSMP [APP-225] detail the Applicant's commitment to extensive BESS incident failure prevention and mitigation solutions.</p> <p>Layer of Protection Analysis (LOPA) or Failure Modes and Effects Analysis (FMEA) are BESS system and site-specific risk assessments that take place at the detailed design stage to evaluate the failure rates of each component in its system to determine the overall failure rate. DNV GL publishes a list of identified BESS threats and associated barriers / safeguards for a comprehensive range of consequence categories with proposed frequencies based upon industry data (common failure mechanisms and frequency / probability of failure) (Ref 1-33). Rigorous LOPA or FMEA analysis of BESS systems is a key component in validating BESS control, protection and mitigation systems.</p> <p>In the unlikely scenario of a BESS failure occurring, potential impacts would be associated with the spread of the fire, emissions to air and pollution from the firefighting water, as set out within paragraphs 17.6.17 to 17.6.29 of Chapter 17: Other Environmental Topics of the ES [APP-048]. An assessment of unplanned emissions to air is also presented within Appendix 17-5: Unplanned Atmospheric Emissions from BESS of the ES [APP-123]. An assessment of potential impacts on the water environment is also presented within Section 10.8 of Chapter 10: Water Environment of the ES [EN010142/APP/6.1(Rev01)].</p> <p>The Application incorporates various measures to avoid significant effects from these potential impacts, as summarised within Section 7 of the Framework Battery Safety Management Plan (FBSMP) [APP-225]. These include but are not limited to the enclosure of BESS, safe equipment spacing, the provision of water supply for firefighting and appropriate access for the LRF, buffers from BESS to properties incorporated within the Outline Design Principles Statement [EN010142/APP/7.4(Rev02)], and measures incorporated within the Outline Drainage Strategy (Appendix 10-4 of the ES [APP-098]) to contain firefighting water. With these measures in place, no residual significant risks are considered to remain.</p> <p>The Framework Battery Safety Management Plan (FBSMP) [APP-225] Section 6.1 (General Risk Assessment Information) provides details of the Applicant's commitment to commissioning a comprehensive range of risk and safety assessments at the detailed design stage.</p> <p>Section 5.3 of the FBSMP lists the key safety objectives for the Scheme, namely:</p> <ol style="list-style-type: none"> To minimise the likelihood of an emergency event such as a fire; To minimise the consequences should an event occur; To restrict any event to the BESS site and minimise any impact on the surrounding areas; To automatically detect and begin to control a fire as soon as possible; To ensure any personnel on site can evacuate safely off site; To ensure that firefighters can operate in reasonable safety where necessary; To ensure that fire, smoke, and any release of toxic gases does not significantly affect site operations, first responders, and the local community; and To ensure that firewater run-off is contained and treated (if required).
Q1.8.4	Applicant HSE Uniper	<p>Control of Major Accident Hazards</p> <p>What are the risks associated with the cable route approach and incursion into the Major Accident Hazard Site and Major Accident Hazard Pipeline sites and how have these risks been mitigated?</p> <p>Ref: 6.1 Chapter 17 Other Environmental Topics [APP-048].</p>	<p>There are two areas where the Order limits of the Cable Route Corridor fall within the consultation zones of a Major Accident Hazard Site (MAHS) and Major Accident Hazard Pipeline (MAHP) site. The MAHS is the EDF Energy's Cottam Power Station. The MAHP is the Uniper's Blyborough to Cottam Pipeline. Risks associated with construction within the consultation zones of these sites include impacting the operation and industrial safety of these sites. The Applicant is in the process of agreeing protective provisions for these sites within the draft DCO [EN010142/APP/3.1(Rev04)] through discussions with EDF Energy and Uniper.</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.8.5	Applicant LA HSE	<p>Control of Major Accident Hazards</p> <p>What are the associated risks arising from the potential increase in the Glentworth K oil site within the principal site boundary?</p> <p>Ref: 6.1 Chapter 17 Other Environmental Topics [APP-048].</p>	<p>A safe access route has been agreed to the existing National Grid Cottam Substation within the Cottam Power Station. Cable entry to the substation shall be formed using Horizontal Directional Drilling techniques to ensure that cable installation works are not required around the live demolition zone within the Cottam Power Station and there is no impact to the existing live site services including the existing gas mains present to the south of the existing substation access road. A separation distance of at least 26m from the gas pipeline has been maintained, as stipulated by Uniper.</p> <p>At detailed design stage, a Designers Hazard Risk Assessment in accordance with the Construction Design and Management Regulations 2015 (Ref 1-34) will be prepared providing detailed mitigation measures within the consultation zones of the MAHS and MAHP sites. How these measures will be implemented will be described in the appointed contractors Risk Assessment Method Statements prior to the commencement of the construction works.</p> <p>As set out within Table 17-8 of Chapter 17: Other Environmental Topics of the ES [APP-048], the Glentworth K oil site has been considered in relation to the risk of fire.</p> <p>The Order limits exclude the existing Glentworth K oil site and the area of the further oil site (LCC planning application ref. PL/0135/22) located to the west of the existing site, ensuring no impact on the operation of these sites. Discussions took place between the Applicant and IGas (operator of the Glentworth K oil site) prior to planning permission being granted to ensure that there were no issues with the emerging Tillbridge Solar Project. Some adjustments were made to the Scheme design to ensure that access could be retained to the new oil site and an agreement was reached to amend IGas' proposals to divert the new pipeline that would connect the existing wellhead to the proposed wellhead. The Application will therefore not prejudice the new oil site coming forward.</p> <p>The Applicant also wrote to IGas in September 2023 enclosing the standard protective provisions applicable to their assets/apparatus that would potentially be impacted by the Scheme, offering to commence discussions regarding the inclusion of protective provisions in the draft DCO to ensure their apparatus and operations were appropriately protected. No response was received to that initial correspondence. The Applicant followed up with IGas via email in May 2024 following acceptance of the DCO Application. No response has been received from IGas to date. The Applicant has therefore assumed that the previous discussions and agreed design changes referred to above were sufficient to address IGas' concerns.</p> <p>Figure 3-1: Indicative Principal Site Layout Plan of the ES [AS-055] shows the exclusion of the existing Glentworth K oil site from the Order limits of the Scheme and a landscape buffer around it. This is then reflected in the Works Plans [REP2-004]. The Applicant has also updated the Outline Design Principles Statement [EN010142/APP/7.4(Rev02)] at Deadline 3 to confirm that no Works No. 2(a) and (b) as shown in the Works Plans [REP2-004] will be located within 30m of the existing Glentworth K oil site and the area granted planning permission under ref. PL/0135/22 to construct a hydrocarbon wellsite, to minimise risk of impact from a fire or explosion from either within the Scheme or within the Glentworth K oil site.</p> <p>With these measures in place, it is considered that the risk of impact from a fire or explosion on and from the Glentworth K oil site has been minimised as far as practicable.</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.8.6	Applicant NATS MoD	<p>Aviation</p> <p>What are the risks to aviation from the solar panels and the potential for interference visually and electromagnetically? Ref: RR-002 A Pilot.</p>	<p>The visual risk to aviation from solar panels has been assessed within Section 17.4 of Chapter 17: Other Environmental Topics of the ES [APP-048] and Appendix 17-2: Glint and Glare Assessment of the ES [APP-120]. The assessment considered the risk to aviation receptors within 30km, with detailed assessment for large international aerodromes within 20km, military aerodromes within 10km and 5km for small aerodromes.</p> <p>As discussed within paragraph 17.4.29 of Chapter 17: Other Environmental Topics of the ES [APP-048], glint is only considered to be an issue with regards to aviation safety when the solar farm lies within close proximity to a runway, particularly when the aircraft is descending to land. This is in accordance with the FAA guidance (Ref 1-35), which is considered best practice in the absence of UK guidance.</p> <p>The glare assessment identified 14 aerodromes within the 30km Study Area from the Principal Site. However, only Sturgate Airfield, RAF Scampton and Wickenby Airfield required a detailed assessment as the Principal Site is located within their safeguarding buffer zone. RAF Scampton and Wickenby Airfield both have Air Traffic Control Towers (ATCTs). The other 11 aerodromes do not require detailed assessments due to their location and distance from the Principal Site. Further detail on aviation receptors is presented in Appendix 17-2: Glint and Glare Assessment of the ES [APP-120].</p> <p>Eight runway approach paths and two ATCTs were assessed in detail at Sturgate Airfield, RAF Scampton and Wickenby Airfield. Only Green Glare impacts, i.e. those predicted with a low potential for temporary after-image, were predicted for Runway 27 at Sturgate Airfield, which is an acceptable impact upon runways according to FAA guidance (Ref 1-35). Overall aviation impacts are therefore assessed as low (not significant).</p> <p>Additionally, as confirmed by the written representation submitted by the Ministry of Defence at Deadline 2 [REP2-013], they had no concerns with regards to the Scheme, including in relation to the existing airfields.</p> <p>Regarding the risk to aviation from Electromagnetic Fields (EMF), the components of the Scheme which could produce EMF are cabling (both within the Principal Site and that which exports to the National Grid), and onsite substations.</p> <p>The Scheme's cabling is to be buried underground, as detailed in Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev02)] and secured within the Outline Design Principles Statement [EN010142/APP/7.4(Rev02)]. Therefore, the distance between any cabling, and therefore any EMF emitted by cabling, with aircraft would be significant. Due to this distance any EMF projected by cabling would be attenuated and negligible to aircraft.</p> <p>Regarding EMF from the onsite substations, a comprehensive summary prepared by the Energy Networks Association (Ref 1-36) states that <i>"larger electricity transmission substations do not produce very large fields themselves (generally less than a microtesla); the fields close by are mainly produced by power lines and cables entering them. There is no restriction on EMF grounds on how close houses can be to substations"</i>. The distance between the on-site substations and any aircraft or airfields would render the limited EMF as negligible.</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.8.7	Applicant	<p>Electromagnetic Field effects</p> <p>What is the Electromagnetic Field risk to adjacent properties from the proposed bundled cable allowing for the transmission loading of all cables in the route combined? Ref: 6.1 Chapter 17 Other Environmental Topics [APP-048].</p>	<p>To put the impact of EMF on aircraft into perspective, Chapter 17: Other Environmental Topics of the ES [APP-048] notes that the exposure to electro-magnetic fields from a vacuum cleaner is 800 microteslas, and for TV, washing machines and microwaves it is 50 microteslas. The National Grid guidance document (Ref 1-14) states that for a 400 kV cable buried at 0.9 m depth, the typical magnetic field is 24 microteslas when on top of the cable, reducing to 0.9 microteslas at 10m distance. Aircraft are a substantial distance from the cable and the EMF levels would be negligible at this distance. For comparison, EMF-Portal (Ref 1-37) reports the EMF from an electric lawn mower to be between 520 and 1,180 microteslas, which is greater than the EMF from the cable and are not known to cause disruption to aircraft.</p> <p>The Applicant notes there are properties adjacent to the Order limits of the Cable Route Corridor, the closest being approximately 10m from the Order limits.</p> <p>As described within Table 1 of the Outline Design Principles Statement [EN010142/APP/7.4(Rev02)], any cable within the Cable Route Corridor would be installed at a minimum distance of 10m from the façade of any residential property.</p> <p>Paragraph 17.9.23 of Chapter 17: Other Environmental Topics of the ES [APP-048] notes that the National Grid guidance document (Ref 1-14) states that for a 400 kV cable buried at 0.85m depth, the typical magnetic field is 24 microteslas when on top of the cable, 3 microteslas at 5m from the cable centreline, and 0.9 microteslas at 10m from the cable centreline, with the maximum known by National Grid being 96 microteslas on top of the cable, 13 microteslas at m, and 3.6 microteslas at 10m. The maximum recorded levels of electro-magnetic field directly above an underground 400 kV cable are therefore less than 30% of the permitted levels of 100 microteslas and 96% of the 360 microtesla reference levels set by ICNIRP (Ref 1-15). Paragraph 17.9.24 of Chapter 17: Other Environmental Topics of the ES [APP-048] states, for context, the Energy Networks Association publication 'Electric and Magnetic Fields' (Ref 1-36) states that in '<i>the vast majority of homes in the UK, the magnetic field, averaged over 24 hours, is between 0.01 and 0.2 microteslas</i>', but goes on to note that exposure to electro-magnetic fields from a vacuum cleaner is 800 microteslas, reducing to two microteslas at 1m away, and for a TV, washing machine or microwave exposure is 50 microteslas next to these appliances and 0.2 microteslas at 1m distance.</p> <p>The 400kV circuits associated with the cumulative schemes would not make a substantial difference to the conclusions above. For sections of the Cable Route Corridor that the Scheme shares with Gate Burton Energy Park, Cottam Solar Project and West Burton Solar Project, each cable would be laid at a minimum distance of 5m from the cabling of the cumulative scheme. As such, the nearest cabling would be a minimum 10m from the nearest property, with the next scheme's cables another 5m away, the third scheme's cables an additional 5m further from the property and the fourth scheme's cables another 5m further away. EMF attenuates rapidly with distance, as demonstrated above, and these other schemes would therefore not change the conclusions of the assessment.</p>

9. Landscape and visual impact

Table 9-1: Landscape and visual impact

ExQ1	Questions to:	Question:	Applicants Response:
Q1.9.1	Applicant	<p>Residential Receptors and Amenity</p> <p>Can the Applicant explain why, in considering the Landscape and Visual Impact Assessment (LVIA) in relation to residential amenity, only viewpoints 7, 9 and 13 are referred to at ES Paragraph 12.8.44 [APP-043]? Where in the LVIA or ES has it been demonstrated that consideration has been given to specific residential receptors (in very close proximity to the site)? Related to this point, other than for viewpoints 7,9 and 13 where has an absence of a Residential Visual Amenity Assessment been justified, particularly taking into account –</p> <p>1: that LSE have been identified in relation to other viewpoints in close proximity to residential receptors (Viewpoint 1 for example); and</p> <p>2: the presence of dwellings within the main area of the principal site (albeit excluded from the Order Limits, see ES Paragraph ES 12.6.14).</p> <p>In responding, please consider any consequences for the related assessment of human health at ES Chapter 11 [APP-042] paragraph 11.8.45 onwards.</p>	<p>GLVIA3 guidance (Ref 1-38) is based on selecting representative viewpoints to demonstrate the range of likely effects on receptor groups, rather than identifying all of the individual receptors potentially impacted. The viewpoints were accordingly selected as a representation of typical views or types of receptors in a manner that is proportionate to the scale of the Scheme and likely significant visual effects, as described in GLVIA3, paragraph 6.21 (Ref 1-38). The viewpoints were agreed with the LCC Landscape Officer and no request to include residential properties as private viewpoints was received during consultation. The selection of viewpoints 7, 9 and 13 was informed by the findings of site surveys and accompanied visits to certain properties located around the Scheme, such that these would best represent theoretical worst-case visibility for both individual or groups of residential receptors.</p> <p>Justification for the absence of a Residential Visual Amenity assessment is provided in paragraphs 12.8.41 to 12.8.45 in Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)]. Viewpoint 7 represents longer-range views from the Cliff. Viewpoint 9 is representative as a worst-case of properties along Kexby Road that are located at closer proximity, in this case a minimum distance of approximately 150 m to the deer fence. The LCC Landscape Officer did not contest this justification, as stated in Appendix A to the Applicant's Response to Local Impact Reports [EN010142/APP/9.26]. Given that no requirement for private viewpoints was received, it was not considered proportionate or appropriate to provide viewpoints or visual assessments for individual properties at close proximity to the Scheme, in line with GLVIA3 Paragraph 6.17 (Ref 1-38). As stated in Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)], one of the principal drivers of the Scheme and mitigation design was to reduce visual effects for residential receptors.</p> <p>With reference to the example of Viewpoint 1, the location was selected to reflect both road receptors using the A631, as well as representative views for residential receptors including those associated with properties at Harpswell Grange. The Applicant acknowledges that this viewpoint is approximately 450 m from two properties on a private access track north of Harpswell Grange, but was selected on account of being publicly accessible, a recognisable junction and a safe place to stop on the highway. These two dwellings will be located at a minimum distance of approximately 85 m from the nearest solar infrastructure, with reference to Figure 3-1: Indicative Principal Site Layout Plan of the ES [AS-055]. A significant effect has been assessed for Viewpoint 1 during construction and operation year 1. The Applicant acknowledges that visual effects of a similar nature will likely arise for receptors associated with these two properties, given the open views during these stages of the Scheme. However, the provision of grassland buffers and woodland or hedge planting as mitigation is well suited to addressing impacts on these properties, in that it balances screening of the solar infrastructure with retention of the longer-range views to the Cliff. This mitigation planting is expected to reduce these effects to less than significant at Year 15 of operation. Furthermore, and for the reasons stated in paragraphs 12.8.41 to 12.8.45 in Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)], and with reference to Landscape Institute (2019) <i>Residential Visual Amenity Assessment. Technical Guidance Note 2/19</i> (Ref 1-39), it is considered that for this viewpoint and properties that it may represent, effects will not reach a threshold where residential visual amenity is a consideration. This guidance states that development types including potentially very large but lower profile structures such as road schemes and housing are unlikely to require a residential visual amendment assessment; and the Applicant notes that, for this location, the Scheme is not expected to appreciably intrude above the skyline, disrupt views through vertical elements, result in any overshadowing</p>

ExQ1	Questions to:	Question:	Applicants Response:
			<p>or any change in landform, or give rise to significant impacts relating to perceptual change through noise or movement.</p> <p>The Applicant considers that the principles outlined above for Viewpoint 1 can be applied to other viewpoints that may be regarded as being representative of residential receptors, as well as individual dwellings within the Principal Site (albeit excluded from the Order limits) for which no viewpoint is included. No viewpoint will reflect all possible views from a dwelling, nor is it proportionate or feasible for the Applicant to assess the precise baseline nature and value of views from all windows, or locations within the curtilage of a property. However, from evidence obtained from site visits and aerial photography, the Applicant considers that a combination of factors including existing screening through vegetation or buildings, distance to the Scheme and proposed mitigation will not result in visual effects will not reach a threshold where residential visual amenity is a consideration. As a result, no change to Chapter 11: Human Health of the ES [APP-042] is also considered to be required.</p>
Q1.9.2	Applicant	<p>LVIA The LVIA [APP-101 to APP-106] of the cable route corridor has been completed using site visits from public access areas. Can the Applicant explain what limitations, if any, this has placed on the baseline that has been gathered?</p>	<p>The publicly accessible locations along the Cable Route Corridor were sufficient to obtain an appropriate level of survey information to inform the LVIA. There were no restrictions on access to locations that were considered to be more sensitive, e.g. adjacent to the River Trent or in the vicinity of Marton, For the limited sections where no survey access or views from public locations were available, e.g. between Normanby by Stow and South Lane, a combination of aerial photography and reference to ecological and arboriculture reports were used. For such areas, where landscape and visual sensitivities are lower, this approach was considered to be proportionate, particularly given the largely temporary nature of the cable corridor works within the Scheme.</p>
Q1.9.3	Applicant	<p>ZTV Can the Applicant explain the reason why the Cumulative ZTVs at Figures 18-2, 18-3 and 18-4 of the ES [APP-204 to APP-206] are not combined such they include all four schemes (Tillbridge, Cottam, West Burton, Gate Burton)?</p>	<p>A cumulative ZTV showing the visibility of the Scheme with all four Solar DCO schemes combined and individually identified was not produced, as the Applicant did not consider that the graphic output, which will comprise multiple differentiating colours, would be sufficiently legible or offer material value to the assessment of cumulative visual effects. The Applicant refers to paragraphs 12.4.16 and 12.4.17 in the Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)], which states that even the 'screened' ZTVs for solar PV projects do not accurately represent actual visibility, given that this screening factor does not reflect hedgerows and single hedgerow trees.</p>
Q1.9.4	Applicant	<p>ZTVs ES Paragraph 12.4.13 [APP-043] states in full: <i>"It should be noted that the ZTVs for the solar PV panels do not demonstrate the theoretical visibility of such features across the entire Principal Site. Due to computer processing capabilities, reference points were taken from the outer boundary of the Panel areas. As such, some areas of panels, particularly along slightly higher topography such as the north-south ridge between the A631 and Harpswell Wood, may increase theoretical visibility beyond that shown."</i> On that basis are the ZTVs accurate? Could the Applicant model the Zones of Theoretical Visibility (ZTV) on the basis of the boundaries and the higher topography within the Order Limits?</p>	<p>The Applicant can confirm that the highest points within the solar panel areas coincide with the outer boundaries of the panels upon which the ZTV is based. These high points are located towards the west around Springthorpe Grange (approximately 28 m Above Ordnance Datum) and near the eastern edge, west of the isolated barn south of Harpswell, (approximately 40 m AOD).</p> <p>As such, the Applicant notes that the text included on the ZTV plans (Figure 12-4 [APP-175 to APP-176], which states that the ZTV has been based on points along the external boundary to the indicative solar panel area and that "...it does not reflect all theoretical visibility arising from panels located within the external solar panel boundary", is incorrect. Paragraph 12.4.13 of Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)] should therefore state that these outer panel boundaries are reflective of worst-case visibility derived from the elevated locations. The Applicant has updated Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)] at Deadline 3 to reflect this.</p>

ExQ1	Questions to:	Question:	Applicants Response:
			Further to this, any marginal changes in theoretical visibility that may arise from localised internal variations in topography are considered to be negligible, particularly when compared to the substantially greater influence of screening by hedgerows and isolated trees across the wider Till Vale landscape.
Q1.9.5	Applicant	<p>Figure 12.5 With Q1.9.3 in mind, ES Figure 12.5 [APP-043] could more effectively illustrate the site topography if it only indicated the topography within the Order Limits. This is because it includes The Cliff, which significantly reduces the usefulness of the gradient colours used to illustrate the change in levels across the site. Can the Applicant therefore address this and provide a separate Figure illustrating the site topography within the Order Limits?</p>	The Applicant has updated Figure 12-5 of the ES [EN010142/APP/6.2(Rev01)] to illustrate the topography within the Order limits more effectively and submitted the updated figure at Deadline 3.
Q1.9.6	Applicant	<p>Residential Properties ES Paragraph 12.3.5 [APP-043] states: <i>“Professional judgement has been used to assess residents’ views where it has not been possible to ascertain levels of visibility from gardens and inside properties through accompanied visits. Such judgements have been aided by aerial photography and fieldwork observations from the surrounding area.”</i> Can the Applicant explain what efforts were made to assess visual impact from private residential properties?</p>	<p>Accompanied visits were made to several residential properties where the Applicant felt there would be particular benefit in both introducing the Scheme at an early stage and reviewing the level of visibility from the dwelling and curtilage. These were primarily properties that were immediately adjacent to Order limits, both to the edge and within the Principal Site. The Applicant acknowledges that it was not possible to visit all properties that may fall into this category, due to availability of residents at the time of the visits. No requests were made by the Applicant to review views from specific rooms from the properties, but the Applicant is not aware of any such requests being made by the residents themselves. Where access into the properties was made available, this was on an informal basis.</p> <p>The Applicant accepts that it was not possible to review all possible views from all dwellings in close proximity to the Scheme, as outlined in the response to Q 1.9.1 above. However, the Applicant considers that information gathered from these visits, supplemented by access within the Principal Site and publicly accessible locations, alongside aerial photography, is sufficient to make informed judgments on visibility and expected visual effects.</p>
Q1.9.7	Applicant	<p>Assumptions ES 12.3.11 [APP-043] states: <i>“For the year 15 operation (2043), the LVIA assumes that the Scheme is operational across all of the Order limits, the season is summer and vegetation and proposed planting is in leaf.”</i> Why has summer been chosen as opposed to winter?</p>	Paragraph 6.28 of GLVIA3 (Ref 1-38) states that consideration should be given to seasonal differences in effects and that assessments may need to be provided for both summer and winter seasons, but it does not state any specific requirements. Summer Year 15 is considered by the Applicant as being an established stage of LVIA that reflects established mitigation planting.
Q1.9.8	Applicant	<p>Decommissioning ES Paragraph 12.3.12 [APP-043] states in part: <i>“The assessment for the decommissioning is undertaken for the winter season with the duration of this phase being between 12 and 24 months.”</i> How has the Applicant determined the likely decommissioning period and does this represent a 'worst-case scenario'?</p>	The worst-case decommissioning period is assumed to be during the winter month, which is an established stage of assessment that reflects the potential for reduced visibility by existing or proposed vegetation, when not in leaf, as stated in Paragraph 6.28 of GLVIA (Ref 1-38). The estimated decommissioning period of 12 to 24 months has been determined in liaison with the design team on the likely worst-case duration of works required for the removal of the infrastructure. This assumption is set out within paragraph 3.7.5 of Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev02)].
Q1.9.9	Applicant	<p>Substations ES Paragraph 12.4.4 [APP-032] states:</p>	As set out within Table 4-6 of Chapter 4: Alternatives and Design Evolution of the ES [APP-035], the location of the on-site substations was informed by a range of environmental constraints in addition to the

ExQ1	Questions to:	Question:	Applicants Response:
		<p><i>“As the boundary to the Principal Site became established, preferred locations for infrastructure were identified, including on-site substations, storage compounds, access routes and office locations. These were sited to take advantage of existing screening by vegetation and limit impacts on sensitive receptors such as residential properties.”</i></p> <p>Can the Applicant be more specific about the rationale for the location of the substations with particular regard to 'existing screening'?</p>	<p>consideration of existing landscape features that could provide screening. Other considerations included access, offsets from properties, ecological and heritage receptors, utilities, avoidance of flood zones and Best and Most Versatile agricultural land. In addition, a separation distance between the two on-site substations is required due to cabling requirements, with each substation serving one half of the Principal Site. Therefore, it was not possible to select preferred locations for the on-site substations on the basis of existing screening alone.</p> <p>Substation A (within the eastern part of the Principal Site) is located immediately north of a small woodland block, which provides a degree of screening in views from the south and south-east, including from the edge of Glentworth. A larger area of woodland approximately 300 m to the north-east (Blythe Close) screens views from the nearest section of Middle Street. Two further, small woodland blocks approximately 240 m and 320 m to the north also provide localised filtering of some views to the edge of Harpswell in the north. Substation B was required to be located in the northwestern part of the Principal Site due to cabling and access requirements, where existing woodland is more limited. The former orchard north of Springthorpe Grange and adjacent to School Lane, whilst a relatively modest feature, serves to limit views from the curtilage of Springthorpe Grange and from the corner of School Lane, as well as forming the basis for more extensive woodland mitigation planting. Existing hedges, whilst generally cut low, are more prevalent in this part of the Principal Site than along the central are along Common Lane. All are within the Order limits and will be allowed to grow taller, including those between Substation A and Springthorpe Cottages.</p>
Q1.9.10	Applicant	<p>Glentworth Hall</p> <p>Is there any particular reason why there is no viewpoint (ES Figure 12-12 [APP-184]) located between Glentworth Hall (Grade II* Listed) and the Principal Site, particularly given the; significance of this Listed Building; topography and close proximity?</p>	<p>Aside from Northlands Road and Kexby Road, there is no public access within the area between the Principal Site and Glentworth Hall. Viewpoint 5 on Kexby Road was selected, with agreement following review by the LCC Landscape Officer, as being representative of receptors on the edge of Glentworth village. The exterior and interior of Glentworth Hall was visited by the landscape and heritage consultants; the latter obtained photographs that informed the assessment. Visibility of towards the Scheme was observed to be limited, with no significant effects recorded in relation to the Grade II* listed heritage asset in Chapter 8: Cultural Heritage of the ES [APP-039]. No response was received from Historic England with request to specific viewpoint locations, including those associated with Glentworth Hall.</p>
Q1.9.11	Applicant and LCC	<p>New Bridleway Update</p> <p>ES Paragraph 12.6.17 [APP-043] states: <i>“At the time of ES preparation, an application to claim a new bridleway has been submitted to LCC, reinstating a section of the historic ‘low’ route along the base of the Cliff between Harpswell and Glentworth, parallel to Middle Street.”</i></p> <p>Can LCC and the Applicant please provide an update?</p>	<p>The Applicant notes that it is not the party bringing forward the application for a new bridleway, and it is not otherwise involved in the application process. However, based on updates made by LCC to the Applicant, the Applicant understands that the claimed route (Glentworth and Harpswell DMMO application Ref: DMMO 371) is opposed. LCC’s Public Rights of Way and Access Officer confirmed in an email on the 16 February 2024 that the case was to be referred to the Planning Inspectorate to determine on behalf of the Secretary of State whether the order is to be confirmed. Lincolnshire County Council is preparing its case for referral to the Planning Inspectorate. The Public Rights of Way and Access Officer confirmed that: <i>“The processes used to consider an opposed Order (e.g. written representation, public hearing or public inquiry) can be lengthy and cases submitted to the Inspectorate, in recent years, are taking a year or two to reach a conclusion. It is, therefore, likely to be a considerable length of time before the outcome of the Harpswell/Glentworth Order is known.”</i></p>
Q1.9.12	Applicant	<p>PROW locations</p> <p>ES Paragraphs 12.6.105-12.6.108 and 12.6.122 [APP-43] outline the Public Rights of Way (PRoW) where the site is theoretically visible from. Can the Applicant label these PRoW on Figure 12-7 [APP-179]?</p>	<p>An updated Figure 12-7 of the ES [EN010142/APP/6.3(Rev01)] has been submitted at Deadline 3, as requested.</p> <p>The Applicant has also added additional annotation to the updated figure that reflects other PRoW noted within Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)]. This includes</p>

ExQ1	Questions to:	Question:	Applicants Response:												
			<p>clarification that the section of the bridleway within the Order limits, south of Kexby Road, is referenced as Gltw/85/1, not Fill/85/1 as stated. PRow references change when crossing the parish boundaries. The Applicant has also updated the reference to this PRow in Paragraph 12.6.106 (item b) in Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)].</p>												
Q1.9.13	Applicant	<p>Cumulative Effects Assessment Terminology In terms of Cumulative effects, ES Paragraph 18.4.29 [APP-049] states: <i>“The significance of effect interactions (also referred to as combined effects) and cumulative effects has been determined in accordance with the criteria set out in Table 18-6. The terminology for significance of effect differs from the general assessment methodology, presented in Chapter 5: EIA Methodology of this ES [EN010142/APP/6.1], so that the significance of cumulative effects can be differentiated.”</i> Does the use of different terminology allow for an easy comparison between effects in isolation and cumulative effects? For example, is ‘minor’ equivalent to ‘slight’? It would be useful if the Applicant could provide a table or explanation as to the relationship between the terminology used in the rest of the ES and that used in this Chapter.</p>	<p>The Applicant established the proposed significance categories for the cumulative and effect interactions assessment within Volume I, Chapter 17: Cumulative Effects of the Preliminary Environmental Information Report (PEI Report) (Ref 1-40).</p> <p>For clarity, Table below presents a comparison of the significance categories used in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] and how these relate to the significance categories presented in Chapter 5: EIA Methodology of the ES [APP-036].</p> <table border="1"> <thead> <tr> <th>Significance Category presented in Table 18-6 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]</th> <th>Significance Category presented within Table 5-2 of Chapter 5: EIA Methodology of the ES [APP-036]</th> </tr> </thead> <tbody> <tr> <td>Very Large</td> <td>Major</td> </tr> <tr> <td>Large</td> <td>Major</td> </tr> <tr> <td>Moderate</td> <td>Moderate</td> </tr> <tr> <td>Slight</td> <td>Minor</td> </tr> <tr> <td>Neutral</td> <td>Negligible</td> </tr> </tbody> </table>	Significance Category presented in Table 18-6 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]	Significance Category presented within Table 5-2 of Chapter 5: EIA Methodology of the ES [APP-036]	Very Large	Major	Large	Major	Moderate	Moderate	Slight	Minor	Neutral	Negligible
Significance Category presented in Table 18-6 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]	Significance Category presented within Table 5-2 of Chapter 5: EIA Methodology of the ES [APP-036]														
Very Large	Major														
Large	Major														
Moderate	Moderate														
Slight	Minor														
Neutral	Negligible														
Q1.9.14	Applicant	<p>Cumulative Effects - Sequential How does ES Paragraph 18.13.16 ES [APP-049] consist with the consideration of ‘sequential impacts’ at 18.13.3b. It is also noted that Table 18-10 and 18-11 both ‘screen out’ developments on the basis of intervening distance but how does this take into account sequential impacts (effects arising from receptors moving through the landscape)? In addition, the brief assessment of sequential views is noted at ES Paragraphs 18.13.21 to 18.13.28, however, the conclusions at paragraph 18.3.28 do not assign the same assessment terms to the effects as those listed at Table 18-6 and used elsewhere in the Chapter. Can the Applicant explain why and expand on the conclusions reached at ES paragraph 18.3.28?</p>	<p>The Applicant has considered sequential effects through the use of representative viewpoints; the cumulative effects assessed for each; and professional judgments in terms of the spatial relationships between these viewpoints and the likely speed, time or frequency receptors may experience when moving between them. The Applicant notes that cumulative visual assessment is a complex area with limited guidance; and that it is invariably not possible to quantify numbers or movement of receptors on all combinations of potential routes across an extensive area. As such, the summaries provided in paragraphs 18.13.23 to 18.13.28 in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] are intended to provide an overview of these likely significant cumulative sequential visual effects, within the context of these judgements.</p> <p>With reference to Table 18-6 in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] (which states the assessment terms) and Tables 18-16, 18-17 and 18-18 (which summarises the cumulative assessment for the Scheme), the Applicant has assumed that sequential visual cumulative effects would be large adverse as a worst case, reflecting representative Viewpoints 9 (Kexby Road) and 13 (Public footpath on Hemswell Cliff) at the construction and Year 1 stages; and for representative Viewpoint 13 only at the Year 15 operational stage. For representative Viewpoint 13, these large adverse significant effects would not likely be experienced sequentially, given the lack on onward access along the PRow to the wider recreational network. The Applicant therefore considers that at Year 15, significant cumulative visual effects arising from sequential views are expected to be moderate adverse as a worst-case.</p>												

ExQ1	Questions to:	Question:	Applicants Response:
Q1.9.15	Applicant	<p>ZTV Methodology and Visualisation Methodology Paragraph 3.8 of the Landscape & Visual Review attached to LCC's LIR [REP1A-001] states in full: <i>"The process of modelling Zones of Theoretical Visibility (ZTVs) is described within paragraphs 12.4.12 and 12.4.13. These paragraphs are not explicit regarding what parameters the proposals have been modelled to and it has been assumed that the ZTV is generated using the maximum parameters provided within Chapter 3: Scheme Description, as this would provide a 'worst case' ZTV. However, this needs to be clarified."</i> Furthermore, paragraph 3.9 (not numbered) questions the visualisation methodology. Can the Applicant please provide a response?</p>	<p>The above response with respect to likely receptor travel times and probability of using particular routes informed the screening process provided in Tables 18-10 and 18-11 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]. This was again based on professional judgement, including numerous site visits across the Principal Site, Cable Route Corridor and surrounding area. The Applicant notes that several applications are located on the west side of the River Trent, to which travel times from the Principal Site are longer due to the limited river crossings. As noted in paragraph 18.13.26 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], away from Middle Street the limited number of recreational routes such as PRoW from which views are available of the Principal Site, combined with the broadly east-west orientation of roads across the Till Vale, informs the summary provided in paragraph 18.13.28.</p> <p>As stated in Appendix A to Applicant's Response to Local Impact Reports [EN010142/APP/9.26], details of the parameters used to produce the ZTVs are provided on the relevant ZTV plans (Figure 12-4 of the ES [APP-175 to APP-176]). These include 3.5 m height for the solar panels; 4 m height for the Battery Energy Storage Stations (BESS)/Solar Stations; and 10m (as a worst-case) for the substations. The screening effect for the ZTVs have been modelled at assumed heights of 8 m for buildings and 11 m for woodland.</p> <p>The visualisations have been presented using a 3D model created from the Applicant's design described in Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev02)]. These drawings are considered to represent a worst-case scenario and reflect the maximum parameters provided in Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev02)].</p>
Q1.9.16	Applicant	<p>Access and Highway Elements Paragraph 4.15 of the Landscape & Visual Review attached to LCC's LIR [REP1A-001] asserts that "access, and the wider highways elements of the scheme do not appear to be fully considered in the LVIA beyond increased traffic during construction and decommissioning phases". Can the Applicant please provide a response?</p>	<p>Detailed vegetation removal plans with respect to highways elements of the Scheme are provided in Appendix 12-7: Arboricultural Impact Assessment of the ES [APP-107 to APP-109] and the Hedgerow Removal Plan [AS-044]. The removal of vegetation for construction has been limited as far as possible during the design process, through the preferential use of existing field entrances and the identification and avoidance of sensitive ecological, arboricultural and landscape constraints, such as important hedgerows and species-rich road verges. All vegetation removal works will be required to be undertaken in accordance with the Construction Environmental Management Plan(s), which must be submitted to, and approved by, the relevant local authority before construction can commence under Requirement 12 of the draft DCO [EN010142/APP/3.1(Rev04)] and must be substantially in accordance with the Framework CEMP [EN010142/APP/7.8(Rev02)]. Measures outlined in this document include the protection of trees during works, including fencing, root protection and exclusion zones to avoid damage to soil structure; requirements for nesting birds, reptiles and amphibians; biosecurity; and lighting. Should any additional tree works be required, these must be discussed with an arboriculturist and no works can be undertaken without the prior consent of the relevant local planning authority.</p> <p>Although Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)] does not refer to every element of vegetation loss on the highway network, the Applicant does not consider that this would result in any new or changed significant landscape and visual effects. This is because the vegetation loss on the highway network largely relates to the provision of construction accesses and vehicle passing places on construction access routes to the Cable Route Corridor. In accordance with paragraph 6.3.7 bullet (k) of the Framework LEMP [EN010142/APP/7.17(Rev03)], any habitat removed on the Cable Route</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.9.17	Applicant	<p>Visual Assessment Can the Applicant provide a response to the discrepancies highlighted at paragraphs 5.12 to 5.13 of the Landscape & Visual Review attached to LCC's LIR [REP1A-001]?</p>	<p>Corridor would be reinstated following the completion of construction. Paragraph 12.8.13 of Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)] states that: "No significant landscape effects are expected for LLCA in relation to construction of the Cable Route Corridor. The works will be of relatively limited extent and of a temporary, short-term duration, with very localised vegetation removal, plant and traffic movement, compounds and lighting. The most sensitive landscape elements will be the roadside verge Local Wildlife Sites, more mature hedgerows associated with older field patterns and pasture along the River Trent. The level of effect is minor adverse at most, and not significant." This conclusion is considered to remain valid.</p> <p>The significant residual effects for the landscape character area that includes the Principal Site (LLCA 3a Till Vale Open Farmland), as stated in Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)], relate primarily to the introduction of solar infrastructure. However, this overall significant landscape effect will encompass the collective, albeit very minor, changes in vegetation, including those that are not likely to be visible from publicly accessible locations.</p> <p>As stated in response to paragraph 5.12 within Appendix A of Applicant's Response to Local Impact Reports [EN010142/APP/9.26], the Applicant confirms that the assessment provided in Appendix 12-6 of the ES [APP-106] was the correct version. The magnitude of change for Viewpoint 13 (Public footpath, Millfield, Hemswell) is medium, which for the high sensitivity receptor will result in a major adverse (significant) effect.</p> <p>Paragraph 12.8.27 and paragraph 12.8.33 of Chapter 12: Landscape and Visual Amenity of the ES [APP-043] incorrectly stated a moderate adverse (significant) effect at the construction and operational year 1 stages respectively.</p> <p>Responding to Paragraph 5.13 within Appendix A of Applicant's Response to Local Impact Reports [EN010142/APP/9.26], the Applicant confirms that the magnitude of change for Viewpoint 19 (Grange Cottage, School Lane) for the construction and operational year 1 is high, which for the medium sensitivity receptor will result in a major adverse (significant) effect.</p> <p>Appendix 12-6 of the ES [APP-106] incorrectly stated a moderate adverse (significant) effect at the construction and operational year 1 stages; and Paragraph 12.8.27 of the Chapter 12: Landscape and Visual Amenity of the ES [APP-043] incorrectly stated a moderate adverse (significant) effect during the construction stage.</p> <p>The Applicant has provided corrected versions of Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)] and Appendix 12-6 of the ES [EN010142/APP/6.2(Rev01)] at Deadline 3.</p>
Q1.9.18	LCC and Applicant	<p>Effect of mitigation planting LCC LIR paragraph 5.14 [REP1A-001] states in part: "This reduced to three receptors or viewpoints experiencing significant residual effects at year 15 which suggests a potential over reliance upon mitigation planting to screen the proposals without full attention to the potential impact of this screening on the landscape." Could LCC please explain the rationale for the conclusion that there is an over reliance on mitigation planting and</p>	<p>As stated within Appendix A of Applicant's Response to Local Impact Reports [EN010142/APP/9.26], the Applicant acknowledges that the proposed mitigation will be key factor in reducing significant visual effects to those receptors located away from the elevated Cliff locations.</p> <p>Principles for the establishment of this mitigation are secured through the Framework LEMP [EN010142/APP/7.17(Rev3)]. Requirement 7 of the draft DCO [EN010142/APP/3.1(Rev04)] provides that a Landscape and Ecological Management Plan must be submitted to and approved by the relevant planning authority (/authorities) before works can commence on the Scheme. The LEMP is required to be substantially in accordance with the Framework LEMP [EN010142/APP/7.17(Rev03)], meaning that any</p>

ExQ1	Questions to:	Question:	Applicants Response:
		clarify what this means in terms of the effects. Could the Applicant please provide a response to paragraph 5.14?	<p>landscape and ecological mitigation measures included in the Framework LEMP (which was submitted as part of the DCO Application, and the measures contained therein were considered in the assessment of landscape and visual effects presented in Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)]) must be reflected in the detailed Landscape and Ecological Management Plan(s).</p> <p>The Applicant acknowledges within the LVIA presented in Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)] that there is a balance to be struck in terms of intentional screening of the Scheme against loss of locally important views both to and from the Cliff that inform the AGLV designation. Consideration of specific viewpoints with respect to this matter is provided below.</p>
Q1.9.19	Applicant	<p>Visual Assessment Could the Applicant please provide a response to paragraphs 5.15 to 5.17 of Landscape & Visual Review attached to LCC's LIR [REP1A-001].</p>	<p>The Applicant has provided a detailed response to paragraphs 5.15 to 5.17 within Appendix A of Applicant's Response to Local Impact Reports [EN010142/APP/9.26].</p> <p>This includes paragraph 5.15 regarding viewpoint 2b (Common Lane), viewpoint 4 (Middle Street above Harpswell) and viewpoint 20 (A631 east of Corringham windmill) and the potential for visual effects to be underplayed. The response to paragraph 5.16 concerns the reporting of visual receptors as against representative viewpoints; the response to paragraph 5.17 concerns the potential for underestimated visual effects in relation to the construction and decommissioning phases.</p>
Q1.9.20	WLDC	<p>Explanation for conclusions Could WLDC please provide further explanation for the conclusions reached at paragraphs 6.15 to 6.40 of its LIR [REP1A-005]? The conclusions with regard to effects of the Proposed Development are noted but can WLDC provide any assessment which supports these conclusions?</p>	No response required from the Applicant.
Q1.9.21	WLDC and Applicant	<p>Requirement 7 – OLEMP Paragraph 6.44 of WLDC's LIR [REP1A-005] states in part: <i>"WLDC does however maintain concerns around the cumulative approach and impacts upon the successful implementation of the OLEMP (e.g. within the cable corridor). More detail around how projects will be phased and mitigation delivered is required to avoid abortive implementation of measures, which could elongate the time period for when mitigation is delivered."</i> Could WLDC please expand on what it means with reference to 'abortive implementation' and set out what additional detail is required? Could the Applicant also respond to this point?</p>	As set out within the Applicant's Response to Local Impact Reports [EN010142/APP/9.26] in response to West Lindsey District Council's LIR paragraph 6.44, the Framework LEMP [EN010142/APP/7.17(Rev03)] will be a live document that will continue to be refined based on ongoing discussions between the Applicant, statutory bodies, and relevant stakeholders. This includes refinements regarding the appropriate timing of the delivery of mitigation measures in line with the progression of relevant cumulative schemes. A final (detailed) LEMP will be prepared prior to the commencement of works, which must substantially accord with the Framework LEMP, in accordance with Requirement 7 in Schedule 2 of the draft DCO [EN010142/APP/3.1(Rev04)] . The final LEMP will be updated at 5-year intervals throughout the operational life of the Scheme.

10.Noise and Vibration

Table 10-1: Noise and Vibration

ExQ1	Questions to:	Question:	Applicants Response:
Q1.10.1	Applicant	<p>Inverters</p> <p>The Applicant has updated the noise modelling [AS-009] to reflect that it has a new figure (84dB(A) as opposed to 88dB(A)) for operational noise from inverters. Could the Applicant please explain why this figure has changed? How has this affected the assessment contained within the ES?</p>	<p>The figure was originally (in Chapter 13: Noise and Vibration of the ES [APP-044]) written as the unweighted value of 88 dB and has now (in Chapter 13: Noise and Vibration of the ES [AS-006]) been presented as the A-weighted equivalent, 84 dB(A), for consistency with the rest of the chapter. The assessment is therefore unaffected by the change which is purely presentational.</p>
Q1.10.2	Applicant	<p>Contour Drawing</p> <p>ES Figure 13-2, which is the noise contours drawing [AS-017], has been revised. However, this appears to show an increase in noise in the SE corner of the Principal Site despite a reduction in inverter operational noise. Could the Applicant explain why the contour drawing appears to show increased noise in certain locations? If there is an increase then how does this affect the assessment contained in the ES?</p>	<p>Figure 13-2 of the ES [AS-017] was revised to align with the Indicative Principal Site Layout shown in Figure 3-1 of the ES [AS-055]. In particular, in the south-east corner of the Principal Site, it reflects the BESS and Solar Stations being moved from the east side of Field 93 to the west side, as well as being moved from next to Substation A in Field 92 further west to Field 75. Both of these changes move some BESS and Solar Stations further from nearby noise sensitive receptors.</p> <p>As explained in response to Q1.10.1 above, this does not include a reduction in inverter noise. It also does not alter any of the conclusions drawn in the ES with regards to likely significant effects with respect to operational noise.</p>
Q1.10.3	Applicant	<p>Other developments</p> <p>ES Paragraph 13.3.2 [AS-006] states: <i>“While some temporary changes in baseline noise levels between the time of the baseline monitoring and the anticipated construction period may occur in some localities due to temporary noise sources such as construction works, no developments are understood to be proposed that may influence noise levels in the operational noise Study Area (defined in paragraph 13.4.3) that would lead to a major additional and ongoing noise source which would notably alter the local baseline noise environment prior to 2028 (e.g. highway or railway schemes, major industrial facilities).”</i></p> <p>Does this take into account the projects identified in ES Chapter 18 [APP-049]?</p>	<p>The Applicant can confirm that this does take into account the projects identified in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)].</p>
Q1.10.4	Applicant	<p>Noise Modelling Data</p> <p>Paragraphs 4.1.5 to 4.1.7 of the ES Appendix 13-4 (Noise Modelling) [AS-008] refer to sound level data from battery storage units and substation plant. The paragraphs explain that these data are based on similar developments in the AECOM library. Please could the Applicant direct the ExA to any application document which expands on this? If not, could the Applicant please provide evidence to support the use of data outlined in these paragraphs (for example with reference to specification sheets)?</p>	<p>The Applicant has reviewed ES chapters from a wide variety of similar applications (including Gate Burton Energy Park [EN010131], Cottam Solar Project [EN010133], West Burton Solar Project [EN010132], East Yorkshire Solar Farm [EN010143], Sunnica Energy Farm [EN010106] and Longfield Solar Farm [EN010118]) and notes that similar sound power levels have been assumed for these developments. For example, sound power levels of between 88 and 100 dB(A) have been used for transformers which compares well with the assumed 95 dB(A) in Appendix 13-4 of the ES [AS-008] and levels between 79 and 96 dB(A) have been used for the inverters associated with the BESS, compared with the 84 dB(A) used in Appendix 13-4 of the ES [AS-008].</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.10.5	Applicant	<p>Assumptions</p> <p>ES Chapter 13 Paragraph 13.3.10 [AS-006] sets out the 'operational assumptions and limitations' which underpin the operational noise model. This paragraph states in part:</p> <p><i>“Digital noise modelling of the Scheme once it is operational has been based on the parameters set out in Figure 3-1: Indicative Principal Site Layout Plan of this ES.”</i></p> <p>However, this plan does not appear to set parameters for the location of inverters, transformers and BESS given its indicative role. Where has the Applicant assumed that the different parts of the development (for example 'solar stations' and 'BESS') would be located for the purpose of undertaking the operational noise model? If the assumption is that they would be in the locations indicatively shown on Figure 3-1 [APP-128], then how does this allow for a worst-case scenario assessment for alternative locations for BESS units and Solar Stations (allowed under the Works Plans, subject to the 250m parameter for residential properties set out in the Outline Design Principles Statement)?</p> <p>Please note that the Technical Note at Appendix C of the Applicant's Responses to Relevant Representations [REP1-028] appears to focus on a worst-case scenario (scenario 1). Has the same approach been taken to the noise modelling at ES Appendix 13-4 [AS-008]?</p>	<p>Given the Applicant's commitment that noise at sensitive receptors will be no higher than the levels presented in Section 13.8 of Chapter 13: Noise and Vibration of the ES [AS-006], as per requirement 17 of the draft DCO [EN01010142/APP/3.1(Rev04)], it is important that the assumed sound power levels for the plant are realistic and achievable. An overly worst-case assumption would only lead to a less stringent condition on noise from the development.</p> <p>The Applicant can confirm that the operational noise model used the locations shown in the Indicative Principal Site Layout in Figure 3-1 of the ES [AS-055]. However, given the Applicant's commitment that noise at sensitive receptors will be no higher than the levels presented in Section 13.8 of Chapter 13: Noise and Vibration of the ES [AS-006], as per requirement 17 of the draft DCO [EN01010142/APP/3.1(Rev04)], this does in fact represent a worst-case scenario in practice.</p> <p>Scenario 1 in the Technical Note at Appendix C of the Applicant's Responses to Relevant Representations [REP1-028] represents a theoretical worst-case scenario, should much of the infrastructure be exactly 250 m away, and for East Cottage only as there are too many potential layout combinations across the Principal Site for it to represent a worst-case scenario for all noise sensitive receptors. As such this is superseded by requirement 17 of the draft DCO [EN01010142/APP/3.1(Rev04)] that any changes in layout (from Scenario 3a) will not lead to higher noise levels at any noise sensitive receptors, ensuring that any theoretical worst-case (whereas much plant as possible is 250 m away from receptors) does not arise.</p>
Q1.10.6	Applicant	<p>Tillbridge Solar Project Acoustics Technical Note</p> <p>Paragraph 4.2.2 of the Technical Note at Appendix C of the Applicant's Responses to Relevant Representations [REP1-028] states in full:</p> <p><i>“The results of noise predictions at East Cottage, presented as specific noise levels, are summarised in Table 4-1. Full modelling results for Scenario 3a (i.e. the illustrative scheme included within the DCO application) are presented within the appendices of this technical note.”</i></p> <p>Why have the full modelling results for the other scenarios not been provided (in particular scenario 1)?</p>	<p>Full modelling results for the other scenarios were not provided as, with the commitment that noise at sensitive receptors will be no higher than the levels presented in Section 13.8 of Chapter 13: Noise and Vibration of the ES [AS-006], they represent theoretical worst-cases only that would not arise in practice. By making this commitment with respect to Scenario 3a, the Applicant is applying the most stringent condition on the noise from the development.</p> <p>Nevertheless, for additional clarity, the full modelling results for the other scenarios look very similar to those for Scenario 3a, typically within 1-3 dB as summarised in Table 4-1 of the Technical Note included within Appendix C the Applicant's Responses to Relevant Representations [REP1-028], with the tonal component of the substation at a similar level across all scenarios as the substation location is unchanged. An updated version of the Technical Note with modelling results for Scenario 1 added for information has been provided within Appendix B of this document.</p>
Q1.10.7	Applicant	Requirement 17	<p>The Applicant is open to imposing the corresponding noise limit on East Cottage suggested by this requirement, on the condition that it is enforced through noise modelling at the detailed design stage when</p>

ExQ1	Questions to:	Question:	Applicants Response:
		<p>Draft DCO [APP-014] Requirement 17 relates to operational noise. Given that 'the Applicant commits that noise at sensitive receptors will be no higher than the levels presented in Section 13.8 of Chapter 13: Noise and Vibration of the ES' (see paragraph 5.1.1 of the Technical Note at Appendix C of the Applicant's Responses to Relevant Representations [REP1-028]), what is the Applicant's view on whether it would be acceptable to impose noise limits (in particular in relation to East Cottage, Northlands Road) within this requirement? In this regard, please also note the final sentence of paragraph 4.1.3 of the Technical Note.</p>	<p>final parameters are known. Attempted enforcement through noise monitoring at East Cottage would not work as levels are low enough to be influenced by background sound and therefore the condition could be breached from day-to-day variations in the existing ambient environment irrespective of the noise from the development.</p>
Q1.10.8	Applicant	<p>Tillbridge Solar Project Acoustics Technical Note</p> <p>a) Could the Applicant please explain whether the medical condition identified in representations from the occupier of a residential property (pertaining to the Technical Note's [REP1-028] assessment) has been taken into account?</p> <p>b) If not, why not? Has the Applicant considered additional mitigation measures in this regard?</p> <p>c) Is the Applicant aware of any best-practice guidance on acoustic assessment in such instances and has it been followed?</p> <p>Given that a response to this question may contain information regarding an individual's health, please separate this response and mark it as confidential such that it can be redacted prior to publication if necessary.</p>	<p>The Applicant's response is provided within Appendix C of this document.</p>
Q1.10.9	Applicant	<p>Outside of construction hours</p> <p>ES Paragraph 13.4.22 [AS-006] states:</p> <p><i>"Some works activities may need to occur out of these hours/times due to activities requiring to be undertaken continuously (such as trenchless methods – part of NGA5) if it is not safe or practical to end it at 19:00 on a particular day. Where work outside of times is necessary, prior notification will be provided to the Local Planning Authority (LPA), in the form of a Control of Pollution Act (CoPA) (Ref 1-9) Section 61 consent application where necessary."</i></p> <p>Could the Applicant please explain how the DCO would ensure that this is the case (i.e. where in the dDCO is there a provision to control this)? Please note that the FCEMP [REP1-055] states that consents under s61 of CoPA 'would be voluntarily obtained'.</p>	<p>The Section 61 Consent process under the Control of Pollution Act 1974 (Ref 1-41) is a risk management tool for the Scheme to guard against the Local Authority issuing a Section 60 notice to stop works in the event of complaints. As such, the Section 61 process is voluntary and would not be a means to secure additional mitigation. If the Applicant thinks there is a risk of complaint due to construction noise, a Section 61 consent would be obtained. In the case of works that are proposed outside core work hours, there is a higher risk of complaints so the Applicant would voluntarily apply for Section 61 consent in this circumstance.</p>
Q1.10.10	Applicant	<p>Outside of construction hours</p> <p>Following on from the previous question, has the Applicant assumed any periods of construction activity falling beyond</p>	<p>Chapter 13: Noise and Vibration of the ES [AS-006] provides an assessment of construction noise effects. All construction activities are assessed as taking place during core daytime work hours with the exception of Horizontal Directional Drilling (HDD) activities, which may be required to take place</p>

ExQ1	Questions to:	Question:	Applicants Response:
		the normal construction hours and how has this been factored into the noise assessment/ modelling?	continuously over a number of days. As such, HDD noise has been assessed as taking place during the night-time period, which is the most sensitive time of day that HDD activities could occur.
Q1.10.11	Applicant	<p>Change in layout ES Chapter 13 Paragraph 13.7.16 [AS-006] states: <i>“Consequently, if there is a decision in the future to move noise generating infrastructure closer to sensitive receptors than shown in Figure 13-1: Noise Sensitive Receptors and Noise Monitoring Locations of this ES [EN010142/APP/6.3], the Applicant commits that noise at sensitive receptors will be no higher than the levels presented in Section 13.8. This commitment will be secured through a requirement of the draft DCO [EN010142/APP/3.1].”</i></p> <p>Which requirement achieves this and how would it be enforced (and by whom)?</p>	<p>Requirement 17 of the draft DCO [EN010142/APP/3.1(Rev04)] provides the requirement for operational noise rating levels as set out in the ES to be complied with.</p> <p>Specifically, it requires under subclause (1) that no part of Work No.1 (being the solar PV panels), Work No 2 (being the BESS) and Work No. 3 (being the onsite substations) can commence until an operational noise assessment for the relevant part has confirmed that the noise rating levels in the ES can be met, incorporating both the final detailed design/plant and the final mitigation measures to be included. This operational noise assessment must be submitted to, and approved by, the relevant planning authority for that part. The process for this approval is set out in further detail in Schedule 17 (Procedure for Discharge of Requirements).</p> <p>It further requires under subclause (2) that the mitigation measures set out in that operational noise assessment (for each part of the authorised development) must be implemented as approved and maintained through the operation of the relevant part of the authorised development.</p> <p>If the Undertaker failed to comply with the obligation to carry out a noise assessment, or to implement the mitigation measures within the noise assessment as approved, it would be in breach of the requirement. The Undertaker would therefore be liable to enforcement action by the relevant planning authority under section 161 of the Planning Act (Ref 1-4), for carrying out development in breach of the terms of an order granting development consent or otherwise failing to comply with the terms of an order granting development consent. In that situation, the Applicant would expect the relevant planning authority to serve an enforcement notice, setting out the steps required to be taken in order to achieve compliance with the requirement. Should the Applicant fail to comply with such a notice, the relevant planning authority has powers to achieve compliance, including entering the site to undertake the steps itself and recover the costs of doing so from the undertaker.</p>
Q1.10.12	Applicant	<p>Vibration – prior warning In relation to vibration, ES Paragraph 13.8.22 [AS-006] states in part: <i>“For PPV vibration levels anticipated to exceed 1.0mm/s, prior warning will be provided on the timings and duration of vibration generating activities. This will be secured through the Framework CEMP [EN010142/APP/7.8] and Framework DEMP [EN010142/APP/7.10], which will be secured through the DCO.”</i></p> <p>Where is provision made for this within the FCEMP and FDEMP?</p>	<p>Provision is made for this towards the end of Table 3-8 of the Framework CEMP [EN010142/APP/7.8(Rev02)] and Framework DEMP [EN010142/APP/7.10(Rev02)] where it is stated that: <i>“The effect of noise and vibration on nearby sensitive receptors can be minimised through a good communication strategy. Prior to construction works being undertaken, liaison will be undertaken with occupiers of sensitive receptors that may be adversely affected by construction noise and vibration.”</i></p>
Q1.10.13	Applicant	<p>Construction and decommissioning traffic noise ES Paragraph 13.8.26 [AS-006] states in part: <i>“The construction compounds are located between 2 and 5km apart along the Cable Route Corridor and therefore any</i></p>	<p>An estimated two months for primary construction activities along the Cable Route Corridor was calculated on the assumption of four cable installation teams working concurrently in separate sections of the corridor and each progressing approximately 100m per day. These assumptions are typical of the working method for cable installation and represent a typical duration for how long the cable installation in each section of the corridor would last. The duration of construction activities is not secured in the draft DCO</p>

ExQ1	Questions to:	Question:	Applicants Response:
		<p><i>one access would only be utilised for up to two months for the primary construction activities, excluding cabling and jointing bays activities"</i></p> <p>Could the Applicant please explain how a maximum period of two months has been calculated and does this represent a worst-case scenario? Is it controlled by the DCO?</p>	<p>[EN010142/APP/3.1(Rev04)]. The above assumptions have been used to provide context for the assessments within the ES. It is noted that this duration of work activities has not been used to determine the effect category for construction traffic noise, its significance or to negate need for mitigation within Chapter 13: Noise and Vibration of the ES [AS-006], however, the duration is referenced to provide context for how long the effect is likely to occur.</p>
Q1.10.14	Applicant	<p>HGV Movements</p> <p>ES Paragraph 13.8.29 [AS-006] states that HGV movements will be distributed evenly across a 10-hour window. How will this be controlled? Is this a worst-case?</p>	<p>HGV movements will occur in an eight hour window, avoiding network traffic peaks, which represents a worst case scenario in terms of hourly traffic flows as movements are compressed into a shorter period. This is set out in 16.4.21 of the Chapter 16: Transport and Access of the ES [APP-045]. This measure will be secured through the Framework Construction Traffic Management Plan (F-CTMP) [EN010142/APP/7.11(Rev03)]. It is a reasonable assumption based on operation of construction sites, that HGV arrivals and departures will follow a broadly even profile over the course of the day. Notwithstanding this, the ES assesses the impact of the peak of the construction period, with HGV calculations based on the shortest potential period of 24 months. Thus the daily and hourly calculations of HGV numbers, and the associated hourly traffic noise predictions, are robust. It is not considered necessary to introduce a control mechanism within the F-CTMP to ensure an even hourly distribution, as the peak calculations are robust.</p>
Q1.10.15	Applicant	<p>Construction overlap</p> <p>Paragraph 13.9.3 [AS-006] states: <i>"A method of scheduling construction traffic from different work teams so they do not overlap is secured in the Framework CEMP [EN010142/APP/7.8] and the Framework DEMP [EN010142/APP/7.10]."</i></p> <p>Where in the FCEMP/ FDEMP is this addressed?</p>	<p>The Applicant can confirm that paragraphs 2.3.3 and 2.3.4 of the Framework CEMP [EN010142/APP/7.8(Rev02)] present the guidelines for the Principal Contractor to consider during the construction phase. As explained in these paragraphs, the construction of the Cable Route Corridor will be undertaken in four concurrent phases with a dedicated team for each phase. It is anticipated that these teams will travel to their construction work areas and as such there will be limited if any overlap of construction traffic. The detailed sequencing will be determined by the Principal Contractor, once appointed, and presented in the detailed CEMP.</p> <p>For the decommissioning phase the scheduling of decommissioning traffic of different work teams will be undertaken to avoid overlap of route usage. This will be presented within the detailed Decommissioning Traffic Management Plan which will be produced by the appointed contractor. This is detailed in Table 3-8 of the Framework DEMP [EN010142/APP/7.10(Rev02)].</p>
Q1.10.16	Applicant	<p>Cumulative effects</p> <p>ES Paragraph 18.14.5 [APP-049] states in part: <i>"Even if other solar DCOs construct their Cable Route Corridor at the same time as the Scheme, it is unlikely that the worst-case scenario would be exceeded. However, the duration of these works is likely to be extended and, hence, the duration that receptors may be exposed to noisy works out of core hours would be increased. This extended exposure may affect the level of mitigation required for out-of-hours trenchless crossing work activities in which case the Section 61 process will be followed."</i></p> <p>Could the Applicant please confirm what effect would this have on the noise calculations presented in Chapter 13 [AS-006]?</p>	<p>The Applicant can confirm that the noise calculations presented in Chapter 13: Noise and Vibration of the ES [AS-006] cover all relevant cable laying activity and would be unaffected in this scenario in terms of the calculated noise and vibration levels. It would just be that there would be a higher risk of the works duration increasing.</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.10.17	Applicant	<p>Cumulative effects</p> <p>ES Paragraph 18.14.6 [APP-049] seems to indicate that an assumption is made that other projects will be subject to best practice and CEMPs and that ultimately this would mean the cumulative effects would be neutral. However, could the Applicant please explain whether a quantitative assessment of cumulative effects has been carried out? If not, then why not, particularly given that (in the case of Gate Burton, West Burton and Cottam) these data (in the form of application documents) are readily available to undertake such an assessment?</p> <p>The ExA notes that a quantitative approach has been taken with regard to cumulative traffic noise at Table 18-20. Why not over facets of construction and operation? For reference, the transport section of the cumulative Chapter has taken a much more thorough and quantitative approach to cumulative effects.</p>	<p>Table 3-1 in the Framework CEMP [EN010142/APP/7.8(Rev02)] clarifies that regular liaison meetings will be held with other construction sites within 500 m of the Scheme, to minimise dust and particulate matter. The Applicant has added a similar clause to Table 3-8 of the Framework CEMP [EN010142/APP/7.8(Rev02)] at Deadline 3, to cover noise and vibration.</p> <p>As discussed in the response to Q 1.10.16 above, the construction noise and vibration assessment presented in Section 13.8 of Chapter 13: Noise and Vibration of the ES [AS-006] associated with the Cable Route Corridor is, with the exception of the works duration, inherently cumulative. Onsite construction works from other local developments, such as Gate Burton Energy Park and Cottam Solar Project, would not give rise to materially different effects on sensitive receptors assessed within the ES due to the distance of works from the properties.</p> <p>Similarly cumulative operational noise has not been quantitatively modelled as, due to the distances involved between the projects, no changes to the noise and vibration levels reported in the ES would be expected.</p>
Q1.10.18	Applicant	<p>Cumulative effects</p> <p>ES Paragraph 18.14.14 [APP-049] states: <i>“Although noise levels at R14 and NR2 may increase as a result of cumulative noise, the increase would be less than 3 dB and not perceptible to the average person.”</i></p> <p>How has this figure been derived and where is the evidence of this?</p>	<p>The predicted rating noise level at NR2 from Table 13-17 of Chapter 13: Noise and Vibration of the ES [AS-006] is identified as 27 dB L_{Ar,Tr} and the cumulative development (ID 79) identifies a rating noise level of 31 dB L_{Ar,Tr} at NR2. The cumulative rating level from both developments would be 33 dB L_{Ar,Tr}, so the Scheme would increase the rating level by less than 3 dB. The combined rating noise level of 33 dB L_{Ar,Tr} would exceed the LOAEL of 30 dB L_{Ar,Tr} but would be below the SOAEL of 40 dB L_{Ar,Tr}. As such, there would not be a significant cumulative noise effect.</p>
Q1.10.19	Applicant	<p>Replacement Panels</p> <p>Has the Applicant undertaken an assessment of noise resulting from the replacement of panels, batteries and other development? If so, what are the assumptions behind this? If not, why not?</p>	<p>The Applicant has assumed that the noise resulting from the replacement of panels, batteries and other development will not exceed the levels generated during construction, as reported in Section 13.8 of Chapter 13: Noise and Vibration of the ES [AS-006], and would therefore not give rise to temporary significant effects.</p>
Q1.10.20	Canal and River Trust	<p>Response to Applicant</p> <p>In relation to noise and vibration, does the Canal and River Trust have any response to the representations made by the Applicant in the document titled ‘Applicant’s Responses to Relevant Representations’ [REP1-028] (PDF Page 31)?</p>	<p>The Applicant understands that the Canal and River Trust accepts the Applicant’s response to their representation on this matter as noted in the SoCG [EN010142/APP/9.20(Rev01)].</p>

11.Socio-economic effects

Table 11-1: Socio-economic effects

ExQ1	Questions to:	Question:	Applicants Response:
Q1.11.1	Applicant	<p>Amenity</p> <p>Planning Statement 6.14.30 states: <i>“The assessment of amenity effects in Chapter 14: Socio-economic and Land Use of the ES [EN010142/APP/6.1] has considered effects from Chapter 16: Transport and Access, Chapter 13: Noise and Vibration, Chapter 12: Landscape and Visual Amenity, and Chapter 6: Air Quality of the ES [EN010142/APP/6.1]. It concludes that considering the residual effects of these assessments results, and the proposed mitigation including woodland and hedgerow planting, appropriate control measures during construction and decommissioning and the securement of design principles for the detailed design, there would be no receptors that would experience a significant effect on their amenity, and as such there would be no effect during all phases of the Scheme.”</i></p> <p>How is this paragraph consistent with the conclusions on 'effect interactions' at ES Table 18-7 for certain residential receptors where 'significant effects' have been identified?</p>	<p>Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] and Chapter 14: Socio-economics and Land Use of the ES [APP-045] each consider and assess different types of effects. Whereas Chapter 14 provides an assessment of multiple impacts on local land use and amenity within 500m of the Order limits, Chapter 18 (specifically Section 18.5) reviews where individual receptors or receptor groups may be impacted by multiple effects. The effects conclusions presented in these chapters are therefore different, due to the nature of effects being considered.</p> <p>As set out in paragraph 18.4.2 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], the effect interactions assessment has been undertaken on a qualitative basis, using the results of the individual assessments, informed by professional judgement. The methodology at paragraph 18.5.1 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] states that the interaction of two or more predicted environmental effects resulting from the Scheme may collectively cause a greater (or lesser) effect than each effect in isolation. Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] has therefore identified where these effects may lead to effect interactions that would (for some receptors) result in a significant effect. It notes that potential effect interactions can occur for neighbouring residential properties and non-motorised user routes and identifies potential effects on an individual receptor basis.</p> <p>In terms of Table 18-7 in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] specifically, this table does not relate to cumulative effects on amenity but rather the interaction of two or more predicted environmental effects resulting from the Scheme that, collectively, may cause a greater effect than each effect in isolation (i.e., effect interactions). Table 18-7 sets out where a receptor has been identified to experience multiple effects above the negligible effect category in any of Chapter 16: Transport and Access [APP-047], Chapter 13: Noise and Vibration [AS-006], Chapter 12: Landscape and Visual Amenity [EN010142/APP/6.1(Rev01)], and Chapter 6: Air Quality [APP-037] of the ES, as applicable, and assesses whether the interaction of these effects will result in an overall effect that is significant. As such, the effects identified in Table 18-7 are not amenity effects, but rather effects on individual receptors arising due to the interaction of multiple other effects.</p> <p>The assessment methodology in Chapter 14: Socio-economics and Land Use of the ES [APP-045] considers effects on amenity, including on residential properties, whereby significant residual effects reported by a selection of other topics (Transport and Access; Noise and Vibration, Landscape and Visual Amenity, and Air Quality) could act in-combination to reduce amenity where two or more such effects would occur at the same time. Comparable amenity assessments, including those undertaken both for other NSIPs such as Thames Tideway Tunnel, and exemplar assessments such as the High Speed 2 Phase 1 Environmental Impact Assessment, have determined that less than five residential properties grouped together do not constitute a sizable proportion of the local community and therefore a significant in-combination amenity effect at smaller groups or individual properties is not possible. In each of these instances, the method was found to be sound. We therefore consider this approach to be justifiable to assess socio-economic amenity effects for the purpose of this DCO Application.</p> <p>Cumulative impacts on local land use and amenity are assessed in Section 18.15 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]. This assessment concludes that the effect of the Scheme and other cumulative schemes on local land use and amenity will be a neutral (not significant) cumulative</p>

ExQ1	Questions to:	Question:	Applicants Response:
			<p>effect through the construction, operation and decommissioning periods. Paragraph 6.14.30 of the Planning Statement [EN010142/APP/7.2(Rev02)] is therefore entirely consistent with the conclusions presented in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] with respect to cumulative effects on amenity.</p> <p>It is recognised, as described above, that there are individual properties where significant effects may be experienced. Where these effects occur individually, they have been reported in the individual topics assessments, and where two or more effects interact, they have been reported in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]. Were a group of five properties or more deemed to all experience a significant residual effect in relation to two or more of the other topics outlined above, occurring at the same time, a significant residual amenity effect would be reported. There are no such instances of this occurring in relation to the Scheme.</p>
Q1.11.2	Applicant	<p>Farming</p> <p>ES paragraph 14.6.21 [AS-029] states: <i>“As noted in Chapter 15: Soils and Agriculture of this ES [EN010141/APP/6.1], a soils and agriculture assessment work preapplication would be deficient for informing works in the Cable Route Corridor. As the works are brief with no loss or degradation of soils or agricultural land, this is not assessed in Chapter 15: Soils and Agriculture [EN010141/APP/6.1]. Therefore, only the Principal Site has been detailed in the existing socio-economic baseline and assessed for socio-economic and land use effects.”</i></p> <p>However, based on a worst-case construction period, what assessment has been undertaken on the effect of construction on the cable route corridor (a period within which at certain times agricultural land may not be farmed, for example)?</p>	<p>Land affected by the trenching works for the eventual cable path, either directly by trenching work or indirectly by severance, will be considerably smaller in extent than the Order limits, with the effect on each land holding taking place for a much shorter duration. The Applicant is seeking to come to voluntary agreements with landowners on the Cable Route Corridor. Details of the Applicant's progress in negotiations with affected landowners along the Cable Route Corridor are given in the Schedule of Negotiations [REP1-017]. As such, no significant effects on the farming businesses along the Cable Route Corridor are considered likely.</p> <p>As set out within Chapter 15: Soils and Agriculture of the ES [APP-046], paragraph 15.4.5 and the Framework Soil Management Plan [REP1-051] paragraph 3.1.2, prior to any cable trenching work taking place, the actual footprint of the cable trenching works (including any easements) will be subject to a detailed soil survey to inform the Soil Management Plan (SMP). Farmers will also be consulted regarding their cropping or livestock plans with the aim of minimising disruption to land management.</p> <p>The impact assessment for the agricultural land resource, soil resource and farming circumstances includes the cable trenching works within the Cable Route Corridor. But given the disparity in extent and duration, the overall impact assessment is not sensitive to the cable trenching works.</p>
Q1.11.3	Applicant	<p>Agricultural barns planning application</p> <p>In relation to the cable route, ES paragraph 14.6.49 [APP-045] states that a planning application for two agricultural barns was submitted to WLDC in November 2022 (application ref. 145882) and that <i>“it is anticipated that a solution can be found for the barns to be constructed in a way and in a location such that it would not affect the Scheme and vice versa”</i>.</p> <p>Could the Applicant update the ExA on whether any such solution has been found?</p>	<p>The Applicant has carried out work with the developers of the other solar DCO projects within the Shared Cable Route Corridor that has confirmed that it is possible for the cables of all four projects (should all four be consented and built) to pass through the area either around the barns (should they be built) or underneath them. It is the Applicant's preference (and, the Applicant understands, the preference of the other developers) that the cables are constructed around the barns. The technical advisors of each of the four projects have agreed that there is sufficient space to install the cables around the barns subject to the projects adopting a suitable cable formation. Also of note is the Examining Authority's Recommendation Report for the Cottam Solar Project [EN010133] in which they stated the following:</p> <p><i>“6.7.26 ... Furthermore, whilst we are mindful of the interaction of the Applicant's proposals with those of Mr and Mrs Hill under the Planning Permission, we note the Applicant's grid connection report... concludes that the cabling proposed could still be achieved in this location even following implementation of the planning permission [for the two agricultural barns]”...</i></p>

ExQ1	Questions to:	Question:	Applicants Response:
			<p>This supports the Applicant's statements within Chapter 14: Socio-economics and Land Use of the ES [APP-045], paragraph 14.6.49 suggesting that should the Scheme receive development consent the Cable Route Corridor for the Scheme and the two agricultural barns if built would be able to co-exist.</p> <p>There remains some uncertainty as to the design of the two agricultural barns and the location in which they are to be constructed within the land holding. The Applicant has sought to confirm the precise location in which the barns are to be constructed with the landowner and is awaiting this information. Should the Scheme receive development consent, the Applicant will carry out further refinement of the Cable Route Corridor in cooperation with the developers of the other projects that share the corridor. The Applicant is continuing to negotiate with the affected landowner with a view to reaching a voluntary agreement. Details of the status of the negotiations are provided in the Schedule of Negotiations [REP1-017].</p>
Q1.11.4	Applicant	<p>Employment generated ES paragraph 14.8.4 [APP-045] states in part: "The Applicant estimates that the Scheme will require a peak of 1,395 full-time equivalent (FTE) jobs, and an average of 812 gross direct FTE jobs on-site over the 24-month construction period." Could the Applicant explain: a) how these figures were derived, with specific reference to relevant projects or evidence; and b) the number of employees estimated for each type of employment (as specified in Table 2.4 of the Framework Skills, Supply Chain and Employment Plan [APP-232])</p>	<p>In response to a), the Applicant has derived these figures from experience of delivering solar PV schemes elsewhere and benchmarking against consented solar NSIPs where information from the planning stage is publicly available. Consideration has been given to employment requirements by task and by phase of work.</p> <p>As for b), the Applicant has prepared an expanded version of Table 2.4 of the Framework Skills, Supply Chain and Employment Plan [APP-232] which includes the number of employees estimated, as percentage of the total workforce, for each type of employment specified. This is provided within Appendix D of this document. It is not possible to state the number of employees estimated for each type of employment, as the figures have been benchmarked against other schemes where no such exact breakdown information is available. It should be noted that this is provided as part of the Applicant's response to ExQ1.11.4 for informational purposes only to assist the ExA – it does not represent a formal update to the Framework Skills, Supply Chain and Employment Plan [APP-232].</p>
Q1.11.5	Applicant	<p>Local Employment ES paragraph 14.8.6 [APP-045] states in part that 15% of construction staff could be sourced from within the 60-minute drive time Study Area. Which specific construction jobs would this apply to?</p>	<p>The Applicant expects that the proportion of the construction jobs which could be sourced from within the 60-minute drive time Study Area include those set out below, subject to viability. The list is prepared with reference to the job names set out in Table 2.4 of the Framework Skills, Supply Chain and Employment Plan [APP-232]:</p> <ul style="list-style-type: none"> • Civil workers • Labourers • Building construction labour • Security guards • CCTV workers • Fencing installation workers • Landscape installation workers
Q1.11.6	Applicant	<p>The 'Multiplier Effect' ES paragraph 14.8.11 [APP-045] states in part that employment growth will be likely to arise locally through manufacturing services and suppliers to the construction process. Could the Applicant explain what sort of manufacturing services and suppliers are being referred to here and their locations?</p>	<p>The Applicant considers it likely to be able procure civil materials and fencing from manufacturers/processors and suppliers sourced from within the 60-minute Study Area identified in Chapter 14: Socio-economics and Land Use of the ES [APP-045]. It may also be possible to use suppliers from the UK for other equipment and materials (e.g. batteries and earthing materials) which would be subject to the appointed contractor's procurement and the availability of these materials.</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.11.7	Applicant	<p>Gross Value Added</p> <p>ES paragraph 14.8.23 [APP-045] applies a Gross Value Added (GVA) per construction worker to the development. The total, based on ONS data, is £57,200 per worker. Could the Applicant please explain in more detail what this figure encompasses and whether the ONS data is applicable to construction workers working and staying away from home?</p>	<p>Gross Value Added (GVA) is a measure of the value of what the labour force produces, the output it generates within a geography, which would be that within the Scheme itself is in this context. As stated in Chapter 14: Socio-economics and Land use of the ES [APP-045] at paragraph 14.8.23, GVA per construction worker in the East Midlands was approximately £57,200 in 2019. This has been derived from identifying total output from the ONS Labour productivity by region by industry dataset for 2019 for the East Midlands (Ref 1-42) and dividing this by the number of jobs in the construction industry in the same region reported by the 2019 Business Register Employment Survey (Ref 1-43).</p> <p>Implicit in this assessment methodology is that the average GVA per construction worker generated from employment on the project is the same for all workers, regardless of whether they are home based. This is on the basis that the GVA they are generating would be that typical of those generated by workers where the Scheme is being built, the East Midlands. A GVA of £57,200 per worker has therefore been applied to all gross employment generated. In recognition that part of the labour force ordinarily resides outside the Study Area, the GVA they generated has been assessed at a regional level and the weight of this in terms of the impact and ultimately effect reported is correspondingly less (negligible, not significant).</p>
Q1.11.8	Applicant	<p>Agricultural Land</p> <p>ES paragraph 14.8.31 [APP-045] sets out proportions of overall agricultural land. Is this based only on the areas proposed for the siting of onsite substations and woodland? If so, why? What assessment has been undertaken of the socio-economic effects resulting from effects on agricultural production over the entire principal site and cable route corridor over the lifetime of the Proposed Development?</p>	<p>For context, the total area of the Principal Site at the time of submission of the Application was approximately 1350 hectares (ha).</p> <p>Paragraph 14.8.30 of Chapter 14: Socio-economics and Land use of the ES [APP-045], explains that the amount of agricultural land only that will be taken up by elements of the Scheme in the Principal Site (at the time of submission of the Application) is 1,212 ha. Paragraph 14.8.31 then provides percentages of the proportion of this land (1,212 ha) within different geographical areas. The 1,212 ha of agricultural land used to calculate percentages includes elements of the Scheme that will be removed following decommissioning such as solar panels and BESS, as well as elements that have the potential to be permanent such as onsite substations and proposed woodland planting. Therefore, the percentages are not just based only on areas proposed for the siting of onsite substations and woodland, and the assessment in Chapter 14: Socio-economics and Land use of the ES [APP-045] provides an assessment of the socio-economic effects on agricultural land of the entire Principal Site.</p> <p>The remaining land within the Principal Site (where infrastructure may also be located) is classed as non-agricultural land and is therefore not assessed within that section of Chapter 14: Socio-economics and Land use of the ES [APP-045]. This equates to approximately 138 ha, which makes up the total area of the Principal Site (as mentioned, was 1350 ha at the time of submission of the Application).</p> <p>To note, following the acceptance of the Change Request by the Examining Authority on 24 October 2024, the overall area of the Principal Site was reduced to approximately 1,345 hectares. The areas excluded from the Order limits mostly included non-agricultural and Grade 3b land. The Applicant prepared a Report on Cumulative Impacts of Solar Projects on Agricultural Land in Lincolnshire, at Appendix B of the Applicant's Response to Relevant Representations [REP1-028] for Deadline 1, which also provides a breakdown of the % of agricultural land, specifically Best and Most Versatile (BMV) land used by the Scheme and other solar projects within Lincolnshire.</p> <p>In regard to the Cable Route Corridor, as stated at paragraph 14.8.35, as all agricultural land within the Cable Route Corridor would be returned for use after construction, any temporary impact on agricultural production from the use of this land will not be discernible and as such there would be no effect. As noted in Chapter 15: Soils and Agriculture of the ES [APP-046], a soils and agriculture assessment work preapplication would be deficient for informing works in the Cable Route Corridor. As the works are brief with no loss or degradation of soils or agricultural land, this is not</p>

ExQ1	Questions to:	Question:	Applicants Response:
			assessed in Chapter 15: Soils and Agriculture of the ES [APP-046]. Therefore, only the Principal Site has been detailed in the existing socio-economic baseline and assessed for socio-economic and land use effects.
Q1.11.9	Applicant	<p>'Local land use and amenity' ES paragraph 14.8.35 [APP-045] states: <i>"Taking into account the residual effects assessment results of the air quality, noise and vibration, traffic and transport and visual assessments relating to the construction activities, there are no receptors that would experience a significant effect on their amenity during construction, and as such there would be no effect."</i></p> <p>Does this mean that in order for there to be any socio-economic effect, the effects arising in other topic areas must be 'significant'? If so, why? For example, is a 'slight adverse' noise effect assumed to result in 'no effect' on amenity?</p>	<p>The Applicant recognises that the methodology for assessing impact magnitude in relation to in-combination amenity effects set out in Chapter 14: Socio-economics and Land use of the ES [APP-045], is not set out in full detail. To assist the ExA the impact magnitude criteria applied in this assessment were as follows:</p> <ul style="list-style-type: none"> • High: Either three or more residual significant other effects for the receptor with at least one being of a major nature, or two major residual significant other effects. • Medium: Two significant residual other environmental effects with at least one being of a major nature. • Low: Two significant residual other environmental effects, both being moderate in nature. • No effect: One significant /and or less significant residual other environmental effects. <p>This methodology is based on that undertaken both for other NSIPs and exemplar assessments such as Thames Tideway Tunnel and the High Speed 2 Phase 1 Environmental Impact Assessment, as explained in the answer to Q1.11.1 above. Generally, the assessment being predicated on multiple effects occurring is based on the understanding from a socio-economic perspective that the benefits of enjoyment and wellbeing are likely to be significantly affected when compounding significant environmental effects arise at the same time.</p> <p>In an instance where a group of residential receptors (five or more) or sensitive other receptor (e.g. a visitor attraction) were to experience only a slight adverse noise effect, this would constitute no effect based on this methodology.</p>
Q1.11.10	Applicant	Further to Q1.11.9, does ES paragraph 14.8.35[APP-045] take into account the in-combination effects set out in ES Table 18-7 and 18-8 [APP-049], where in some cases 'significant effects' are identified?	As set out in the response to Q1.11.1, the assessment of effects on amenity presented in Chapter 14: Socio-economics and Land use of the ES [APP-045] and the assessment of effect interactions in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] consider different effects and follow different methodologies. Response to Q1.11.1 provides an explanation of what the two assessments take into account.
Q1.11.11	Applicant	<p>Existing employment ES paragraph 14.8.49 [APP-045] states in part: <i>"The Principal Site consists of agricultural land, and the Applicant has estimated that there are around 10 existing jobs supported by agricultural activities on the Principal Site."</i></p> <p>How has this figure and those contained in ES Table 14-20 been derived?</p>	There are 12 landowning farming businesses across the Principal Site. There would be no likely direct impact on the permanent employee numbers of these businesses, as the Scheme represents a diversification of their farming operations, and they would receive an income from the Scheme. Part-time employees that may have been seasonally employed would no longer be required. The 10 FTE jobs lost associated with this, which informed the assessment of operational phase employment in Chapter 14: Socio-economics and Land use of the ES [APP-045], was based on impact assessments undertaken for other NSIP solar schemes where the existing land use is predominantly arable agriculture. Consultation with the affected agricultural businesses has occurred as a result of statutory requirements and land negotiations. Discussions with the two tenant farmers affected has indicated that existing employment levels are such that less than 10 jobs will be lost, and as such this number represents a reasonable worst-case appropriate for informing the assessment.
Q1.11.12	Applicant	<p>Wider Employment and socio-economic effects At PDF page 139 of the Applicant's Response to Relevant Representations [REP1-028], the Applicant asserts that the <i>"Principal Site currently supports 10 jobs through agricultural activities, which will be offset by the provision of 11 jobs"</i></p>	The socio-economic impact of the use of the Principal Site on the wider rural economy has been considered through the application of the HCA Additionality Guidance (Ref 1-44) 'ready reckoner' in respect of the multiplier effect being applied to the existing jobs on-site to estimate off-site employment. This is as described at paragraphs 14.8.11 to 14.8.12 and 14.8.51 of Chapter 14: Socio-economic and Land Use of the ES [APP-045] with job numbers presented in Table 14-20. The table shows that for the 10 jobs identified as the worst-case direct employment on site lost through the operation of the Scheme, four induced and indirect jobs within the supply chain would also be lost. This assessment is considered to be appropriate to considering the effect of the socio-economic impact of the

ExQ1	Questions to:	Question:	Applicants Response:
		<p><i>running and managing the Scheme whilst its in operation</i>".</p> <p>Could the Applicant please direct the ExA to any assessment of the effect of the socio-economic impact of the Proposed Development on the wider rural economy (for example, employment in the local area which is currently supported by agricultural production on the application site)? If not, then why has no such assessment been undertaken?</p>	<p>Scheme on the wider rural economy based on the level of existing employment on-site and as being a typical methodology of estimating net employment effects arising from development proposals at planning stage.</p>
Q1.11.13	Applicant	<p>Tourism</p> <p>The ExA notes the Applicant's response to Stow Parish Council on PDF page 140 of the Applicant's Response to Relevant Representations [REP1-028] in relation to 'tourism'. Whilst the ExA acknowledges the Applicant's comments in relation to the ES, can the Applicant direct the ExA to any detailed explanation or analysis of the effect of the Proposed Development on tourism in the application documents and if not, why not?</p>	<p>The Applicant has prepared a further assessment of the impacts of the Scheme on tourism within a technical note presented in Appendix D of Applicant's Response to Local Impact Reports [EN010142/APP/9.26]. The assessment concludes that the impact of the Scheme on visitor expenditure, visitor attractions, recreation facilities and other tourism and recreation receptors is not significant during the construction/decommissioning and operational phases.</p>
Q1.11.14	WLDC and Applicant	<p>Tourism</p> <p>Paragraph 8.14 of the WLDC LIR [REP1A-005] states in full:</p> <p><i>"Notwithstanding the Applicant's assessment, WLDC has significant concerns regarding the potential impact upon the tourism industry, which would begin to be impacted through the influx of workers employed on a number of projects over a significant period of time (up to a decade)."</i></p> <p>Could WLDC please provide an explanation for this conclusion and identify what effect this would have (using EIA terminology)? Could the Applicant please respond to this point?</p>	<p>Recognising that visitor accommodation could be impacted by Scheme through an influx of construction workers, the Applicant assessed potential effects on this sector workers in Chapter 14: Socio-Economics and Land Use of the ES [APP-045]. To support this, the Applicant has prepared a further assessment of the impacts of the Scheme and the cumulative schemes on this sector within a technical note presented in Appendix C of Applicant's Response to Local Impact Reports [EN010142/APP/9.26]. The assessment concludes that the impact of the Scheme on visitor accommodation is not significant during the construction/decommissioning and operational phases.</p>

12. Soils and Agriculture

Table 12-1: Soils and Agriculture

ExQ1	Questions to:	Question:	Applicants Response:
Q1.12.1	Applicant	<p>Agricultural Land</p> <p>What is the likely impact on ALC of the proposed cable route and what mitigation has been proposed in advance assuming a reasonable worst case scenario?</p> <p>Ref: 6.1 Chapter 15 Soils and Agriculture [APP-046].</p>	<p>Cable trenching works will have no impact on the extent of the agricultural land resource or the ALC Grade of that resource. The Framework Soil Management Plan (SMP) [REP1-050] includes measures to conserve soil volume and functional capacity through the trenching works with appropriate aftercare. These measures are secured through Requirement 18 in Schedule 2 of the draft DCO [EN010142/APP/3.1(Rev04)], which provides that a detailed SMP must be approved by the relevant local planning authority (/ies) and be substantially in accordance with the Framework SMP. Agricultural land is routinely trenched for the laying of field drains with no loss of land extent or quality. The land will be available for arable farming after reinstatement, meaning there is no loss of agricultural land or change to its classification.</p>
Q1.12.2	Applicant	<p>Agricultural Land</p> <p>What mechanisms have been proposed within the dDCO to secure the grazing of the principal site during its life?</p> <p>Ref: 6.1 Chapter 15 Soils and Agriculture [APP-046].</p>	<p>The Framework LEMP [EN010142/APP/7.17(Rev03)] details in a number of paragraphs how the Scheme will provide areas suitable for grazing and when grazing could be carried out during the operational phase of the Scheme:</p> <p>The Scheme will provide areas of Semi-improved Grassland, as detailed in Paragraph 8.2.31, which is suitable for grazing;</p> <p>The Scheme will provide areas of Traditional Orchard, as detailed in Paragraph 8.3.38, which will be underplanted with species-rich grass see mix suitable for grazing;</p> <p>Paragraph 8.3.39 detailed the proposed establishment of grassland within the Scheme. 8.3.39 (c) indicates that grazing, where feasible, will be utilised in the establishment maintenance of Grassland;</p> <p>Paragraphs 8.3.40 to 8.3.41 detail the proposed long-term management of grassland within the Scheme. 8.3.41 (a) indicates that grazing is included in the management of grassland within the Scheme; and Paragraph 8.3.43 indicates that low intensity sheep grazing could be used to maintain the grassland within the Sensitive Archaeological Sites.</p> <p>The Applicant reiterates that the Scheme will be implemented in accordance with the Framework LEMP [EN010142/APP/7.17(Rev03)] and implementation of the Framework LEMP [EN010142/APP/7.17(Rev03)] is secured by Requirement 7 of the draft DCO [EN010142/APP/3.1(Rev04)].</p>
Q1.12.3	Applicant	<p>Agricultural Land</p> <p>How does the baseline report align to the requirements of the written ministerial statement "Solar and protecting our Food Security and Best and Most Versatile (BMV) Land" issued on 15 May 2024?</p> <p>Ref: 6.2 Appendix 15-2 Agricultural Land Classification Baseline Report [APP-116].</p>	<p>Appendix 15-2: Agricultural Land Classification Baseline Report of the ES [APP-116] shows that the Principal Site is predominantly ALC Grade 3b, which is not Best and Most Versatile (BMV) agricultural land. As there is less than 5% extent of BMV land in the Principal Site, with any actual loss of agricultural land being marginal, it is considered that the Applicant has minimised impacts on BMV land in accordance with the Ministerial Statement (Ref 1-45).</p> <p>With regard to food security, the Ministerial Statement (Ref 1-45) does not substantiate any concern that solar farm development presents any food security risk. Farmers are under no obligation to manage land for food production and can receive support payment from Defra to reduce the intensity of agricultural production or take land out of agricultural production to deliver environmental benefits.</p> <p>Regardless, the land within the Principal Site can remain in agricultural use during the operational phase of the Scheme, for example with the grazing of sheep. Subsequent to the May 2024 Ministerial Statement (Ref</p>

ExQ1	Questions to:	Question:	Applicants Response:
			1-45), development consent has been granted for a number of Solar NSIPs, including for example Gate Burton Energy Park and Cottam Solar Project. This demonstrates that the existing Agricultural Land baseline reports were well aligned to the requirements of the Ministerial Statement (Ref 1-45), as is the Soils and Agriculture ES Chapter for the Scheme (Chapter: 15 Soils and Agriculture of the ES [APP-046])
Q1.12.4	Applicant	<p>Agricultural Land</p> <p>Can it be demonstrated that the sequential test has been applied to BMV or that an alternative brown field site was considered within this site selection exercise?</p> <p>Ref: 6.2 Appendix 15-2 Agricultural Land Classification Baseline Report [APP-116].</p>	<p>Agricultural land quality was a key consideration in the Applicant's site selection process. As set out in Chapter 4: Alternatives and Design Evolution of the ES [APP-035] and the Design and Access Statement [AS-031]. Grades 1 and 2 BMV agricultural land were excluded from further consideration within the initial 15km search area for the Scheme. This was based on provisional ALC mapping from Natural England. This resulted in the identification of an area of land for the Scheme shown as Grade 3, with only the completion of ALC surveys being able to confirm whether any of the Principal Site contained BMV land. Previously developed land was also considered. These land types were identified by checking the local authority brownfield register. No suitable or available areas of brownfield or non-agricultural land which could form a contiguous Principal Site of sufficient size were identified.</p> <p>Following this, as part of the iterative design evolution of the Scheme and using the results of the ALC survey completed in relation to the Principal Site, the Order limits have been iterated to minimise impacts on BMV land. In addition, the Applicant removed an area of Grade 3a land which was located on the western extent of the Principal Site from the Scheme as part of the design evolution of the Scheme, reducing the amount of affected BMV land by 11ha. This is set out in more detail in the Design and Access Statement [AS-031].</p>
.Q1.12.5	Applicant Natural England	<p>Agricultural Land</p> <p>What are the potential implications of the land being laid to rest, not ploughed or cropped for 60 years versus the existing management regime and how might this affect the classification and quality of the land in the long term?</p>	<p>The ALC methodology was developed specifically for informing land use planning decisions (Ref 1-46). On Page 8 in the Introduction of the Agricultural Land Classification of England and Wales report (Ref 1-46), it states that "<i>Land is graded according to the degree to which physical or chemical properties impose long-term limitations on agricultural use. It is assessed on its capability at a good but not outstanding standard of management.</i>" There are therefore no plausible effects of a change in land management that could impact upon ALC Grade, beneficially or adversely.</p> <p>The 60-year fallow period during the operational phase of the Scheme will enable the recovery of soil organic matter back towards a higher equilibrium than under arable management. Under typical arable management regimes, cultivation aerates soil and speeds up metabolization of soil organic matter, so that irrespective of the rate of organic matter additions (such as crop residue and manures) soil microorganism populations grow to consume this before dying back as the substrate is depleted. The installation of solar panels will provide year-round plant cover, which benefits the accumulation of soil organic matter while also preventing soil erosion and promoting improved soil structure. Therefore, although there will be no uplift to the ALC grade as a result of the Scheme, the extended fallow period will benefit soil health, with the extended environmental benefits that accrue from that. Please see Defra R&D project SP08016 - Best Practice for Managing Soil Organic Matter (SOM) in Agriculture (Ref 1-47).</p>
Q1.12.6	Applicant	<p>Agricultural Land</p> <p>What has been the agricultural use of the land within the order limits for the last 10 years, including planting, ploughing and harvesting regime, yields and net production? How does this compare the average yields for the region and nationally;</p>	<p>The agricultural land within the Order limits is predominantly under arable combinable crops such as wheat, barley and oilseed rape. Yield in tonnes only gives a partial indication of land performance. For instance, a crop of malting barley is expected to yield significantly lower than a crop of feed barley, but the value of the former would normally be significantly greater than the latter. Likewise, an organic accredited crop will normally be lower yielding than a conventional crop but attract a higher price.</p>

ExQ1	Questions to:	Question:	Applicants Response:
		and what is the effective net reduction in agricultural output by taking these fields out of production for the next 60 years?	<p>Comparison between years is also complicated by changes in crop value, cost of inputs, weather and changes in the regulatory environment, for instance the loss of neonicotinoid pesticide for brassica crops such as oilseed rape.</p> <p>As the ALC system was designed specifically to inform land use planning decisions it deliberately ignores measures of production. This is to avoid creating a perverse incentive to landowners to suppress output or manage land poorly in the hope of securing planning consent. For these reasons, the Applicant has not presented any yield information and does not consider that it would be informative to do so.</p> <p>Page 82 of the Defra UK Food Security Report 2021 (Ref 1-48) notes the following: "<i>In terms of medium and long term risk to UK domestic food production, the biggest risks include climate change and soil degradation.</i>" Land use and land use change are not listed as risks to UK domestic food production. As noted above, in addition to combatting climate change, the multi decade fallow for a solar farm is beneficial for soil health.</p>

13. Transport and access

Table 13-1: Transport and access

ExQ1	Questions to:	Question:	Applicants Response:
Q1.13.1	Applicant	<p>Cumulative effects</p> <p>The ES outlines that the North Humber to High Marnham Energy Grid upgrade has been scoped out of the assessment of cumulative effects. The reason given is that the construction period is deemed to be different to that of the Proposed Development (see ES paragraph 18.7.4d [APP049]). However, NGETs Relevant Representation [RR-206] indicates that construction is likely to overlap. Could the Applicant explain the rationale applied in 'screening' out this development, taking into consideration NGETs representation?</p>	<p>Based on the 'Supplementary Corridor and Routing Report' published in July 2024 (Ref 1-49), the North Humber to High Marnham (NHHM) DCO submission is only expected to occur in 2026. Following which there will be an Examination and detailed design period. The Tillbridge Solar Project (the Scheme) is therefore at least two years ahead of NHHM in the planning process. The construction peak for the Scheme is expected to occur in 2026, therefore, it is unlikely that the construction of the Scheme would have a temporary overlap with construction phase of NHHM. Should the NHHM scheme be consented, and then constructed, construction will likely occur once the Tillbridge Scheme is operational. There would be limited potential for cumulative effects during the Tillbridge operational phase due to the limited movements required as part of the maintenance and operation of the Tillbridge Scheme. Furthermore, based on information currently known about NHHM from consultation material, potential geographical overlap with the Scheme would be limited to the Cable Route Corridor, where there would be expected to be no operational traffic needed.</p> <p>As it is unlikely there will be temporal or geographical overlap between NHHM and the Scheme, the Applicant considers it reasonable to scope out the NHHM project from the cumulative assessment. NGET's Relevant Representation [RR-206] highlights a potential interaction, and an expectation that construction periods will overlap. The Applicant respectfully does not concur with this expectation. Notwithstanding this, NGET highlights the ongoing co-operation between the Parties, and the Applicant is committed to continuing this positive engagement.</p>
Q1.13.2	Applicant	<p>Cumulative effects</p> <p>ES paragraph 18.17.2 [APP-049] states: <i>"The developments identified above have been screened for spatial and temporal overlaps with the Scheme. For transport and access, this relates to the roads in the vicinity of the Scheme that are expected to be used to access each of the relevant schemes during the peak construction period in 2026."</i></p> <p>Could the Applicant direct the ExA to a detailed explanation of how this screening process was undertaken. In particular, can the Applicant please explain exactly why certain ATC (Automatic Traffic County Survey) locations identified for the Proposed Development within the Transport Chapter of the ES have been excluded? It would also assist the ExA if all ATC locations included in the Transport Chapter could be mapped onto ES Figure 18-5 to allow for a clearer understanding on this matter.</p>	<p>As requested, Figure 18-5 of the ES [EN010142/APP/6.3(Rev01)] has been updated and is submitted at Deadline 3 to include ATC locations (which represent the receptors assessed) to provide a clearer overview of the impacts of cumulative assessments (as set out in Table 18-13 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]).</p> <p>Paragraph 18.17.2 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] considers the cumulative effects during the construction phase of the Scheme, and identifies and assesses other developments within the Zone of Influence of 5km for spatial and temporal overlaps with the Scheme. Specifically, this relates to the roads in the vicinity of the Scheme which would be expected to be used to access each of the relevant schemes in the peak of the construction period.</p> <p>Paragraph 18.17.4 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] discusses the relevant schemes which could have a potential to result in a cumulative effect with the Scheme in the peak construction phase. Detailed rationale is provided for why schemes have been either scoped out, or included in, the cumulative assessment.</p> <p>To provide an example of the adopted methodology for the cumulative assessment as part of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], paragraph 18.17.7 provides a description of the considerations adopted for West Burton Solar Project. The cumulative assessment for West Burton Solar Project focusses on assessment of the construction trips associated with the land parcels and the Cable Route Corridor based on the information set out within Chapter 14: Transport and Access of the West Burton Solar Farm Project</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.13.3	Applicant	<p>Rail Crossings</p> <p>ES Paragraph 16.4.53 [APP-047] states in part that the Proposed Development has the potential to generate impacts on rail assets such as bridges and level crossings due to HGV movements during construction and decommissioning. Whilst it is recognised that there is a FCTMP [REP1-021] and HGV Routing Strategy [APP-118], where is the assessment of the potential effects during construction and decommissioning on the rail network. Indeed, it is noted that the cable route would cross the operational rail network in several locations. Network Rail's Relevant Representation [RR-211] identifies these cable crossings as T16 and T8 on ES Figure 3-11 [APP-140].</p>	<p>ES and as per the transport study area shown in Figure 14.1 as well as the supporting documents. Appendix 14.2: Construction Traffic Management Plan and the associated figures (Figure 5.1 – 5.4) (Ref 1-50) provide the proposed routing to the various land parcels and Cable Route Corridor for the West Burton Solar Project. This has been reviewed and compared against the construction vehicle routing for the Scheme set out within Figure 16-3 of the ES [AS-018] and Figure 18-5 of the ES [EN010142/APP/6.3(Rev01)], showing a clear overlap between the two schemes and identifying the relevant receptors which would need to be considered to understand the cumulative impact on the network affected by the Scheme and West Burton Solar Project. The combined cumulative impact of the two schemes is set out in Table 18-9 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] which highlights an overlap on the following links – A1500, A15, A156, Cottam Road and Headstead Bank. The same approach was adopted to assess the impact of Cottam Solar Project, Gate Burton Energy Park and the Glentworth K Oil Extraction Site and later the overall cumulative impact of the relevant schemes in the peak of the construction period is presented in Table 18-13 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)].</p> <p>The ATC locations, which were agreed with the local highway authority, are the receptors assessed within Chapter 16: Transport and Access of the ES [APP-047]. As part of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], only those receptors subject to construction vehicle routing from the Scheme and the other relevant schemes have been assessed as set out in Table 18-13. Figure 2-1 of the Joint Report on Interrelationships between Nationally Significant Infrastructure Projects Part 1 of 3 [EN010142/APP/7.6(Rev01)] shows a map of each of the cumulative schemes and their construction routes.</p> <p>Table 16-7 of Chapter 16: Transport and Access of the ES [APP-047] summarises how matters raised by consultees have been addressed. Network Rail has raised the matter of the routing of construction traffic and its interaction with Rail Assets such as bridges with low clearance/weight restrictions and railway level crossings. The response sets out that the routing of construction vehicles associated with the Scheme will avoid bridges with low clearance and weight restrictions. The HGV routing has been established to avoid railway level crossings where possible. HGV and ALL routing is set out in the Framework Construction Traffic Management Plan (F-CTMP) [EN010142/APP/7.11(Rev03)] in Figures 1 and 2. The F-CTMP is updated and submitted at Deadline 3, with a minor change in HGV routing as per the response to ExQ1.13.10. Network Rail's Written Representation at Deadline 2 [REP2-015] advises that it is reviewing potential impacts in this respect and will liaise with the Applicant in relation to any mitigation required. The Applicant considers that the embedded mitigation of HGV routing secured through the CTMP represents appropriate and proportionate mitigation of risks. The Applicant has fully assessed all construction routes through Chapter 16: Transport and Access of the ES [APP-047], with only one significant adverse effect, which is in a location with no interface with Rail Assets. On the basis of embedded mitigation, designing out risk as far as possible through HGV routes, use of public highway within its restrictions (i.e. not exceeding weight limits), and full assessment of construction routes, the Applicant does not consider there to be potential effects on the rail network. Notwithstanding this, the Applicant will engage positively with Network Rail at such a point as Network Rail provides its review to the Applicant.</p> <p>The Applicant acknowledges Network Rail's concerns and requirements in respect of impacts to the ongoing operation of its assets. The parties are subject to ongoing negotiations in respect of any</p>

ExQ1	Questions to:	Question:	Applicants Response:
			<p>impacts on Network Rail assets, including the negotiation of protective provisions to ensure appropriate protections and controls are in place to manage any impacts on those assets, and will update the ExA further once these negotiations conclude.</p> <p>The Applicant will track progress on resolving these matters through its Statement of Common Ground with Network Rail [REP2-008].</p>
Q1.13.4	Applicant	<p>Cumulative effects ES paragraphs 18.17.13 and 18.17.32 [APP-049] outline that only certain parcels have been 'focused on' in respect of Cottam and West Burton. Can the Applicant confirm whether there are any other parcels where construction might require use of the highway network within the Tillbridge Study area? If not, where is the evidence of this? Or alternatively, if so, then has the cumulative assessment considered the effects on these?</p>	<p>The vehicle routing relating to the other development proposals with potential temporal overlap with the construction phase of the Scheme and any routing which overlapped with the Tillbridge Scheme has been accounted for in the cumulative assessment set out within Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]. For the West Burton Project and Cottam Solar Project, the routing was considered for each individual parcel, as set out in the respective CTMPs for these projects. Where the routing did not overlap with the Scheme's construction routes then it was excluded from the cumulative assessment. Thus, the cumulative assessment fully accounts for the Cottam Solar Project and West Burton Solar Project.</p> <p>It should be noted that the cumulative assessment within Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev02)] already considers a worst-case scenario assessment. This assesses an overall impact of all the schemes (including the Scheme) being constructed simultaneously, when in reality it is highly unlikely that this would occur in this manner.</p>
Q1.13.5	Applicant	<p>Cumulative effects ES paragraph 18.17.17 [APP-049] concludes that West Burton parcel WB2 can be scoped out. However, is this a worst-case-scenario? Particularly given that the DCO has not yet been made. Furthermore, is the Cottam CTMP subject to approval under a requirement of the DCO and therefore subject to change?</p>	<p>Similarly to the response to Q1.13.4, this parcel has been scoped out of the assessment as there is no overlap in the construction routing for the WB2 parcel and the Scheme. Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], paragraphs 18.17.10 and 18.17.11 state the following: <i>"Parcel WB2 is located to the west of WB1 and to the south of the A1500. It is currently expected that during construction, the parcel would be accessed via three junctions from the B1241 Sturton Road (as the road bisects the parcel). The construction vehicle routing for WB2 is proposed via the A57 and B1241, therefore trips related to WB2 would not be expected to utilise parts of the highway network located within the Scheme's Study Area"</i>.</p> <p>The assessment was made on the basis of the latest available documentation reviewed in March 2024, and the above remains valid at the time of writing (December 2024). The West Burton Solar Project Examination concluded in May 2024 and the Planning Inspectorate has passed its recommendation to the Secretary of State in August 2024. A decision is anticipated on 24 January 2025. It is reasonable to assume that, if consented, it will be on the basis of the assessment presented in the Environmental Statement for that project. This will be in line with the construction routes included in the West Burton Framework Construction Traffic Management Plan (F-CTMP). Any change in construction routing would need to ensure that the ES assessment remains within the Rochdale Envelope, and therefore other schemes should be able to rely on the information contained within the West Burton ES and CTMP as worst-case scenarios for the purpose of cumulative assessments.</p> <p>The Cottam Solar Project DCO was consented on 5 September 2024. Therefore, the construction traffic routing set out in the Cottam Solar Project's F-CTMP can be relied upon as a worst-case assessment for use in cumulative assessment.</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.13.6	Applicant	<p>Cumulative Effects ES paragraph 16.8.48 [APP-047] states in part: <i>“One significant effect on transport and access across the construction phase has been identified as a result of the Scheme (a moderate adverse (significant) effect on severance/ pedestrian delay/ NMU amenity on the B1241 (ATC 23).’ ES Paragraph 16.10.1 identifies that ‘one significant residual effect has been identified during the construction phase as a result of the Scheme: severance/ pedestrian delay/ NMU amenity on the B1241 (ATC 23).”</i></p> <p>However, there does not appear to be any assessment of the cumulative effects on severance/ pedestrian delay/ Non-Motorised User (NMU) amenity in the ES Chapter 18 [APP-049]. Could the Applicant please explain why? It is noted that paragraph 16.10.2 makes reference to the shared cable route, but should this form part of the assessment and be included in the cumulative assessment at ES Chapter 18?</p>	<p>In both cases, it is recognised that there is reliance on information set out in the F-CTMP, and there is a requirement for a final CTMP or CTMPs to be prepared and agreed for each project prior to implementation. Whilst it is accepted that there is potential for minor changes between these documents, each DCO requirement is drafted to ensure that the final CTMP is broadly in alignment with the Framework version, and so the scope for significant change is limited (if possible at all). Construction hours and routeings are a fundamental part of embedded mitigation for these Schemes, and therefore it would be questionable whether a CTMP which does not match the F-CTMP in these respects would be sufficiently aligned.</p> <p>In the unlikely event that the Cottam Solar Project or West Burton Solar Project seek to fundamentally alter the F-CTMPs, it will be for that project to demonstrate that no new environmental effects would arise from that change (and that is provided for under Requirement 3 of the Cottam Order, which provides that a certified document can only be amended where it has been demonstrated to the satisfaction of each relevant planning authority that the change sought to be approved is unlikely to give rise to any materially new or materially different environmental effects from those assessed in the environmental statement, and based on the draft Order for West Burton it is expected that any made order for that scheme would include the same requirement). This would include the assessment of cumulative effects. Therefore, that project would need to demonstrate that no new significant cumulative environmental effects with the Scheme would occur. If such an effect would occur, the onus would be on that scheme to propose and deliver suitable mitigation (although it is unlikely an amended certified document could be approved under the DCO in that instance). Thus, the Examining Authority for the Scheme can have confidence that a worst-case cumulative assessment has been provided.</p> <p>Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] sets out the level of construction traffic forecast by each of the cumulative schemes on links which are included within the study area for the Scheme. This includes traffic flows for the Principal Site and the Cable Route Corridor. Paragraph 18.17.68 states (emphasis added) <i>“Given the uncertainty around the likelihood of construction of the cumulative schemes overlapping, a high-level review of impacts on road link receptors has been undertaken, based on percentage changes in daily two-way traffic flows, to assess effects on driver delay, severance, pedestrian delay, non-motorised user amenity, fear and intimidation and road safety.”</i></p> <p>The following paragraphs to 18.17.75 within Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] describe that high level assessment. The B1241 will be used for both the Cottam Solar Project and Cable Route Corridor for the Scheme. The magnitude of impact on the B1241 is slight. Effects will be temporary in nature and will occur during the construction of the shared Cable Route Corridor, which has been assessed in this section. The shared Cable Route Corridor itself represents embedded mitigation in terms of minimising the impacts of four solar projects. The Applicant and the undertakers of each of the other solar schemes intend to work constructively with the Local Highways Authorities to manage and mitigate cumulative effects to a level below that assessed, and therefore in line with the Rochdale Envelope. The assessment of cumulative effects represents a worst-case scenario, and the Applicant and other undertakers intend to work towards a Joint CTMP if it is required. This is set out in 18.17.76 to 18.17.79 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)].</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.13.7	Applicant	<p>Panel Replacement ES paragraph 16.4.50 [APP-047] states in full: <i>"If full Panel and BESS replacement is required at some point during the lifetime of the Scheme, activity would be considerably less intensive than during construction, and is anticipated to generate approximately 10% of the daily HGV/coach and car/LGV movements estimated to be generated during peak construction of the Principal Site and Cable Route Corridor."</i> How has the 10% figure been derived and where is the evidence of this?</p>	<p>The Cable Route Corridor trips for the four solar schemes will be split across the respective accesses depending on the section of the Cable Route Corridor that is being installed. Therefore, the accesses which require traffic to be distributed along School Lane, Cow Lane, Fillingham Lane, the B1241, Cottam Road and Headstead Bank will not be used by all four schemes at exactly the same time and will not be used every day during the construction period. Therefore, it is highly unlikely that all schemes will utilise these parts of the network at exactly the same time and a large number of the trips will only occur for a short period during the construction phase.</p> <p>The figure has been derived from the Applicant and its team's experience of working on solar farm projects. It is based on a calculation of one HGV arrival every fifteen minutes over a ten-hour day. If the Applicant undertook a large-scale replacement of panels, it would need to decommission some panels whilst the remainder would be operational and generating electricity. To avoid loss of energy generating revenue, the Applicant would not decommission at a faster rate than the panels could be replaced. It should also be noted that, the PV panels themselves are only a proportion of the infrastructure required to construct a solar farm, the remainder of which would remain in place.</p> <p>A standard Heavy Goods Vehicle (HGV) can typically carry around 780 solar panels. This is based on the dimensions of a typical dry van used for truckload shipping, which measures about 53 feet in length, 8.5 feet in width, and 9 feet in height. These dimensions allow for approximately 26 standard-size pallets, with each pallet holding about 30 solar panels. Four HGVs per hour is a reasonable rate of delivery for the replacement of panels in one field at a time.</p> <p>As stated in paragraph 16.4.36 of Chapter 16: Transport and Access of the ES [APP-047], replacement of the solar panels is expected to generate up to a maximum of 40 HGVs (or 80 two-way movements) per day, and up to 75 staff car trips (150 two-way movements) per day. This is based on panel replacement being planned in advance and that much of the construction activities required during construction would not be required during panel replacement.</p> <p>During the construction peak, the combined trip generation for the Principal Site (paragraph 6.4.4 of Chapter 16: Transport and Access of the ES [APP-047]) and Cable Route Corridor (paragraph 6.4.29) works is 392 HGVs (784 two-way trips) and 719 cars/LGVs (1,438 two-way trips). Therefore, the panel and BESS replacement generates approximately 10% of the peak construction activity.</p> <p>The statement made, alongside very low operational staff numbers, forms part of the rationale for scoping out a quantitative assessment of the operational phase. This is a standard approach for Solar NSIPs, and has been agreed with the Local Highways Authorities.</p> <p>The level of traffic required during the operation of the Scheme would be controlled through the Framework OEMP [EN010142/APP/7.9(Rev02)]. This requires that the Applicant sets out a schedule of planned maintenance activities to be undertaken on an annual basis, to be agreed with the Local Planning Authority. The maintenance schedule is required to include the extent and nature of the planned maintenance, details of transport requirements, and confirmation that the environmental effects that are likely to arise as a result are not materially worse than those in the ES, and therefore this acts as a mechanism to ensure that the rate of HGV and staff traffic during the operational stage does not exceed that set out in the ES.</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.13.8	Applicant, LCC, NCC	<p>Baseline Data</p> <p>ES paragraph 16.6.27 [APP-047] outlines that baseline traffic data is based on surveys undertaken between 10 – 19 July 2022. Are the Councils and the Applicant satisfied that this is a representative period for the purposes of providing baseline data?</p>	<p>The traffic surveys were discussed at the first transport pre-application meeting held with Lincolnshire County Council and Nottinghamshire County Council on 19 January 2023. The dates of the surveys were clearly stated in the presentation used to introduce the Scheme and the proposed methodology for the assessment of impacts and no issues were raised. Minutes of the meeting are included in Annex A of Appendix 16-2: Transport Assessment of the ES [APP-118].</p>
Q1.13.9	Applicant	<p>Collisions</p> <p>ES paragraph 16.8.29 [APP-047] states in full: <i>“A total of five collisions, four slight and one serious, were recorded in the vicinity of the A1500/ B1241 Sturton by Stow junction during the five-year study period, equivalent to one collision per year. All five collisions occurred at similar locations and as such, this part of the network has been assigned a Medium level of sensitivity in terms of road safety.”</i></p> <p>What is the basis for assigning a ‘Medium’ level of sensitivity here? Could the Applicant please expand providing references or evidence to support this?</p> <p>On a related point, Transport Assessment (ES Appendix 16-2) paragraph 4.4.28 states in part: <i>“It should however be noted that a low number of construction staff development trips (a peak of 143 construction worker vehicles travelling to/from the Scheme per day) have been distributed through this junction along the A1500 to arrive at Principal Site Access 4.”</i></p> <p>Does this take into account the cumulative effects of other development and does the cumulative assessment at ES Chapter 18 [APP-049] assess the effect on collisions (and in particular; this junction)?</p>	<p>Paragraph 16.4.65 of the Chapter 16: Transport and Access of the ES [APP-047] sets out the methodology for assessment of the Scheme in terms of Road Safety. It states, <i>“In terms of Road Safety, the impacts of the Scheme will be assessed based on the findings of the TA (Appendix 16-2 of this ES [APP-118]), in terms of whether any accident clusters or patterns have been identified across the Study Area. This analysis will be included in the TA (Appendix 16-2 of this ES [APP-118]) and undertaken to highlight if there are any existing safety issues on the local highway network which may be exacerbated by the Scheme and in consideration with Rule 2 outlined above which identifies specifically sensitive areas such as accident black spots to be assessed where traffic flows increase by 10% or more.”</i></p> <p>Paragraph 16.6.32 sets out <i>“One collision cluster was identified at the A1500/ B1241 Sturton by Stow junction, where five collisions occurred over the five-year study period equating to one collision per year. This junction has therefore been assigned a Medium level of sensitivity in terms of road safety (others assigned a Low level of sensitivity) and the assessment of likely impacts and effects is discussed further in Section 16.8 of this Chapter.”</i></p> <p>Paragraph 4.4.27 of the Appendix 16-2: Transport Assessment of the ES [APP-118] provides the further analysis referenced in paragraph 16.4.65 of the Chapter 16: Transport and Access of the ES [APP-047]. This describes each collision type. Whilst they occurred in close proximity, the types and causality of collisions are all different, and they do not involve vulnerable road users. Furthermore, whilst five accidents in five years suggests a cluster, it is not such a high rate as to suggest a major safety concern. Thus, the junction has been assigned a “Medium” sensitivity, as it is elevated above other areas due to the existence of a cluster. However, the lack of common causation and collision type, no incidence of collisions involving vulnerable road users, and relatively limited frequency, suggests that there is not a case for the junction being assigned “high” sensitivity.</p> <p>The statement in paragraph 4.4.28 of Appendix 16-2: Transport Assessment of the ES [APP-118] does not specifically take into account cumulative effects of other development as it solely relates to traffic travelling to/from the Scheme. The cumulative assessment is provided in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)]. Paragraph 16.8.32 of Chapter 16: Transport and Access of the ES [APP-047] sets out that the impact of traffic from the Scheme would be low, meaning that there would be a Minor Adverse (not significant) effect in terms of road safety during construction.</p> <p>The cumulative assessment at Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] provides a proportionate high-level review of impacts, including on road safety, as referenced at paragraph 18.17.68. The cumulative level of flow increase, as shown</p>

ExQ1	Questions to:	Question:	Applicants Response:
			<p>in Table 18-27, on either the A1500 or the B1241 would be well below the 60% increase which would result in a moderate impact, and therefore a moderate adverse effect. Thus, the cumulative impact on road safety would not be significant.</p>
Q1.13.10	Applicant	<p>Construction Traffic The Applicant responded to Stow Parish Council's concerns in relation to construction traffic on PDF pages 140 to 142 of its Responses to Relevant Representations [REP1-028]. Could the Applicant please elaborate on the extent to which the proposed construction traffic routing for the Proposed Development is the same as previously assessed by the SoS and relevant ExAs for other solar NSIPs in the local area? In doing so, could the Applicant please highlight where there are any differences proposed in relation to the Tillbridge Project in terms of construction traffic routing?</p>	<p>The Applicant's response to Stow Parish Council's concerns in relation to construction traffic on pages 140 to 142 of the Applicant's Responses to Relevant Representations [REP1-028] specifically relates to their concerns with the appropriateness of the use of the B1241 as a construction route. The response quotes the Examining Authority and Secretary of State's report and decision respectively, with regards to the Cottam Solar Project, as that project also uses the B1241 as a construction route.</p> <p>Table 18-27 of the Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)] highlights in the final column the schemes which will utilise links which are used as construction routes by more than one of the cumulative schemes. This is shown graphically in Figure 18-5 of the ES [APP-207], which is updated at Deadline 3 on the request of the ExA in Q1.13.2.</p> <p>Figure 2-1 of the Joint Report on Interrelationships between Nationally Significant Infrastructure Projects Part 1 of 3 [EN010142/APP/7.6(Rev01)] shows a map of each of the cumulative schemes and their construction routes. It is appreciated that the clarity of this Figure could be enhanced. For example, it shows the Cottam Solar Project and Tillbridge Solar Project construction routes using the B1241 through Sturton by Stow, however it is difficult to see the Cottam Solar Project route due to the lines overlapping. The clarity of this figure has been visually enhanced and submitted as part of the updated Joint Report on Interrelationships between Nationally Significant Infrastructure Projects Part 1 of 3 [EN010142/APP/7.6(Rev01)] at Deadline 3. One amendment has been made to accept NCC's request to amend the Tillbridge Solar Project construction route passing through Laneham to pass through Stokeham instead, and therefore utilise a route assessed through the Cottam Solar Project, Gate Burton Energy Park and West Burton Solar Project DCOs.</p> <p>The portion of the route subject to revision, further to receipt of NCC Highways comments, comprises the route from Cottam Road in the north, to the junction with Dunham Road in the south. The route previously designated as an HGV route passes through the villages of Rampton and Laneham. The alternative route, Laneham Road, as suggested by NCC is in effect a bypass to these villages, is some 7m width along its route and operates with the national speed limit (60mph). Whilst there are a number of minor junctions along the route, there is a limited number of properties or other sensitive receptors that are accessed from Laneham Road, located at the eastern extent of Stokeham. On the basis of it being a reasonably wide rural road with few sensitive receptors and no pedestrian and cycle facilities, it would be reasonable to consider that the route would have "very low" sensitivity from transport assessment perspective.</p> <p>By comparison, the existing route of Laneham Street and Rampton Road passes through the centre of the villages of Rampton and Laneham and therefore in close proximity to homes and other properties. Thus, making the change results in the use of a more appropriate route.</p> <p>The use of Laneham Road would make the HGV route consistent with the proposed abnormal loads route, as it already designated as the route for the cable drum Abnormal and Indivisible Loads. This</p>

ExQ1	Questions to:	Question:	Applicants Response:
			<p>is set out within Figure 16-10: Abnormal Indivisible Load Routes – Principal Site and Cable Route Corridor of the ES [APP-202]. It therefore follows that a standard HGV could also be considered to use the same route. The use of Laneham Road for Abnormal and Indivisible Loads is considered within Section 6.5 of the Framework Construction Traffic Management Plan – Appendix C (Abnormal Indivisible Loads Management Plan) [APP-223].</p> <p>It is also noted that two of the local energy schemes (Gate Burton Energy Park and Cottam Solar Project) propose to use Laneham Road, and the suitability of this route has been assessed through these DCOs. West Burton does not propose to make use of this portion of the highway network.</p> <p>The nearest sensitive receptor and traffic data point along the route towards the nearest access to the Cable Route is ATC30 (Cottam Road, East of Westbrecks Lane). This is common to both the route through Rampton, and the new route proposed by NCC. Table 16-17 of Chapter 16: Transport and Access of the ES [APP-047] shows that during each development peak hour, a total of 85 additional vehicles would pass this point. The use of the Laneham Road route by 85 vehicles for the development peaks (i.e. 0600-0700 hours and 1900-2000 hours) for a temporary and short period of time during the construction of the cable corridor would not result in any additional effects. An increase of 85 vehicles per hour at an off-peak time for a short temporary period, on a very low sensitivity route, would not reasonably be considered by a competent expert to result in a significant effect. This is because the sensitivity of the route is considered very low, and therefore, even if the increase of 85 vehicles in the peak hour was classified as substantial, the effect would be minor adverse at worst, which is not significant. On this basis, even if the timing of the works coincided with the Gate Burton Energy Park and Cottam Solar Project cable construction, which is unlikely, it would not result in any new cumulative effects.</p> <p>It is therefore concluded that the change requested by NCC is unlikely to result in any new or different transport effects, to those assessed in Chapter 16: Transport and Access [APP-047] or Chapter 18: Cumulative Effects and Interactions [EN010142/APP/6.1(Rev01)] of the ES. In addition, the impacts at air quality and noise sensitive receptors would be of the same magnitude as reported for the previous route and unlikely to result in any new or different effects, to those assessed in Chapter 6: Air Quality of the ES [APP-037] or Chapter 13: Noise and Vibration of the ES [AS-006] respectively.</p> <p>This is also discussed in the Applicant's response to NCC's LIR, at point 5.41, submitted at Deadline 3 (refer to Applicant's Response to Local Impact Reports [EN010142/APP/9.26]).</p>
Q1.13.11	LCC	<p>FCTMP Paragraph 9.11 of LCCs LIR [REP1A-001] states in part: <i>"The Framework Construction Traffic Management Plan (ES Vol 7) needs to be captured as a requirement rather than a stand alone document."</i> However, Requirement 14 of the draft DCO [APP-014] relates to the FCTMP [REP1-021]. Could the Council please confirm the</p>	<p>The Applicant has responded to this point in response to LCC's LIR paragraph 9.11 within Applicant's Response to Local Impact Reports [EN010142/APP/9.26].</p>

ExQ1	Questions to:	Question:	Applicants Response:
Q1.13.12	WLDC	<p>acceptability or otherwise of this requirement/approach to securing the FCTMP?</p> <hr/> <p>FCTMP Paragraph 9.34 of WLDC's LIR [REP1a-005] states in full: <i>"With regard to the mechanisms used to control construction traffic cumulatively with other projects however, WLDC has significant concerns regarding the lack of detail on how such impacts will be controlled."</i> Could the Council please elaborate on this statement and provide information to clarify which details it thinks should be provided in the FCTMP [REP1-021]?</p>	<p>The Applicant has responded to comments made within WLDC LIR on the FCTMP at paragraph 9.34 within Applicant's Response to the Local Impact Report [EN010142/APP/9.26].</p>

14. Water environment including flood risk

Table 14-1: Water environment including flood risk

ExQ1	Questions to:	Question:	Applicants Response:
Q1.14.1	Applicant Environment Agency	<p>How will the wastewater arising from the cleaning of the solar panels be collected, treated and disposed of? What potential risks are associated with the wastewater and its contamination?</p> <p>Ref: 6.1 Chapter 10 Water Environment [APP-041].</p>	<p>Paragraph 2.2.1 of the Framework OEMP [EN010142/APP/7.9(Rev02)] refers to the use of clean water with no added chemicals, sourced from local potable water suppliers, for the annual panel cleaning. As set out within Chapter 10: Water Environment of the ES [EN010142/APP/6.1(Rev01)], the Solar PV units will be regularly observed and any panels which required maintenance / replacement will be removed. The panels are constructed in a robust manner and their components cannot be separated except with a considerable mechanical load. Therefore, the risk of any liquid leakage from the panels is very low, such that the impacts of such leaks are negligible. Any other matter washed off the panels is assumed to have already landed on the Site in a baseline scenario (i.e. dirt, dust, animal droppings), and is therefore not considered to be additional pollution added by the Scheme, nor result in measurable pollution risk. As such, this will not lead to any significant pollution risk.</p> <p>Appendix 10-4: Outline Drainage Strategy of the ES [APP-098] discusses drainage within and from the solar panel fields. Paragraph 3.1.2 of the Appendix 10-4: Outline Drainage Strategy of the ES [APP-098] notes: <i>“Despite not contributing towards the impermeable areas, in order to limit the potential for channelisation from rainfall dripping of the end of the panels, the areas between, under and surrounding the solar PV panels will be planted with native grassland and wildflower mix”</i>. The planting between panels will absorb and slow runoff from the PV fields, mimicking the existing regime.</p> <p>Edge swales within the PV fields are proposed to provide betterment to the existing runoff from the fields, reducing surface water flood risk downstream. They are not required to attenuate additional flows as there is no additional impermeable area draining to these. All new impermeable areas (i.e. BESS and solar stations, substations, Solar Farm Control Centre, and equipment storage) drain to separate at-source swales for attenuation, with discharge rates limited to greenfield rates; therefore, the long-term storage approach is not required.</p> <p>As summarised within Chapter 10: Water Environment of the ES [EN010142/APP/6.1(Rev01)], impacts on water quality from drainage are also assessed within Section 3.5 of Appendix 10-4: Outline Drainage Strategy of the ES [APP-098]. The assessment demonstrates that pollution is effectively managed, using the CIRIA Simple Index Approach, with appropriate treatment provided, where required. Water quality of runoff from the Scheme will not adversely impact watercourses.</p> <p>Lincolnshire County Council as Lead Local Flood Authority (LLFA) covering the Principal Site, within their Local Impact Report [REP1A-001] paragraph 11.5, has determined the Appendix 10-4: Outline Drainage Strategy of the ES [APP-098] is acceptable.</p>
Q1.14.2	Applicant Environment Agency LLFA IDB	<p>The Applicant proposes that pluvial water falling on the developed site will behave the same as that falling upon green field with similar infiltration rates and run off. Is there any evidence to demonstrate the impermeability of solar panels and the concentration of the rainfall run off at their lower edges behaves the same way as per natural distribution of rainfall? What is the impact on time to peak</p>	<p>An outline drainage strategy has been prepared as part of the Application, Appendix 10-4: Outline Drainage Strategy of the ES [APP-098]. The drainage strategy will mimic the natural existing drainage regime within the Order limits and also restrict new impermeable areas to the greenfield runoff rate. SuDS features within the solar PV panel fields on the Principal Site will incorporate edge swales which will intercept peak runoff and allow infiltration, reducing flood risk off site. New impermeable areas will attenuate runoff at source and discharge at greenfield rates. Therefore, time to peak for runoff leaving the site will be reduced through the use of the proposed SuDS features.</p>

ExQ1	Questions to:	Question:	Applicants Response:
		<p>curves for rainfall concentrated into this way as opposed to more open infiltration? Ref: 6.2 Appendix 10-3 Flood Risk Assessment [APP-097].</p>	<p>Regarding evidence of impermeability of solar panels, a research paper by Cook and McCuen (2013) Hydrologic Response of Solar Farms (Ref 1-51) states that solar panels themselves have non-significant impact on runoff volumes / peak / time to peak and recommended grass to be well maintained under the panels or a buffer strip placed after most downgradient row of panels to prevent increase in runoff / soil erosion. As explained within Appendix 10-4: Outline Drainage Strategy of the ES [APP-098] and secured through the Framework LEMP [EN010142/APP/7.17(Rev03)], in order to limit potential increases in runoff, the Scheme would provide planting in the areas between, under and surrounding the solar PV panels with native grassland and wildflower mix. The planting will absorb and slow runoff from the PV fields, mimicking the existing regime.</p>
Q1.14.3	Applicant LCC FRS	<p>Storage of water for firefighting is proposed to meet the requirements of the NFFC guidance but is there an additional allowance for storage for the integral firefighting and sprinkler systems proposed for the BESS or does this eat into the fire fighters allowance and is there a risk that the supply for attending fire fighters is partially used or exhausted by the time of their arrival? Ref: 6.1 Chapter 10 Water Environment [APP-041].</p>	<p>The Applicant can confirm that if an internal automatic water-based BESS fire suppression system is integrated, this would not be fed from water tanks or hydrants provided for external firefighting i.e. Boundary Cooling. Section 7.6.2 of the Framework Battery Safety Management Plan [APP-255] stipulates that “<i>System design and water supply requirements must be fully agreed with Lincolnshire Fire & Rescue Service (LFR)</i>”. If a dry pipe sprinkler system is integrated, then water supply provision and volume requirements would be fully agreed with LFR.</p>
Q1.14.4	Applicant Environment Agency LLFA IDB	<p>A section of watercourse is proposed to be fenced across. What measures are proposed to prevent debris build up, damming and associated risk during a flood event and what are the EA/IDB/LLFA views on the crossing and obstruction of this watercourse? Ref: 6.2 Appendix 10-3 Flood Risk Assessment [APP-097].</p>	<p>The Applicant understands that this comment relates to the Principal Site, where Figure 3-1 of the ES [AS-055] indicatively shows deer fencing across a watercourse. Fencing will be designed to prevent minor obstructions, as detailed in Table 3-5, of the Framework OEMP [EN010142/APP/7.9(Rev02)]. Furthermore, Table 3-5 of the Framework OEMP [EN010142/APP/7.9(Rev02)] has been updated at Deadline 3 to confirm that regular inspection and maintenance of fencing will be undertaken throughout the operational phase. During these inspection and maintenance visits, debris build up would be identified and removed when necessary.</p> <p>Furthermore, protective provisions for drainage authorities are secured within the draft DCO [EN010142/APP/3.1(Rev04)], that state relevant drainage authority’s approval must be sought for any part of the Scheme that is in, on, under, over or within 8 metres of a drainage work (meaning any ordinary watercourse and includes any bank, wall, embankment or other structure, or any appliance constructed for land drainage or flood defence which is the responsibility of the drainage authority) or is otherwise likely to affect the flow of water in any watercourse.</p>
Q1.14.5	Environment Agency LLFA IDB	<p>What are the EA/IDB/LLFA views on the freeboard for the solar panels in the interaction area reducing to 220mm at the end of the life of the development, and are they happy that adequate assessment of the risks of climate change have been accommodated into the FRA? Ref: 6.2 Appendix 10-3 Flood Risk Assessment [APP-097].</p>	<p>No response required from the Applicant.</p>
Q1.14.6	Applicant Environment Agency	<p>What is the purpose of the reservoirs within and adjacent to the order limits? Are they to be retained, maintained by who and what is the residual risk from these reservoirs in relation to the development?</p>	<p>Figure 10-1 of the ES [APP-167] shows one square water reservoir within the Principal Site. This is a cesspit for digestate of an adjacent farm business and has been assumed to remain in use by that farm business throughout the lifecycle of the Scheme. The reservoirs adjacent to the Order limits are assumed to be for irrigation purposes. The flood risk assessment in Appendix 10-3: Flood Risk Assessment of the ES [EN010142/APP/6.2(Rev01)] assesses flood risk from all sources, including reservoir flood risk. The</p>

ExQ1	Questions to:	Question:	Applicants Response:
		Ref: 6.3 Fig 10-1 Surface Water Features and their Attributes [APP-167].	Environment Agency online mapping (Ref 1-52) for reservoir flood risk includes flood risk from these reservoirs. The Scheme is not impacted by flooding from the reservoirs and does not increase flood risk from reservoirs elsewhere.
Q1.14.7	Applicant Environment Agency	What is the vulnerability of the HDD connections and working pit locations to fluvial alignment changes in Ref: 6.2 Appendix 10-3 Flood Risk Assessment the River Trent in the future should the river meander?	The location of the HDD connections and working pits are behind the flood defences of the River Trent which are at a distance of approximately 250m west and 400m east of the watercourse edge, as such they will be protected from any meander of the River Trent. The location of the HDD connections and working pits is detailed in Tabel 3-4 of the Framework CEMP [EN010142/APP/7.8(Rev02)] which is secured by Requirement 12 of the draft DCO [EN010142/APP/3.1(Rev04)] .
Q1.14.8	Applicant	What is the proposed construction and permeability of the permanent access roads to ensure their surface water drainage discharge is less than or equal to greenfield run off rates? Ref: 6.2 Appendix 10-3 Flood Risk Assessment [APP-097].	New access roads will be permeable, in accordance with paragraph 2.10.85 from the NPS EN-3 (Ref 1-2). Therefore, access roads will not lead to an increase in impermeable area. The drainage regime of the access roads is therefore assumed to remain consistent with its pre-developed state. This is addressed in paragraph 3.1.3 of the Outline Drainage Strategy (Appendix 10-4: Outline Drainage Strategy of the ES [APP-098]).
Q1.14.9	Applicant	Where areas of solar panels coincide with areas at highest risk of flooding, can the Applicant confirm how the design and layout of solar panels has been addressed to minimise risk of flooding? For example, how will the bottom level of solar panels in areas at risk of flooding, set out in ES Chapter 10, paragraph 10.4.18 [APP-041], be secured?	The flood risk assessment in Appendix 10-3: Flood Risk Assessment of the ES [EN010142/APP/6.2(Rev01)] assesses the impact of flood risk to solar PV panels. The lowest point of solar PV panels will provide at least 300mm freeboard to the design flood level, including allowances for climate change. Panels will be raised to ensure the freeboard is provided. The credible maximum scenario has also been assessed to ensure flood waters will not reach the panels, ensuring the solar PV panels will remain operational in times of flood. Within and adjacent to the Flood Zones 2 and 3 of Yewthorpe Beck within the Principal Site, in accordance with the Outline Design Principles Statement [EN010142/APP/7.4(Rev02)] , <i>"The Solar PV panels will not be installed lower than 20.06m AOD to mitigate the risk of flooding from the Yewthorpe Beck surface water ditch within fields 51, 56 and 57 as shown Figure 1 of Appendix A of this ODP Statement."</i> This mitigation is secured by Requirement 5 of the draft DCO [EN010142/APP/3.1(Rev04)] , which requires design details for the solar PV panels (Work No 1) to accord with the Outline Design Principles Statement [EN010142/APP/7.4(Rev02)] .
Q1.14.10	Applicant	Paragraph 10.7.35 [APP-041] and Environment Agency [RR-093] notes that another construction compound is to be installed in flood zone 3 but would be temporary so is not mitigated. How will flood risk in this area be managed and measures secured?	<p>Within Paragraph 4.5, point 2, of the Environment Agency's relevant representation [RR-093], the Environment Agency notes two of the six temporary construction compounds are located within Flood Zone 3 of the River Trent, which benefit from flood defences. The Environment Agency notes, in point 2, that the other 4 temporary compounds are located within Flood Zone 1.</p> <p>Paragraphs 5.2.8 to 5.2.24 in Appendix 10-3: Flood Risk Assessment of the ES [EN010142/APP/6.2(Rev01)] provides an assessment of the two temporary construction compounds located within the defended floodplain of the River Trent, including assessment of breach of the flood defences. Safe refuge is to be provided above a minimum level of 7.66m AOD for these two temporary compounds. A technical note is also provided in Annex F of Appendix 10-3: Flood Risk Assessment of the ES [EN010142/APP/6.2(Rev01)] that assesses the flood risk of the two temporary compounds in the defended floodplain of the River Trent in further detail, referencing the Environment Agency provided Product 4 data (included with Appendix C of the technical note), and the proposed mitigation to ensure safe refuge can be provided.</p> <p>The requirement to maintain safe refuge above 7.66m AOD for the two temporary construction compounds within the floodplain of the River Trent has been added to the Framework CEMP [EN010142/APP/7.8(Rev02)] at Deadline 3.</p>

15. Other planning matters

Table 15-1: Other planning matters

ExQ1	Questions to:	Question:	Applicants Response:
Q1.15.1	LCC	<p>Glentworth K Oil Site Paragraphs 12.6 and 12.7 of the Council's LIR [REP1A-001] refer to the effect of the Proposed Development on the operation of the Glentworth K Oil site. Please could the Council confirm its current position on the effect on this site, with reference to relevant policies?</p>	<p>The Applicant notes that this question was posed to LCC but seeks to assist the ExA by reference to the Applicant's Response to Local Impact Reports [EN010142/APP/9.26] at LCC LIR references 12.6 and 12.7, where the Applicant outlines how the Scheme design ensures that both the existing Glentworth K Oil site and the potential new oil well site would not be adversely impacted by each other. The Application would not be an incompatible land use with the existing and emerging oil well developments.</p> <p>An assessment of the Scheme's compliance with the relevant policies in the Central Lincolnshire Local Plan (2023) (Ref 1-5) is set out in Appendix B of the Planning Statement [EN010142/APP/7.2(Rev02)].</p>
Air quality			
Q1.15.2	Applicant	<p>Non-Road Mobile Machinery ES paragraph 6.4.23 [APP-037] outlines that emissions from Non-Road Mobile Machinery (NRMM) have not been modelled separately. Part of the reason given is that they are already included in the Institute of Air Quality Management assessment approach. Could the Applicant please expand on this point? In particular, is the use of NRMM for construction of the cable route accounted for by this approach?</p>	<p>The IAQM assessment approach (Ref 1-53) is semi-empirical being based on real world experience of changes in air pollutant concentrations associated with different types of construction activities. The assumption is that works are undertaken using mobile plant such as excavators or cranes and emissions from associated engines, rather than being manual tasks. The assessment approach has considered potential emissions and impacts based on factors like the Scheme's scale, duration, its proximity to sensitive areas, and the likely intensity of dust and emissions for different types of works.</p> <p>For the cable route and all other work areas the use of NRMM is accounted for by the approach applied.</p>
Q1.15.3	Applicant	<p>Cumulative effects Could the Applicant direct the ExA to the assumptions/ methodology which underpins the approach taken to the assessment of cumulative effects on air quality in the Air Quality Modelling Report [APP-056] (for example, which projects have been included and what are the assumed/ worst-case construction scenarios used in this assessment)?</p>	<p>Cumulative schemes considered in the air quality modelling of cumulative traffic include Cottam Solar Project, West Burton Solar Project, Gate Burton Energy Park and the Glentworth Oil Extraction Site. These were included due to the potential for overlap in construction vehicle trips associated with these schemes. A summary of the reasoning for scoping in or out cumulative schemes from the cumulative traffic assessment is presented within paragraphs 18.17.2 – 18.17.5 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)].</p> <p>The cumulative assessment evaluated the combined effects of vehicle emissions from trips from these multiple schemes on the road network, factoring in overlaps in routes, construction timelines, and peak traffic periods. This conservative methodology not only estimates potential traffic impacts but also generates worst-case scenario traffic flows, which are subsequently used to calculate emissions to air and assess corresponding air quality impacts. Further details of the construction trips assumed for each cumulative scheme is provided within Section 18.7 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev01)], with a summary presented within Table 18-27.</p>
Q1.15.4	Applicant	<p>Unplanned emissions What is the Applicant's view on whether the conclusions reached in ES Appendix 17-5 [APP-123] should be referred to and considered in the Air Quality Chapter of the ES? What</p>	<p>Chapter 6: Air Quality of the ES [APP-037] considers likely effects during the construction, operational and decommissioning phases. The occurrence of a fire is theoretically foreseeable but is not likely to occur during the operational lifetime of the Scheme and therefore it is not meaningful to assess the impacts or a fire against air quality criteria intended to assess exposure to planned emissions. This is a similar situation</p>

ExQ1	Questions to:	Question:	Applicants Response:
		implications, if any, do these conclusions have with regard to the assessment undertaken in the Air Quality Chapter?	to considering emissions from a conventional energy plant stack with and without abatement in place, but not assessing the impact of a fire at the energy plant. Appendix 17-5: Unplanned Atmospheric Emissions from Battery Energy Storage Systems of the ES [APP-123] is a risk-based assessment that helps inform the Framework Battery Safety Management Plan [APP-225] , by establishing that the risk of exposure to emissions from a thermal event are of a scale that can be managed without endangering first responders attending the fire or the wider community. Instead, the assessment has been considered as part of Section 17.6 Major Accidents and Disasters within Chapter 17: Other Environmental Topics of the ES [APP-048].
Minerals and waste			
Q1.15.5	LCC	Waste Topic Paper Could LCC please provide a response to the 'Applicant's Responses to Relevant Representations' [REP1-028] in relation to 'waste' at PDF pages 86-89 and the Waste Quantitative Cumulative Assessment at Appendix A?	No response from Applicant required.
Q1.15.6	WLDC	Minerals and Waste Could WLDC please expand on the conclusions at paragraph 18.1 (W2 and W3) of its LIR [REP1A-005], particularly given that these conclusions do not appear to be expanded on in the text in Section 18 of the LIR.	While it is noted that this question is posed to WLDC, to assist the ExA the Applicant notes that it has responded to conclusions W2 and W3 of WLDC LIR paragraph 18.1 in the Applicant's Response to Local Impact Reports [EN010142/APP/9.26] .
Q1.15.7	NCC	Minerals safeguarding Could the Council please confirm whether it considers that the Proposed Development complies with Nottinghamshire Minerals Local Plan (2021) Policy SP7? This policy is referred to at paragraphs 5.8 to 5.10 of NCCs LIR [REP1A-002] but it is not clear whether the Council considers the Proposed Development to comply with this policy.	While it is noted that this question is posed to NCC, to assist the ExA the Applicant notes that the Applicant's Response to Local Impact Reports [EN010142/APP/9.26] sets out how the Scheme has considered the presence of mineral safeguarding areas in response to NCC LIR references 5.8 and 5.10. The Applicant would like to draw the ExA's attention to NCC's response at LIR ref 5.9 of the Applicant's Response to Local Impact Reports [EN010142/APP/9.26] . NCC has confirmed that: <i>"In terms of Policy SP7, the cable route corridor and accesses which lie within the County area fall within the Mineral Safeguarding and Consultation area for sand and gravel. However, given the relatively small land take for the proposed cabling route, the County Council do not foresee any problems and therefore raise no mineral safeguarding issues."</i>
Ground conditions			
Q1.15.8	Applicant	Ground Conditions ES Appendix 17-4 [APP-122] (Preliminary Risk Assessment (PRA) for the cable route corridor) notes several limitations due to access constraints and contains recommendations for further work. Please explain what has been done to address the recommendations for further work within this document. Can the Applicant confirm when further work will be undertaken and how it would be secured?	The Applicant acknowledges that there are limitations with Appendix 17-4: Ground Conditions Cable Route Corridor Preliminary Risk Assessment (PRA) of the ES [APP-122] due to access constraints, however, the recommendations (page 48) indicate that ground investigation is required and the results of which will be used to refine the Appendix 17-4: Ground Conditions Cable Route Corridor PRA of the ES [APP-122]. The ground investigation would provide any information that would have been gathered from the site reconnaissance visit that was unable to be undertaken. In the absence of the site walkover, Appendix 17-4: Ground Conditions Cable Route Corridor PRA of the ES [APP-122] has been based on desk-based information only.

ExQ1	Questions to:	Question:	Applicants Response:
			Table 3-12 of the Framework CEMP [EN010142/APP/7.8(Rev02)] states that intrusive geo-environmental ground investigation works will be undertaken prior to commencing development to evaluate soil and groundwater quality. Therefore, the ground investigation identified as required by Appendix 17-4: Ground Conditions Cable Route Corridor PRA of the ES [APP-122] is secured within the Framework CEMP [EN010142/APP/7.8(Rev02)] by Requirement 12 of the draft DCO [EN010142/APP/3.1(Rev04)] .
Other			
Q1.15.9	WLDC	PoC Paragraph 6.28 of WLDCs Written Representation [RE2-016] states in part <i>“...whilst connection agreements are in place, what has not been confirmed in the application documents is whether there is existing capacity at the PoC to connect all of the projects, or the implications for all developments seeking to make connections within a similar timeframe.”</i> Ref. 1. Could WLDC please specify what effect is alleged here, if any?	No response from Applicant required.

16. References

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- Ref 1-17 ICE, 2019. Embodied Carbon - The ICE Database, s.l.: s.n
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Appendix A – ExQ1.1.2 Appendix – Applicant's Response to ExA's First Written Questions – ExQ1.1.2

Appendix A – Applicant’s Response to ExA’s First Written Questions – ExQ1.1.2

Document Reference - Tillbridge Solar Project Examination Library	Organisation	Issues raised regarding common elements (Shared Cable Route Corridor (CRC) and Cottam Substation)	Approach proposed by the Tillbridge Solar Project	Gate Burton Energy Park - ExA Recommendation Report	Gate Burton Energy Park – Secretary of State Decision	Cottam Solar Project - ExA Recommendation Report	Cottam Solar Project - Secretary of State Decision	Consideration of concern/effect already considered by the Secretary of State or previous ExAs in relation to the other schemes
INTERESTED PARTIES								
RR-208 RR-165 REP1A-001 REP1A-003-007	Natural England (NE)/ Lincolnshire County Council (LCC)/ West Lindsey District Council (WLDC)	Seeking ALC survey within the shared cable route.	Framework Soil Management Plan [REP1-051] proposes that a soil survey of the cable route will be undertaken prior to construction to ensure the management of soils during construction to minimise degradation.	Gate Burton Energy Park submitted a soil resource and ALC survey of the cable route corridor into its Examination. The ExA concluded that appropriate mechanisms will be put in place to manage soil and restore it (paragraphs, 3.11.100, 3.11.109 and 3.11.110).	The Secretary of State agreed with the ExA that the Applicant's assessment of ALC land was reasonable (paragraph 4.1.174).	No ALC survey was completed of the cable route prior to development consent being granted. The ExA agreed with the approach to surveying the cable route prior to the commencement of the development and that this was secured in the Outline Soil Management Plan (paragraphs 3.8.33 and 3.8.57).	The Secretary of State agreed with the ExA on this matter (paragraph 4.72).	The approach proposed by the Tillbridge Solar Project aligns with the Cottam Solar Project, being the most recently granted development consent (September 2024).
REP1A-002	Nottinghamshire County Council (NCC)	The Local Highway Authority requested a revision to the routing of HGVs through Laneham Road through Stokeham.	The Framework Construction Traffic Management Plan (CTMP) [EN010142/APP/7.11 (Rev03)] has been amended and submitted at Deadline 3 to amend the construction route for the CRC such that Laneham Road is used, which passed through Stokeham rather than the village of Laneham.	The ExA in his report raised no concerns with transport and access impacts with no specific reference to Laneham Road as a construction route other than confirming that this was the HGV route proposed by the Applicant (paragraphs 3.12.27, 3.12.69 and 3.12.70). The FCTMP for Gate Burton identifies key routes that will be used by HGVs. This shows HGVs travelling via the A57, Laneham Road and Rampton Road to	The SoS agreed with the ExA's conclusions and weight ascribed to traffic and transport issues (neutral) (paragraph 4.13).	The ExA concluded that the Scheme would not result unacceptable impacts to highway safety and that residual cumulative impacts would not be severe (paragraph 3.10.39).	The SoS agreed with the ExA's conclusions and weight with respect to transport and access (neutral) (paragraph 4.6).	The Framework CTMP [EN010142/APP/7.11 (Rev03)] has been amended and an updated version submitted at Deadline 3 to address the query raised by NCC as Local Highway Authority regarding the preferred routing of construction vehicles via Laneham Road. The potential impact of this change in terms of the assessment in the ES has been considered to ensure that no new significant adverse effects would arise. This amendment confirms that the FCTMP [EN010142/APP/7.11 (Rev03)] aligns with both the consented Gate Burton Energy Project and Cottam Solar Project.

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				access Cottam Road and Headstead Bank.				
REP1A-003-007	WLDC	Impact of construction on farming businesses - additional farm businesses will also occupy land crossed by the shared cable route which have not been assessed.	There is minimal potential for significant effects as a result of the shared cable route on farming businesses, as following the brief construction work for each section of the cable route, the land can resume its current agricultural use.	The ExA referred to the impact of the project upon farm holdings. This focused on consideration of the solar site. No specific mention was made of farm holdings with the cable route (paragraph 3.11.115).	The SoS does not make specific reference to farming businesses.	The ExA at paragraph 3.8.27 considered cumulative effects, including the Tillbridge Solar Project, states that there is no meaningful data available concerning farming circumstances. It was concluded that farming businesses would be unlikely to be unacceptably impacted by the proposed development.	The SoS agreed with the ExA's conclusions in relation to cumulatives, which included consideration of impacts upon agriculture (paragraph 4.90).	The consented Gate Burton Energy Park and Cottam Solar Project agreed that impacts on farming businesses within the shared cable route would be unlikely to be unacceptable. The Tillbridge Solar Project retains this position. This is consistent with the consented Gate Burton Energy Park and Cottam Solar Project. The short duration and small land take associated with works to construct the cable route corridor will ensure that land is only temporarily impacted before the land is reinstated and returned to its continued agricultural use.
REP1A-003-007	WLDC	WLDC maintains concerns around the cumulative approach and impacts upon the successful implementation of the Framework Landscape and Ecological Management Plan (LEMP) [EN010142/APP/7.17 (Rev03)] (e.g. within the cable corridor). More detail around how projects will be phased and mitigation delivered is required to avoid abortive implementation of measures, which could elongate the time period for when	The Framework LEMP [EN010142/APP/7.17 (Rev03)] includes the timing of the delivery of mitigation measures in line with the progression of relevant cumulative schemes. A final (detailed) LEMP will be prepared prior to the commencement of works, which must substantially accord with the Framework LEMP, in accordance with the Requirement 7 in Schedule 2 of the draft DCO [EN010142/APP/3.1 (Rev04)] . The final LEMP will be updated at 5-year intervals throughout the	The ExA agreed with the applicant's assessment that in either a scenario where all projects are built together or sequentially that they will not result in significant cumulative effects (paragraph 3.4.24) Reference is made to the potential for joint mitigation within the shared cable route to manage environmental effects. The detailed CEMP(s) would outline all ecological mitigation. The CEMP is secured through Requirement 12 of	The SoS agreed with the ExA's conclusions and neutral weight ascribed to the planning balance with respect to ecology (paragraph 4.13).	The ExA confirmed that the level of the information submitted is sufficient to reach conclusions on effect (paragraph 3.4.37).	The SoS agreed with the ExA and was satisfied with the management of landscape and ecology and the manner in which it was secured through the Cottam Solar Project DCO and that the applicant had adequately assessed the likely significant effects of the proposed development cumulatively with other planned developments (paragraphs 4.6 and 4.90).	The Tillbridge Solar Project includes sufficient control mechanisms secured through requirements to ensure the successful implementation of landscape and ecological mitigation measures in conjunction with the other Schemes if these are implemented. The approach is in accordance with Gate Burton Energy Park and Cottam Solar Project.

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		mitigation is delivered.	operational life of the Scheme.	the Gate Burton Energy Park DCO. The ExA concluded that this would provide reasonable safeguards with the applicant demonstrating joint working (paragraph 3.4.59).				
RR-093	Environment Agency (EA)	Potential effects of (electromagnetic fields) EMF in relation to fish within the River Trent.	The Tillbridge Solar Project seeks to secure a 5m minimum depth of the cable under the River Trent through the Outline Design Principal Statement (ODPS) [EN010142/7.4 (Rev02)]. Requirement 5 in Schedule 2 of the draft DCO [EN010142/APP/3.1 (Rev04)] requires that the detailed design will need to be in accordance with the ODPS.	The applicant undertook a risk assessment of impacts from EMF from the cable crossing to ecological receptors. This concluded that as the cable would be buried at a minimum depth of 5m below the riverbed (as secured in the outline design principles that the likelihood of a significant effect was low and not significant. This was agreed in the applicant's SoCGs with the EA and Natural England (NE) (paragraph 3.4.58).	The Secretary of State's Decision letter accepted the conclusions of the applicant's Risk Assessment, and considered a significant impact on the qualifying features of the Humber Estuary SAC to be unlikely. However, NE requested a need for a programme of monitoring to collect further data in the interests of informing best practice, as well as the design and assessment of future developments. The Secretary of State agreed with this (paragraphs 5.16 and 5.17).	Paragraph 5.28 of the ExA Recommendation Report stated that the Risk Assessment of EMF Impacts on Fish document considered that potential effects of electric fields on these fish would not be likely due to the buried depth of the cable. The same conclusion is reached with regard to cumulative effects. The final SoCG between the applicant and the EA agreed that monitoring would be secured by the final Operational Environmental Management Plan (OEMP).	The SoS agreed with the applicant's Risk Assessment and considered it sufficiently precautionary in terms of the 5m minimum depth at which the cable would be buried beneath the riverbed of the River Trent. The SoS welcomed the scheme of EMF monitoring, as detailed in the outline OEMP and secured in Requirement 14 of the Cottam Solar Project DCO(paragraph 5.24).	<p>The Outline Design Principles Statement [EN010142/APP/7.4 (Rev02)] at page 9 secures a minimum depth of 5m for the cable below the lowest surveyed point of the riverbed to prevent disturbance to fish species.</p> <p>The Framework Operation Environmental Management Plan [EN01042/APP/7.9(Rev02)] secures on page 15 a programme of monitoring impacts from EMF on fish species in the vicinity of the operational cable crossing beneath the River Trent.</p> <p>Requirement 13 in Schedule 2 of the draft DCO [EN010142/APP/3.1(Rev04)] secures the submission of a OEMP to be substantially in accordance with the Framework OEMP and for construction works associated with the authorised development to be carried out in accordance with the approved OEMP.</p> <p>These mechanisms and control measures associated with detailed design and operation fully align with the approach taken for both the Gate Burton</p>

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								Energy Park and the Cottam Solar Project.
RR-292	Stow Parish Council	<p>Construction traffic impacts through the village. Vehicles close to SM of St Mary's Church with effect of heavy vehicles on foundations of the SM.</p> <p>Impacts on the B1241 – primary school.</p>	<p>Figures 1 and 2 of the Framework CTMP [EN010142/APP/7.11 (Rev03)] set out the proposed HGV and AIL routes for the Principal Site and Cable Route Corridor. HGVs and AILs will travel along Sturton Road (B1241) and Stow Park Road/Marton Road/Tillbridge Lane (A1500) to access and construct the cable route.</p> <p>Section 7 of the Framework CTMP [EN010142/APP/7.11 (Rev03)] provides full details of embedded mitigation measures that are proposed to prevent or reduce potential adverse effects associated with construction traffic on local roads. A detailed CTMP (which must substantially accord with the Framework CTMP) will need to be approved prior to construction by the relevant local authorities and this is secured by requirement 14 in Schedule 2 to the draft DCO [EN010142/APP/3.1(Rev04)]</p>	No specific reference to SM of St Mary's church in relation to structural integrity.	No specific reference to SM of St Mary's church in relation to structural integrity.	<p>The ExA at paragraph 3.7.3 stated that in light of the potential for a direct effect on the Site of a college and Benedictine Abbey, St Mary's Church SM, that it raised concerns over the potential for effects on its structural integrity, including the boundary retaining wall abutting the road. The ExA confirmed that it was also raised by Interested Parties, including Stow Parish Council .</p> <p>The Applicant subsequently updated the outline CTMP to include provisions for such a plan. HE confirmed that the measures set out appeared appropriate to provide adequate protection against damage to this asset. Therefore, the ExA concluded that there were no unresolved matters that related to this</p>	The SoS in his decision also confirmed at paragraph 4.6 that he agreed with the ExA's conclusions in relation to transport and access matters attributing neutral weight in the planning balance.	The Framework CTMP [EN010142/APP/7.11(Rev03)] includes the same provisions for the protection of this asset as were agreed by the ExA and SoS in relation to the Cottam Solar Project (refer to paragraphs 5.6.4 and 5.6.5 of the Framework CTMP). The approach taken in this regard by the Tillbridge Solar Project is consistent with the consented Gate Burton Energy Park and Cottam Solar Project.

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			<p>Severance, pedestrian delay (incorporating delay to all non-motorised users) on the B1241 (ATC 23) which passes Sturton-by-Stow Primary School (Table 16-20 of Chapter 16: Transport and Access of the ES [APP-047]). The significant adverse effect on the B1241 will only occur in the worst-case scenario for a short period of time (in the order of a couple of weeks), if activity on the construction of the cable route is concentrated on the B1241 north of Fleets Road.</p>			<p>asset (paragraph 3.7.36)</p> <p>The use of the B1241 as a construction route was examined by the ExA in relation to the Cottam Solar Project. In his report, the ExA at paragraph 3.10.28 confirmed that: <i>“Accordingly, we are satisfied that the effects arising from construction traffic access, routing and generation would be ably accommodated on the local highway network.”</i></p>		
RR-214 and RR-091	[REDACTED]	<p>[REDACTED] Hill agriculture purchased land at Marton and gained planning permission for a new farm yard and buildings for our first generation agricultural business. We totally object. Tillbridge, Gate Burton, [Cottam] and west Burton proposed cable routes go directly Straight through our new farm yard this will have a devastating impact on our first generation farming business and</p>	<p>Whilst all solar NSIP schemes have sought to deliver a shared cable route as far as practicable to minimise environmental impacts, there is a need to retain some flexibility to ensure that one project does not prevent another project coming forward should all DCOs be made and to have regard to the extant planning permission for the agricultural barns in this location (LPA Ref no. 145882). In the case of land owned by Nicholas Hill, the Scheme includes an</p>	<p>The ExA confirmed that they were satisfied that the rights to be acquired and/or created are necessary to permit the realisation of the proposed development and that the proposed development would result in significant public benefits and that these outweigh any private interests such that the compelling case in the public interest is made (paragraph 6.6.10).</p>	<p>SoS agreed with ExA that the rights to be acquired and/or created were necessary to permit the realisation of the proposed development and that the proposed development would result in significant public benefits that outweigh any private interests, such that the compelling case in the public interest is made (paragraph 6.4).</p>	<p>The ExA concluded that the land is required for the grid connection, an essential element of the proposed development confirming that it satisfies the first limb of s122 of the Planning Act 2008 (PA2008).</p> <p>The ExA confirmed that overall, it accepted that whilst the compulsory acquisition and temporary</p>	<p>The Secretary of State agreed with the ExA’s conclusions and considered that there is a compelling case in the public interest for the compulsory acquisition and temporary possession powers sought (paragraphs 6.5 and 6.6).</p>	<p>In common with the other projects, the Applicant has identified that the land is required for the cable route. The Applicant has sought to reach a voluntary agreement with [REDACTED] as outlined in the Schedule of Negotiations and Powers Sought [REP1-017]. The Applicant has included optionality in this location in the event that at detailed design there is not sufficient land for all four projects to have their cables running to the north of the proposed barns (should all be consented).</p>

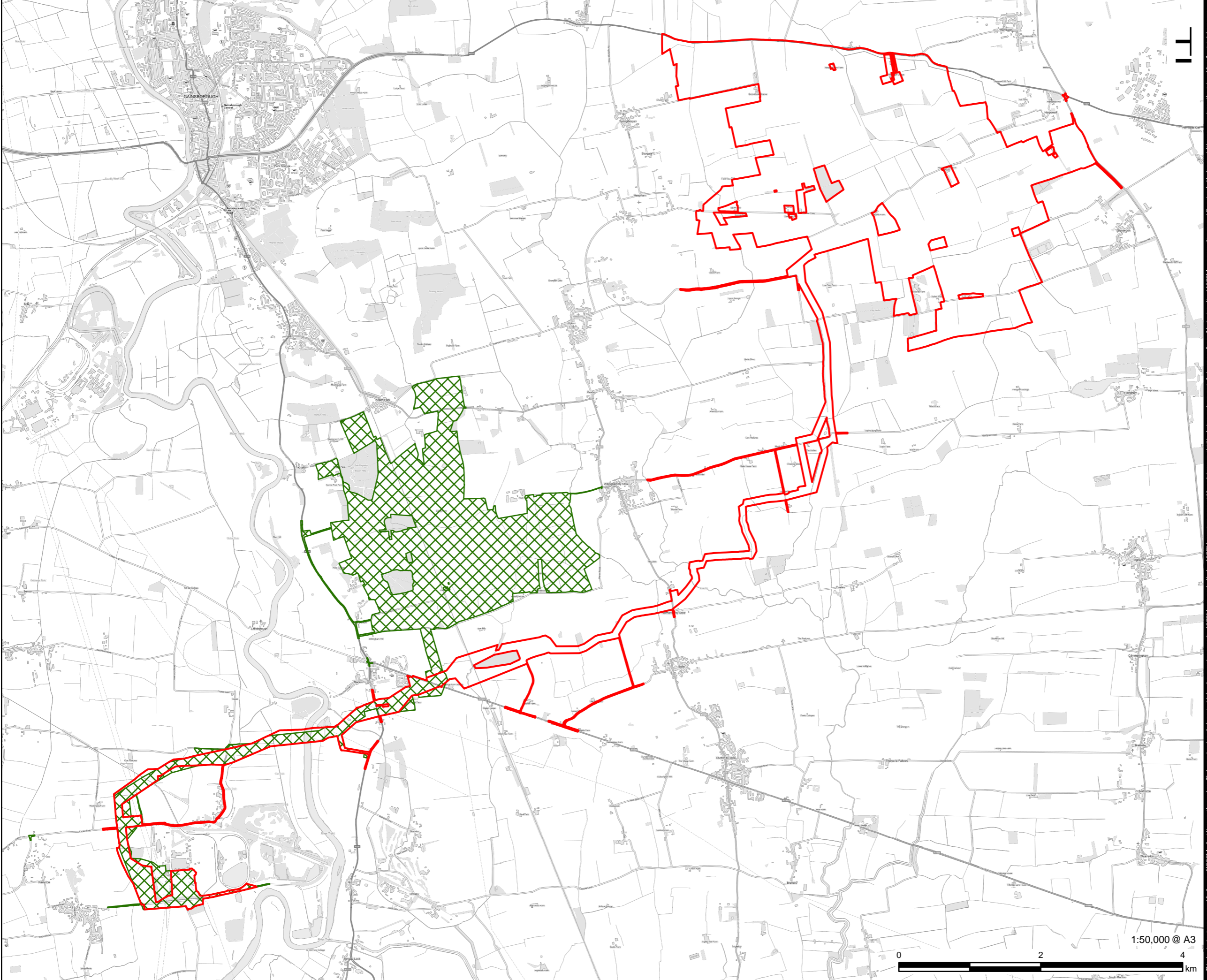
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		<p>may put us out of business as we will simply not be able to develop our farm</p>	<p>area of optionality within the cable route that provides two alternative routes, one to the north of the approved barns and one to the south.</p> <p>During the coordination discussions with the other developers, the Applicant has sought to ensure that each of their respective Order limits would not prejudice the implementation of the approved planning permission for the agricultural barns and to also allow sufficient space for the cables associated with the four NSIP schemes to be located either north or south of the proposed barns.</p>			<p>possession powers sought might result in some adverse impacts to Mr and [REDACTED] private interests, in view of the established need for energy generation and the need to provide certainty in terms of project delivery, that there is a compelling case in the public interest for that the land to be acquired compulsorily. The ExA were therefore satisfied that it met the tests in s122(3) the PA2008 (paragraphs 6.7.26 to 6.7.28).</p>		
PROTECTIVE PROVISIONS								
RR-316	Trent Valley IDB	<p>Seeking protection of watercourses – will only accept an increase in flow if no harm or mitigation in place.</p> <p>Byelaw Number 10 prevents planting within 9 metres of watercourse.</p> <p>Byelaw Number 17 – all watercourses to be crossed by HDD at a depth of no less than 2m plus the cable safety distance below</p>	<p>Any temporary Sustainable Drainage Systems with discharges to Trent Valley Internal Drainage Board managed watercourses during construction would be managed by the Contractor, as set out within the Framework CEMP [EN010142/APP/7.8 (Rev02)], which in turn is secured by requirement 12 of the draft DCO</p>	<p>SoCG unsigned at close of Examination.</p> <p>ExA concluded that although TVIDB did not conclude a SoCG with the applicant that the ExA had no substantive objections from them in respect of flooding or water quality issues (paragraph 3.13.70).</p>	<p>SoS agreed with the ExA, assigning neutral weight to flood risk in the planning balance (paragraph 7.4).</p>	<p>Protective provisions included for Trent Valley IDB within the Cottam Solar Project DCO. No specific reference was made to this matter within the ExA recommendation report.</p>	<p>SoS agreed with the ExA in terms of water and flood risk comprising neutral weight in the planning balance (paragraph 7.2).</p>	<p>The Applicant has provided TVIDB with a copy of the standard drainage board provisions included in the draft DCO EN010142/APP/3.1(Rev04)] for review and comment. The Applicant is awaiting a response but discussions around protective provisions to date have generally been positive, including at a technical meeting between the Applicant and the Drainage Board held in August 2024 and ongoing discussions regarding an SoCG between the parties. While the Applicant cannot provide exact timescales for resolution at this</p>

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		the hard bed level of all watercourse.	<p>[EN010142/APP/3.1(Rev04)].</p> <p>Article 6(1)(c) of the draft DCO [EN010142/APP/3.1 (Rev04)] seeks to disapply Byelaw 17 (as a byelaw made under section 66 of the Land Drainage Act 1991. Instead, the dDCO would manage drainage matters via the protective provisions to be agreed between Trent Valley IDB and the Applicant. The Applicant awaits the Trent Valley IDB's comments on the protective provisions included within the draft DCO. The Applicant is looking to agree the protective provisions with TVIDB through a Statement of Common Ground (SoCG).</p> <p>No planting proposed within any part of CRC within IDB area.</p> <p>Preliminary designs show a minimum depth of 3m below the watercourse bed level. Except Till and Trent where will be a minimum of 5m below the lowest survey point of the riverbed. Minimum depth secured within the ODPS</p>					stage, the Applicant is confident that agreement can be reached within the timescales of the examination. The Applicant will track agreement of protective provisions through its SoCG with TVIDB, and will submit an updated SoCG, once comments on protective provisions have been received. At this stage of the examination, therefore, the approach taken by the Tillbridge Solar Project is entirely consistent with that taken for the Gate Burton Energy Park and Cottam Solar Project.

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			[EN010142/7.4 (Rev02)].					
RR-080	EDF Energy	Proposed cable route must not sterilise the safeguarded land for future development at Cottam. EDF will require protective provisions within the draft DCO to protect its interests. Detailed design of cable route corridor – EDF request to be a consultee a part of the discharge of the requirement.	<p>The Order limits do not prejudice the future development of the redevelopment of Cottam through the cable extending south out of the Cottam Substation, turning west before extending northwards towards Cottam Lane.</p> <p>The Applicant is progressing protective provisions with EDF.</p>	<p>The ExA confirmed that EDF retained its view that the compulsory acquisition of its land would cause serious detriment to its undertaking (paragraph 6.7.16). Given the required use of this land, there is no alternative land that can be used. The land is required for the safe decommissioning and demolition of the former coal fired station, safe continued operation of the existing Uniper and National Grid assets, and long-term regeneration of the Cottam site.</p> <p>The ExA stated that protective provisions need to be complete to be included in an Order. The ExA inserted the additional wording at paragraph 190(1) as requested by EDF as this requires agreement to be reached between the parties which will be</p>	<p>The Secretary of State confirmed that negotiations on the protective provisions progressed such that the Secretary of State deleted subparagraph 190(1) of Part 15 of Schedule 14 to the draft Order requiring EDF's agreement to any compulsory acquisition (paragraph 9.17). The Secretary of State considers this should be dealt with through the formal process provided through compulsory acquisition or agreement with EDF outside of the draft Order.</p> <p>Paragraph 9.18. confirms that the Secretary of State has amended subparagraph 193(12) relating to notice to cease works during certain events. A compromise has been reached between the two parties within the latest protective provisions and 28 days has been inserted to ensure</p>	<p>The ExA confirmed that EDF raised a number of matters during the Examination over the effect of the proposed development on its operations at the Cottam Power Station site and the Priority Regeneration Area (paragraph 3.9.42).</p> <p>The ExA concluded that as part of the proposed development which impacts the power station site is limited to making the grid connection to an existing sub-station, the effect would be limited (paragraph 3.9.45).</p> <p>The ExA concluded that the SoS can be satisfied that the powers sought are necessary for the purpose of carrying out the proposed development and</p>	<p>The SoS in his decision letter confirmed that EDF continued to negotiate with the Applicant on the protective provisions however no Voluntary Land Agreement had been reached, and the Applicant had not yet been able to provide the reassurance that EDF requires to ensure there will be no serious detriment to its undertaking in lieu of such agreement (paragraph 6.19). The SoS confirmed that EDF concluded that its position was that its preferred protective provisions submitted at Deadline 6 which restricts the usage of compulsory acquisition powers without an agreement, must be included in the DCO (paragraph 6.20).</p> <p>The Secretary of State agreed with the ExA's recommended changes as set out in Table 2 [ER 5.5.1]</p>	<p>The Applicant has reviewed and provided comments to EDF on EDF's standard protective provisions and is awaiting EDF's response. The bulk of the provisions are considered to be agreed, with only a handful of provisions needing further discussion and resolution (from the Applicant's perspective). While the Applicant cannot provide exact timescales for resolution at this stage, the Applicant is confident that agreement can be reached within the timescales of the Examination.</p> <p>The Applicant is engaged in ongoing discussions with EDF, with the Heads of Terms currently being negotiated. The Applicant is confident that the terms of the agreement with EDF will be finalised before the Examination concludes.</p>

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				required in any case to facilitate the grid connection (paragraph 6.7.19).	adequate notice whilst facilitating the delivery of the authorised development.	there would be no serious detriment to EDF's undertaking. The ExA stated that the protective provisions included in the recommended DCO are sufficient to ensure that there would be no serious detriment to EDF's undertaking and that the tests set out in sections 127 and 138 of the PA2008 have been met (paragraphs 6.7.53 to 6.7.58).	to EDF's preferred form of protective provisions, with text included to make consent explicitly subject to the test of reasonableness, to ensure that there would be no serious detriment to EDF's undertaking as a result of the exercise of compulsory acquisition powers by the applicant (paragraph 6.21).	
RR-211	Network Rail (NR)	<p>Interaction of Order limits with operational railway (Sheffield to Lincoln line and Torksey branch line).</p> <p>Concern relating to application of CA over its assets and disapplication of railway legislation.</p> <p>Concern regarding interaction of HGV and AIL routes with its assets.</p> <p>NR reviewing the Applicant's FCTMP.</p>	<p>Proposing trenchless crossing at 10m below NR assets.</p> <p>The Applicant has reached agreement with NR regarding protective provisions. The Draft DCO [EN010142/APP/3.1 (Rev04)] was updated at Deadline 1 to include NR's standard protective provisions, which are supplemented by the terms of a Framework Agreement that is currently being negotiated between the parties.</p> <p>Heads of Terms for an easement in respect of both operational and</p>	ExA confirmed that it added wording to protective provisions to protect NR assets to ensure there is no serious detriment to NR's Undertaking (paragraph 6.7.28).	Protective provisions with NR agreed on 13 May with SoS agreeing to amend the DCO (paragraph 6.10).	<p>Deadline 6, the applicant confirmed that protective provisions had been agreed and voluntary agreements were being negotiated (paragraph 6.7.67).</p> <p>The ExA concluded that it was satisfied that the inclusion of compulsory acquisition powers in respect of NR's land and interests would not result in serious detriment to the</p>	The SoS confirmed at paragraph 6.15 that NR confirmed that negotiations regarding the protective provisions were still underway and nearing finalisation of a confidential agreement that will ensure the inclusions of the necessary protective provisions for NR, which they expect to be concluded in the coming weeks.	<p>The Applicant has reached agreement with NR regarding protective provisions. The Draft DCO [EN010142/APP/3.1 (Rev04)] was updated at Deadline 1 to include NR's standard protective provisions, which are supplemented by the terms of a Framework Agreement that is currently being negotiated between the parties. In terms of protective provisions, therefore, the approach taken for the Tillbridge Solar Project is consistent with that taken for Gate Burton Energy Park and Cottam Solar Project.</p> <p>The Applicant is engaged in ongoing discussions with Network Rail, with the Heads of Terms currently being reviewed by the Applicant. The Applicant is</p>

Document Reference - Tillbridge Solar Project Examination Library	Organisation	Issues raised regarding common elements (Shared Cable Route Corridor (CRC) and Cottam Substation)	Approach proposed by the Tillbridge Solar Project	Gate Burton Energy Park - ExA Recommendation Report	Gate Burton Energy Park – Secretary of State Decision	Cottam Solar Project - ExA Recommendation Report	Cottam Solar Project - Secretary of State Decision	Consideration of concern/effect already considered by the Secretary of State or previous ExAs in relation to the other schemes
			<p>non-operational railways crossings provided by NR on 1 October.</p> <p>SoCG with NR is being progressed.</p>			<p>carrying on of its undertaking. The ExA also confirmed that it was satisfied that the inclusion of powers in respect of the extinguishment of rights were necessary for the purpose of carrying out the development. The ExA confirmed that the tests set out in s127 and s138 of the PA2008 were met (paragraph 6.7.68).</p>		<p>confident that the terms of the agreement with Network Rail will be finalised before the conclusion of the Examination.</p>



AECOM

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LEGEND

- Order limits
- Gate Burton Order limits

NOTES

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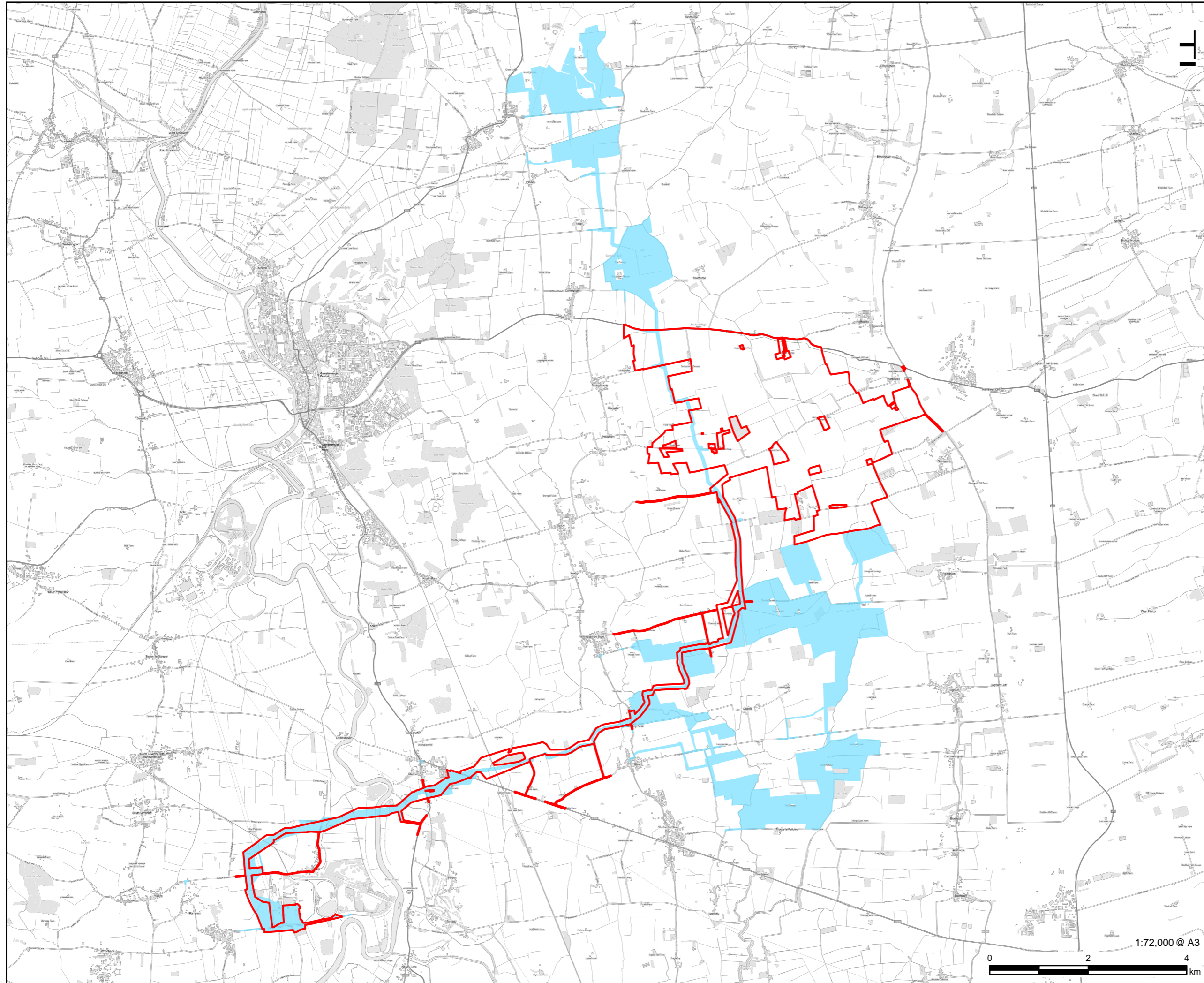
ISSUE PURPOSE
DCO Examination

PROJECT NUMBER
60682158

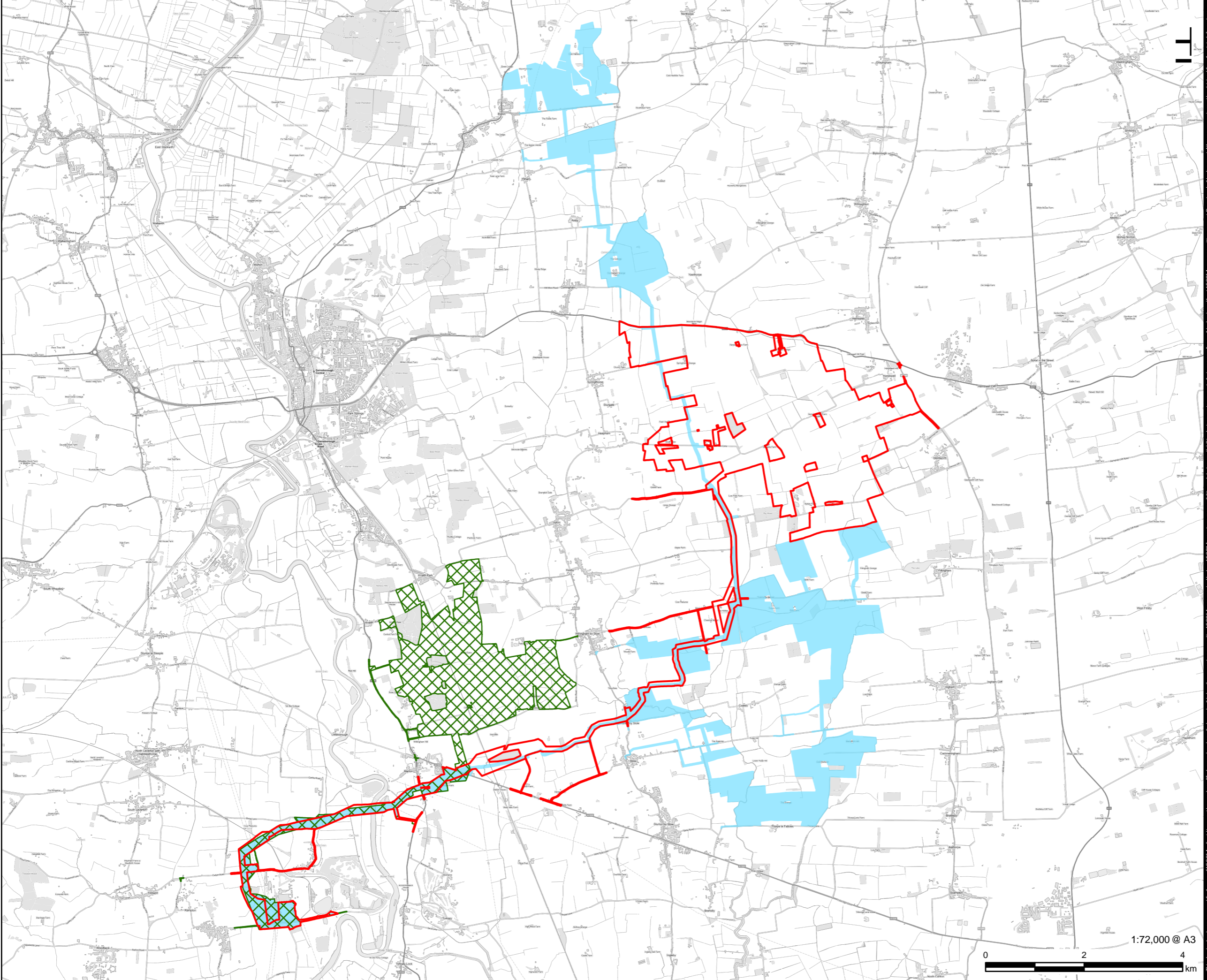
FIGURE TITLE
Figure in response to ExQ1.1.2 showing where the Order limits for the Tillbridge Solar Project overlaps with the consented Gate Burton Energy Park.

FIGURE NUMBER
Figure ExQ1.1.2a

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- Order limits
- Gate Burton Order limits
- Cottam Order limits

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ISSUE PURPOSE
DCO Examination
PROJECT NUMBER
60682158

FIGURE TITLE
Figure in response to ExQ1.1.2 showing where the Order limits for the Tillbridge Solar Project overlaps with the consented Gate Burton Energy Park and Cottam Solar Project.
FIGURE NUMBER
Figure ExQ1.1.2c

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Appendix B – ExQ1.10.6 Appendix – Updated Tillbridge Solar Project Acoustics Technical Note

Tillbridge Solar Farm Acoustics Technical Note

East Cottage on Northlands Road

Project number: 60682158

December 2024

Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
1	12/02/2024	1 st version	NT	██████████	Technical Director
2	23/02/2024	Updated following client meeting	NT	██████████	Technical Director
3	13/05/24	Updated following Clarke Saunders review	NT	██████████	Technical Director
4	05/12/24	Scenario 1 modelling results added to appendices	AT	██████████	Associate Director

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Executive Summary

This technical note relates to noise levels at East Cottage on Northlands Road resulting from the operation of new infrastructure (a substation, solar station, and battery energy storage system (BESS)) associated with Tillbridge Solar Project (hereafter referred to as the 'Scheme').

The predicted noise has been modelled at East Cottage during operation of the Scheme for different scenarios to test the effect of locating some of the noise source equipment further from East Cottage.

The modelling shows that the amended illustrative layout of the Scheme, which has been incorporated within the DCO application, would lead to lower predicted noise levels at East Cottage compared to alternative scenarios. As a result, Tillbridge Solar Limited (hereafter referred to as 'the Applicant') has included a commitment in the Development Consent Order (DCO) application to avoid solar stations and BESS in Field 92 where Substation A is proposed.

Furthermore, noise levels at East Cottage can be restricted to 26-27 dB(A), which is typical of the existing external night-time background sound. This commitment would be tested and verified through further modelling the Scheme layout and chosen equipment during detailed design. At that stage, the Applicant would be able to check the effect of the selected equipment using known sound power levels, along with the precise location of the BESS and solar stations, to deliver a Scheme that achieves a typical night-time background sound level at East Cottage. Spot check monitoring would also be carried out during operation at East Cottage.

1. Introduction

- 1.1.1 This technical note relates to a concern raised by a stakeholder who lives near the Principal Site of the proposed Tillbridge Solar Project ('the Scheme') regarding how noise emissions may affect the occupiers of East Cottage on Northlands Road. This is represented by receptor R15 in the Preliminary Environmental Information Report (PEIR) as well as the Environmental Statement (ES), which has been submitted with the application for development consent.
- 1.1.2 This technical note provides a summary of the existing noise climate to confirm noise levels without the Scheme and the results of noise modelling of the operational Scheme. The information is intended to support further discussions with the stakeholder on how the best practicable noise environment can be provided at East Cottage whilst not unduly constraining the proposed Scheme.

2. Policy Compliance

- 2.1.1 The assessment of noise and the methodology adopted in the ES forming part of the DCO application submission is in accordance with national noise policy. This includes the Noise Policy Statement for England¹ (NPSE), which defines noise effects in terms of the following concepts:
 - Lowest Observed Adverse Effect Level (LOAEL) – the level above which, as an average response, adverse effects on health and quality of life can be detected; and
 - Significant Observed Adverse Effect Level (SOAEL) – the average response level above which, as an average response, significant adverse effects on health and quality of life occur.
- 2.1.2 For assessment purposes, with reference to guidance from BS 4142, BS 8233, and World Health Organisation (WHO) guidelines, the LOAEL has been set as equal to the typical background level ($L_{A90, T}$) with minimum rating levels ($L_{Ar, Tr}$) of 35 and 30 dB applied in low noise environments for day and night periods respectively. The SOAEL is defined at 10 dB above the typical background level

¹ Department for Environment Food and Rural Affairs (2010); Noise Policy Statement for England

($L_{A90,T}$) with minimum rating levels ($L_{Ar,Tr}$) of 45 and 40 dB applied in low noise environments for day and night periods respectively.

2.1.3 Planning Practice Guidance Noise² provides more information on the LOAEL and SOAEL by providing a noise exposure hierarchy table “based on the likely average response of those affected”. The hierarchy table identifies that, for noise levels between LOAEL and SOAEL, “Noise can be heard and causes small changes in behaviour, attitude or other physiological response”.

2.1.4 Noise levels at sensitive receptors in the ES are predicted at sensitive receptors as, at worst, above LOAEL but below SOAEL. For noise levels exceeding the LOAEL, the NPSE states that:

“It requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development.”

2.1.5 The embedded in-built design measures represent reasonable steps to mitigate and minimise noise levels in accordance with planning policy. The general embedded in-built design measures incorporated within the Scheme are:

- Plant selection (noise emissions will be one of the criteria evaluated when procuring equipment for use on the site).
- There is a commitment to locate Solar Stations (with inverters, transformers, and battery energy storage systems) at least 250m from residential properties. (Note, a greater offset distance has been proposed for East Cottage as a result of the modelling in this technical note, as described in Section 4 and 5).
- Design layout to locate Scheme equipment in areas away from large concentrations of sensitive receptors such that noise emissions from electrical equipment are less impactful, including:
 - Location and orientation of the solar stations and BESS;
 - Location and orientation of inverters and transformers; and
 - Location and orientation of the two sub-stations.

2.1.6 There is a requirement to retain some flexibility on where infrastructure would be located within the Principal Site due to the outline nature of DCO applications but there are mechanisms that can establish design principles for the detailed design stage post consent should the DCO be approved. In this case, the Applicant commits that noise will be no higher than the predicted levels presented in the ES at sensitive receptors. This commitment is included in Table 3-8 of the Framework Operational Environmental Management Plan [EN010142/APP/7.9].

3. Baseline Noise Monitoring

3.1 Methodology

3.1.1 Baseline noise monitoring has been carried out to establish the existing noise climate in the area around the Principal Site. The baseline monitoring was used to define ambient noise conditions at sensitive receptors in the noise assessment presented in the PEIR³ for statutory consultation and in the ES submitted as part of the DCO application. The monitoring procedures followed guidance from BS 7445-1⁴ and BS 4142⁵. All noise measurements included $L_{Aeq,T}$ and $L_{A90,T}$ sound level indicators. Acoustic field calibrators were applied to each instrument at the start and end of each measurement. No significant drift (± 0.1 dB) in calibration was noted.

² Ministry of Housing, Communities & Local Government (2019); Planning Practice Guidance - Noise

³ British Standards Institute (2019) BS 4142:2014+A1:2019 – Methods for rating and assessing industrial and commercial sound. London: BSI.

⁴ British Standards Institute (2003) BS 7445 – Description and environment of environmental noise – Part 1: Guide to quantities and procedures. London: BSI.

⁵ British Standards Institute (2019) BS 4142:2014+A1:2019 – Methods for rating and assessing industrial and commercial sound. London: BSI.

- 3.1.2 Meteorological conditions were measured throughout the noise monitoring using a weather station. Noise measurements during adverse meteorological conditions (periods of high wind speed and rain) have been excluded from analysis. During the rest of the monitoring period wind speeds were below 5 m/s, which is conducive for noise monitoring.
- 3.1.3 Unattended long-term noise monitoring equipment was set up at four locations for a period of 7-days between the 8th July and 14th July 2022 and an additional four locations for a period of 7-days between the 15th July and 22nd July 2022. Continuous measurements were taken to establish the existing baseline conditions at nearby sensitive receptors. Each unattended sound level meter was housed in a weatherproof box with batteries to power the instrument for the full measurement duration. Appropriate outdoor all-weather equipment was used on all microphones.
- 3.1.4 Noise monitoring location ML7 provides representative ambient noise data for East Cottage and is located approximately 350 m east of the dwelling. It is common practice when monitoring noise to select a suitably representative proxy location for the purpose identifying (or providing worse case) ambient noise conditions at a sensitive receptor. As there were no identified dominant noise sources in the area, ambient noise is considered consistent at ML7 and East Cottage, and the noise data was considered suitably representative. The locations of ML7 and East Cottage are presented in Figure 3-1 below.

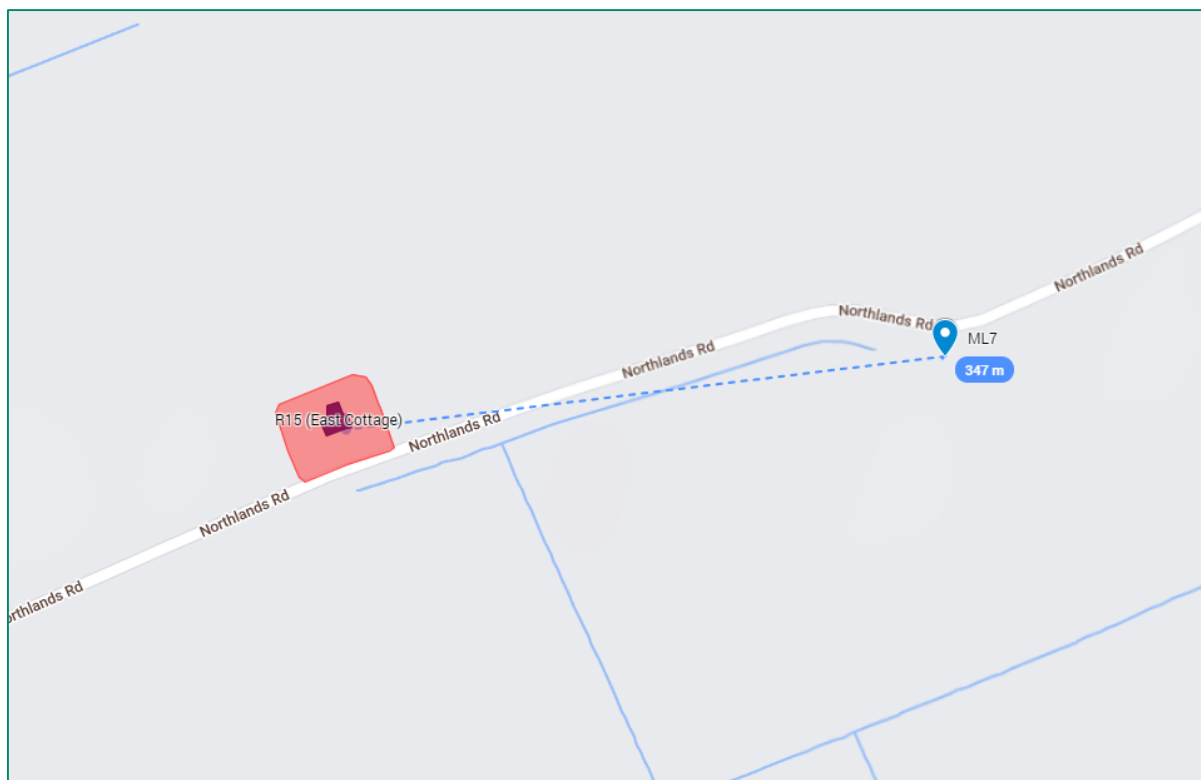


Figure 3-1 Noise Monitoring and Receptor Location

3.2 Results and Analysis

- 3.2.1 During the installation and collection of the noise monitoring equipment, the sound environment at this location was characterised by (from the most dominant noise source to the least dominant noise source):
- Intermittent traffic noise from Northlands Road;
 - Aircraft passing overhead;
 - Foliage moving in the wind;
 - Insects chirping; and
 - Birds calling.

- 3.2.2 A summary of the range of weekday and weekend measured sound levels during the daytime, evening and night-time periods is presented in Table 3-1 and Table 3-2. The values in Table 3-1 represent the range of ambient and background 1-hour levels measured during each time period over the week. The values in Table 3-2 represent the range of ambient and background levels, measured over the week, for the entire duration of the corresponding period. For the $L_{Aeq,T}$ values, this represents the ambient level for the corresponding time period and for the $L_{A90,T}$ values, this represents the arithmetic average of the one-hour L_{A90} values for the corresponding period.
- 3.2.3 The noise levels presented in Table A-1 to Table A-4 of Appendix A represent the arithmetic average of the one-hour ambient and background levels in each 1/3rd octave frequency band. Figure A-1 within Appendix A presents a time history of the measured levels throughout the survey period. Measured maximum and minimum background A-weighted 1/3rd octave sound data are presented in Figure D-1 for the weekday period and Figure D-2 for the weekend period within Appendix D.

Table 3-1. ML7 Baseline Noise Level 1-hour Summary

Location Reference	Week Period	Sound Level Indicator	Day (07:00 – 19:00)	Evening (19:00 – 23:00)	Night (23:00 – 07:00)
ML7	Weekday	$L_{Aeq, 1h}$	30-54	26-52	23-55
		$L_{A90, 1h}$	24-34	19-36	19-33
	Weekend	$L_{Aeq, 1h}$	30-60	27-37	23-42
		$L_{A90, 1h}$	25-32	22-29	20-33

Table 3-2. ML7 Baseline Noise Level Period Summary

Location Reference	Week Period	Sound Level Indicator	Day (07:00 – 19:00)	Evening (19:00 – 23:00)	Night (23:00 – 07:00)
ML7	Weekday	$L_{Aeq, T}$	40-48	33-46	32-46
		$L_{A90, T}$	27-33	25-28	23-28
	Weekend	$L_{Aeq, T}$	42-51	32-35	34-36
		$L_{A90, T}$	27-29	26	25-26

4. Operational Plant Noise Modelling

4.1 Noise Modelling

4.1.1 Noise predictions have been undertaken based on three illustrative site layouts:

- **Scenario 1:** Substation A located 510m away from East Cottage and the closest solar station and BESS in Field 92 within 250m of the cottage. This was considered as a worst-case scenario.
- **Scenario 2:** Substation A and the closest solar station and BESS approximately 510m and 550m from the nearest part of the East Cottage property boundary respectively.
- **Scenario 3a:** A revised masterplan layout, designed to reduce the noise at the cottage in response to concerns raised by the residents, with the solar station and BESS in Field 92 moved west to Field 88 (approximately 770 m from the nearest part of the property boundary with East Cottage) and the solar station and BESS in Field 93 moved west to the boundary of Field 77 (approximately 950 m from the nearest part of the property boundary with East Cottage). Substation A remains at approximately 510m from East Cottage. This illustrative masterplan layout has been included within the DCO submission (Figure 3-1: Illustrative Principal Site Layout Plan of the ES [EN010142/APP/6.3]).

- **Scenario 3b:** A revised masterplan layout with the same location for Substation A and the solar station and BESS in Field 92 moved to Field 88 as Scenario 3a, but with the solar station and BESS in Field 93 left in the same configuration as in Scenario 2, to test whether its relocation makes a difference to noise levels at East Cottage.
- 4.1.2 Operational noise was modelled in SoundPLAN which employs the noise prediction routines commonly used in the UK e.g. ISO 9613 Part 1⁶ and Part 2⁷, which applies “*moderate downwind conditions*” at receptor points when predicting noise, which may be considered a reasonable worst case.
- 4.1.3 Noise source data for plant has been selected based on experience of previous solar farms. There is a requirement for flexibility in final plant specifications so noise source data may not be representative of the plant selected in the final design. Although there can be variations in noise emissions from different makes of plant, there is a commitment in the Framework Operational Environmental Management Plan [EN010142/APP/7.9] to select plant with consideration of noise emissions where practicable. Additionally, the commitment to achieve noise levels predicted at sensitive receptors in line with the ES submitted as part of the DCO submission provides certainty on the maximum noise levels that will be experienced at sensitive receptors such as East Cottage.
- 4.1.4 The proposed inverters are represented by indicative sound source data based on measurements of Power Electronics central inverters at a similar existing facility, giving a total sound power of approximately 84 dB(A)⁸. Transformers associated with the inverters will have noise emissions approximately 10 dB(A) below that of the inverters. Noise from transformers will not be audible above noise from the inverters and have not been included in the modelling.
- 4.1.5 Battery storage module sound power levels have been based on AECOM library sound power data for battery storage module cooling systems, giving a sound power of 71 dB(A).
- 4.1.6 Sound level data of substation transformers have been modelled with a sound power level of 95 dB(A) and at a source height of 3.5 m.
- 4.1.7 Sound level data of shunt reactors in the substation area have been modelled with a sound power level of 82 dB(A) and at a source height of 4 m.
- 4.1.8 A worst-case assumption has been made that the inverters, BESS and substation are operational at all times, when in practice they would primarily operate during daylight hours. There may be energy stored in the BESS exported through the inverters and substation during night-time hours but this is unlikely to be full load and if it were, its operation would not be continuous. As there is uncertainty regarding when this would occur, a worst-case assumption has been assessed. However, in practice, noise from the inverters would likely be lower than predicted at night-time.
- 4.1.9 The BESS can be as noisy at night as in the day if there are high temperatures (e.g. above 25°C), due to the operation of fans to cool the system. This is likely to only be during the hottest days in the year and therefore an atypical occurrence. When the ambient temperatures are lower, the BESS will be operating at lower noise levels without a reliance on fans for cooling.
- 4.1.10 1/3rd octave band data for operational noise sources are presented in Appendix B.

4.2 Results

- 4.2.1 Although policy compliance has been demonstrated, this section provides more detailed analysis of the noise modelling results to contextualise how different noise sources influence the predicted noise levels at East Cottage. Three scenarios have been modelled to identify how different noise sources contribute to predicted noise levels at East Cottage as follows:
- All noise sources.
 - Substation noise only.

⁶ International Organisation for Standardisation (1993) ISO 9613 Attenuation of Sound during Propagation Outdoors – Part 1: Calculation of the Absorption of Sound by the Atmosphere. Switzerland: ISO.

⁷ International Organisation for Standardisation (1996) ISO 9613 Attenuation of Sound during Propagation Outdoors – Part 2: General Method of Calculation. Switzerland: ISO.

⁸ This is presented in the PEIR Appendix as 88dB so converted to A-weighting for consistency with other noise sources.

- Solar station (inverters and transformers) and BESS noise only.

4.2.2 The results of noise predictions at East Cottage, presented as specific noise levels, are summarised in Table 4-1. Full modelling results for Scenario 3a (i.e. the illustrative scheme included within the DCO application) are presented within the appendices of this technical note.

Table 4-1: Noise Modelling Results

Scenario	Predicted Specific Noise Level at East Cottage $L_{Aeq,T}$			
	Scenario 1 - Worst Case layout	Scenario 2- Initial Indicative layout	Scenario 3a – DCO Illustrative layout	Scenario 3b – Alternative DCO layout
All noise sources	29	28	27	27
Substation noise only	24	24	24	24
Solar station and BESS noise only	27	26	24	23

4.2.3 Table 4-1 shows that the predicted noise levels at East Cottage are progressively better for all the noise sources between Scenarios 1, 2 and 3, with Scenario 3a and 3b leading to the lowest noise levels. This change is due to the solar station and BESS locations on Field 92, with the noise from the substation at East Cottage consistent across the three modelled scenarios.

4.2.4 Predicted specific noise from the substation on its own is 24 dB for all scenarios, which is below average background sound levels, even at night.

4.2.5 It is the Applicant's intention to progress with Scenario 3a, which reduces the noise impact at East Cottage by 3 dB for all noise sources relative to the worst-case scenario. The illustrative layout modelled as part of Scenario 3a is included within Figure 3-1: Illustrative Principal Site Layout Plan of the ES [EN010142/APP/6.3]. However, it is noted that the Works Plans [EN010142/APP/2.3] allow the location of solar station and BESS anywhere within Field 93, the worst-case scenario of which has been tested as part of Scenario 3b. This demonstrates that the location of solar station/ BESS on Field 93, only increases noise levels by 1 dB and therefore does not have a material difference to noise levels at East Cottage.

4.2.6 Table 4-2 presents a comparison of Scenarios 3a and 3b with all noise sources against the range of period baseline sound levels at East Cottage presented in Table 3-2. The predicted noise, external to cottage, from Scenarios 3a and 3b with all noise sources would not exceed 27 dB $L_{Aeq,T}$, which is below measured $L_{Aeq,T}$ ambient sound levels for all time periods (lowest of 32 dB $L_{Aeq,T}$ for weekend evening period) and equal to the lowest $L_{A90,T}$ for daytime periods of 27 dB. $L_{A90,T}$ background sound levels are exceeded during the evening and night-time periods for Scenarios 3a and 3b with all noise sources by up to 3-4 dB during the quietest period (a weekday night period with $L_{A90,T}$ of 23 dB).

Table 4-2: Comparison of Scenarios 3a and 3b for all noise sources against Baseline sound levels at East Cottage

Location Reference	Week Period	Sound Level Indicator	Day	Evening	Night
			(07:00 – 19:00)	(19:00 – 23:00)	(23:00 – 07:00)
ML7	Weekday	$L_{Aeq,T}$	Below ambient levels	Below ambient levels	Below ambient levels
		$L_{A90,T}$	Below background levels	1-2 dB above lowest background to 1-2 dB below highest background levels	3-4 dB above lowest background to 1-2 dB below highest background levels
	Weekend	$L_{Aeq,T}$	Below ambient levels	Below ambient levels	Below ambient levels
		$L_{A90,T}$	Below background levels	At or 1 dB above background levels	Up to 2 dB above background levels

- 4.2.7 1/3rd octave band results, with respect to Scenario 3a are tabulated in Appendix B and noise contour plots for this scenario are presented in Appendix E. 1/3rd octave band noise predictions at East Cottage show a prominent peak at 100 Hz from the substation and at less prominent peaks centred around 1,600Hz from the substation and at 400 Hz and 1,000 Hz due to inverter noise.
- 4.2.8 As can be seen from Figure E-2, the noise contours from the substation are not symmetrical in all directions. This is a result of the ground topography in which ground height increases to the east of the substation with some undulating ground and decreases to the west. This results in more ground absorption and therefore lower sound levels to the east.
- 4.2.9 A comparison of 1/3rd octave band predictions at East Cottage for all noise sources with the maximum and minimum measured background L_{A90,1h} period 1/3rd octave band data are presented in Figure D-2 for the weekday period and Figure D-2 for the weekend period.
- 4.2.10 The figures show that 1/3rd octave band levels predicted at East Cottage from solar farm infrastructure are typical of background 1/3rd octave band levels for day, evening and night periods with the exception of 100 Hz substation noise, which is above the measured 100 Hz background sound level at all times.
- 4.2.11 A discussion as to what this may mean for the residents of East Cottage, in terms of the potential audibility of the solar farm infrastructure, is provided in Section 6.

5. Mitigation

- 5.1.1 The DCO application incorporates the following general mitigation measures to minimise operational noise:
- a. Table 3-8 of the Framework Operational Environmental Management Plan (OEMP) **[EN010142/APP/7.9]** includes the below measures to minimise operational noise. In accordance with Requirement 13 of the draft DCO **[EN010142/APP/3.1]**, a detailed operational management plan will be prepared prior to operation; this must be substantially in accordance with the Framework OEMP.
 - i. The specification of plant machinery with low noise emission and properly attenuated supply and extract terminations will help to minimise noise emissions during the operational phase. The use of enclosures, local screening, mufflers, and silencers will also be used as appropriate. If required, the relevant penalty/ correction would be applied in accordance with British Standard 4142.
 - ii. The location and orientation of Solar Stations and substations, inverters, transformers and cooling fans are in areas away from large concentrations of receptors such that operational noise emissions from electrical equipment are less impactful. There is a commitment to locate Solar and BESS Stations at least 250 m from residential properties.
 - iii. Transformers may be standalone units or pre-assembled with inverters and switchgear to form a single contained unit (i.e. they are enclosed).
 - iv. The Applicant commits that noise at sensitive receptors will be no higher than the levels presented in Section 13.8 of Chapter 13: Noise and Vibration of the ES **[EN010142/APP/6.1]**.
 - b. The Outline Design Principles Statement **[EN010142/APP/7.4]** states that '*to avoid adverse noise effects on residential properties in close proximity to the Scheme, solar stations and BESS will not be located within 250m of a residential property*'.
 - c. The Works Plans **[EN010142/APP/2.3]** submitted with the DCO application exclude the provision of solar station and BESS on Field 92 to further reduce noise impacts on East Cottage.
 - d. Finally, the following requirement is included within Schedule 2 of the draft DCO **[EN010142/APP/3.1]**:

Operational noise

17.—(1) No part of Work No. 1, Work No. 2 or Work No. 3 may commence until an operational noise assessment containing details of how the design of the authorised development has incorporated mitigation to ensure the operational noise rating levels as set out in the environmental statement are to

be complied with for that part has been submitted to and approved by the relevant planning authority for that part.

(2) The mitigation measures described in the operational noise assessment for each part of the authorised development must be implemented as approved.

- 5.1.2 Acoustic barriers were considered as part of the mitigation strategy through noise model testing to determine their effectiveness at mitigating substation noise. From the modelling results it was found that the noise barriers had minimal impact on reducing the emitted noise levels of the substation at East Cottage. Therefore, noise barriers have been deemed an ineffective mitigation measure.

6. Conclusions

- 6.1.1 Noise modelling of solar farm infrastructure has been undertaken to provide details on how noise would influence occupants of East Cottage, Northlands Road. The noise model results have been compared with measured noise data that is considered representative of typical noise conditions at the East Cottage.
- 6.1.2 Four layouts have been modelled ranging from the worst to best layout in terms of noise at East Cottage. The noise model results indicate that, for all layouts, predicted specific noise levels at East Cottage from solar farm infrastructure are low, with no significant effects arising. As such, the Scheme is policy compliant in terms of the likely average response of those affected.
- 6.1.3 Overall noise levels from the Scheme submitted with the DCO application are typical of background sound levels at East Cottage. With reference to Figure A-1 and Table 4-1, in the worst-case scenario of continuous operation of solar infrastructure overnight (see para. 4.1.8), such noise is expected to be higher than (external) background sound between approximately 22:30 and 04:30 and lower than background throughout the rest of the day. Existing ambient sound levels are typically well above the levels expected from solar infrastructure noise, except in the middle of the night when they are comparable. During the day existing ambient sound is typically 10-20 dB higher, with intermittent maximum sound levels higher still.
- 6.1.4 In relation to the overall broadband noise level, and noting that residents are likely to be indoors during the night period where even a partially open window could provide up to 15 dB further attenuation⁹, solar farm infrastructure noise is unlikely to be louder than the existing background sound.
- 6.1.5 The noise from the transformers in the sub-station is tonal, with a relative peak at 100 Hz, which, although expected to be at a low level (14 dB) at East Cottage, is louder than the background sound during daytime and night-time at this frequency. This tone could therefore be audible outside East Cottage. However, there are existing ambient sounds above 14 dB at 100 Hz throughout the day, and although it is unlikely they exhibit the same tonal nature as that of the transformers it is possible that they would help mask the sound of the transformer.
- 6.1.6 The Applicant is carrying out a review of the sound power levels associated with the transformers of the substation. It is likely that the modelling has over-estimated the noise impacts by applying deliberately high sound power levels and assuming this level of noise is emitted at all times of the day, evening and night.
- 6.1.7 The Applicant will be procuring this equipment during detailed design stage, post consent. At the detailed design stage, the Applicant's noise consultant will advise on the adequacy of the equipment and remodel the sound power levels to deliver a Scheme that adheres with the draft DCO Requirement 17.

⁹ British Standards Institute (2014) BS 8233:2014 – Guidance on sound insulation and noise reduction for buildings. London: BSI.

Appendix A 1/3-Octave Band Sound Measurements

Table A-1: Measured Weekday Ambient (L_{Aeq}) Average 1/3-octave Band Data

Period	Measured 1/3-Octave A-weighted Ambient (L _{Aeq}) Noise																											
	31 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz	12.5 kHz	16 kHz
Day	3	9	14	16	19	21	23	24	25	26	29	38	40	32	30	30	29	28	26	25	23	24	26	23	19	15	12	10
Evening	3	7	8	13	15	16	18	20	23	23	25	28	29	28	28	28	27	25	24	23	22	24	24	22	18	13	10	7
Night	0	1	5	8	12	13	17	19	19	20	23	27	29	23	21	21	20	18	18	17	19	23	24	23	18	11	9	7

Table A-2: Measured Weekend Ambient (L_{Aeq}) Average 1/3-octave Band Data

Period	Measured 1/3-Octave A-weighted Ambient (L _{Aeq}) Noise																											
	31 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz	12.5 kHz	16 kHz
Day	0	4	9	12	15	19	19	21	24	25	26	32	34	30	29	29	28	27	27	26	27	31	32	27	21	13	10	8
Evening	0	2	6	9	11	13	14	15	16	17	19	22	26	23	21	22	21	21	21	18	17	22	22	17	14	10	8	6
Night	0	1	5	7	10	10	12	13	14	16	18	22	25	21	21	21	20	19	21	21	23	27	28	24	16	10	8	5

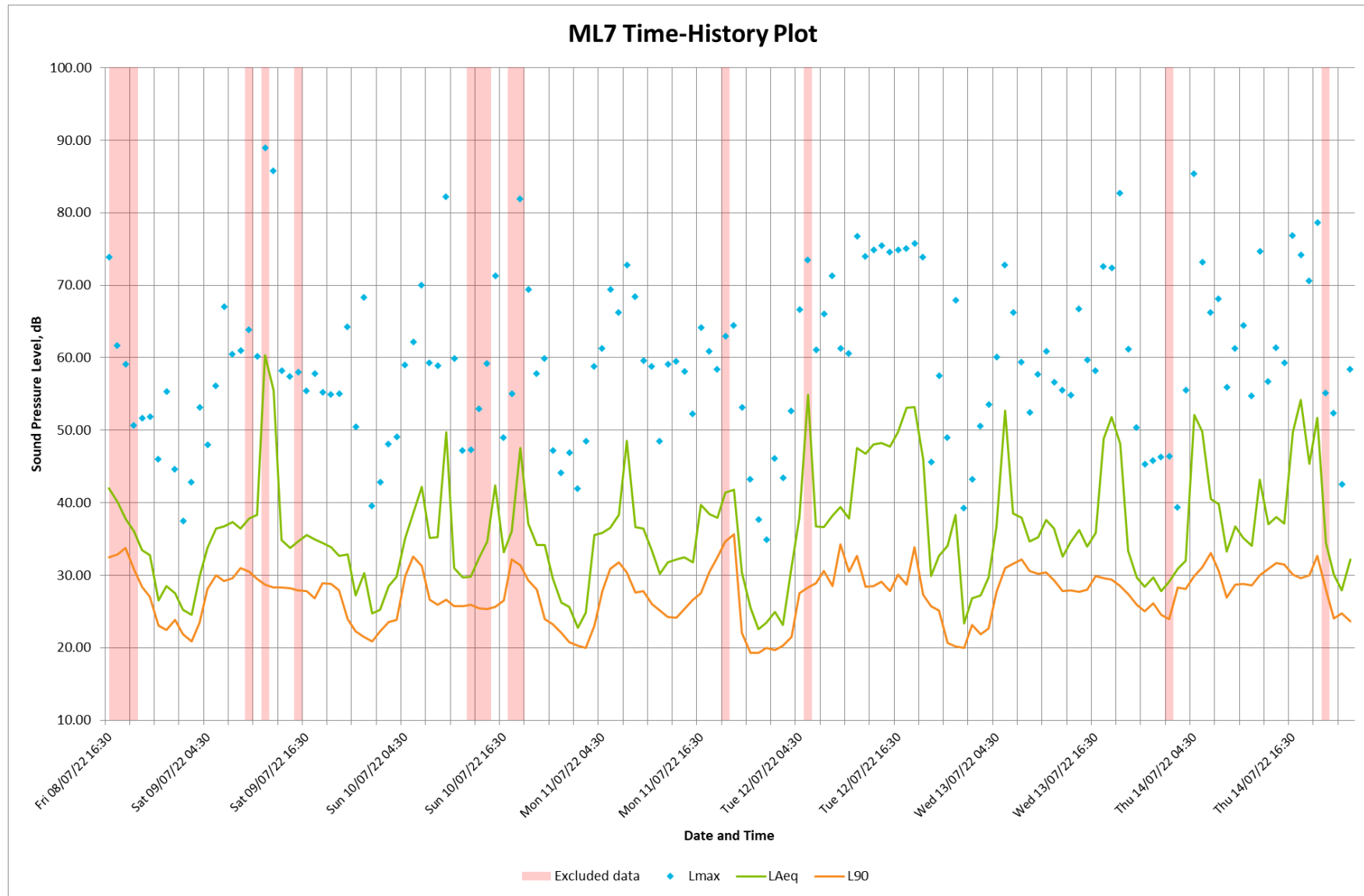
Table A-3: Measured Weekday Background (L_{A90}) Average 1/3-octave Band Data

Period	Measured 1/3-Octave A-weighted Ambient (L _{A90}) Noise																											
	31 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz	12.5 kHz	16 kHz
Day	0	0	2	4	5	6	6	7	9	11	14	16	18	18	19	19	17	16	14	13	12	12	12	11	10	9	8	6
Evening	0	0	0	1	3	4	6	5	7	9	12	14	16	15	15	15	13	12	11	10	10	10	11	11	10	9	7	6
Night	0	0	0	0	4	5	6	5	6	8	11	13	14	13	14	13	11	10	9	8	9	9	9	10	9	8	7	5

Table A-4: Measured Weekend Background (L_{A90}) Average 1/3-octave Band Data

Period	Measured 1/3-Octave A-weighted Ambient (L _{A90}) Noise																											
	31 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz	12.5 kHz	16 kHz
Day	0	0	0	2	5	5	6	6	8	9	12	14	15	15	17	17	16	14	12	12	12	12	11	11	10	9	8	6
Evening	0	0	1	3	5	6	5	4	6	7	9	14	16	15	15	15	13	12	10	9	9	10	10	10	9	9	7	5
Night	0	0	0	1	4	4	5	5	6	9	11	14	15	14	14	13	11	10	9	8	9	10	10	9	9	8	7	5

Figure A-1 ML7 time history plot



Appendix B 1/3-Octave Band Noise Source Data and Results for Scenario 1 and 3a

Table B-1: 1/3-octave Band Noise Source Data

Plant	A-weighted Sound Power Data dB																												
	Sum	31 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz	12.5 kHz	16 kHz
BESS*	71	18	24	32	31	34	41	56	44	51	53	58	62	59	60	66	70	61	64	66	65	66	64	62	59	59	54	47	41
Inverter Fan Vent	84	25	32	44	41	43	47	59	49	56	61	73	78	67	69	73	77	68	70	73	73	72	71	66	64	64	60	51	44
Shunt Reactor	82	35	42	48	47	49	69	56	49	59	59	65	64	61	68	73	71	71	76	70	72	68	72	61	53	49	47	44	36
Transformer	95	48	55	61	60	62	82	69	62	72	72	78	77	74	81	86	84	84	89	83	85	81	85	74	66	62	60	57	49

*BESS sound power data was normalised to 71.0dB(A)

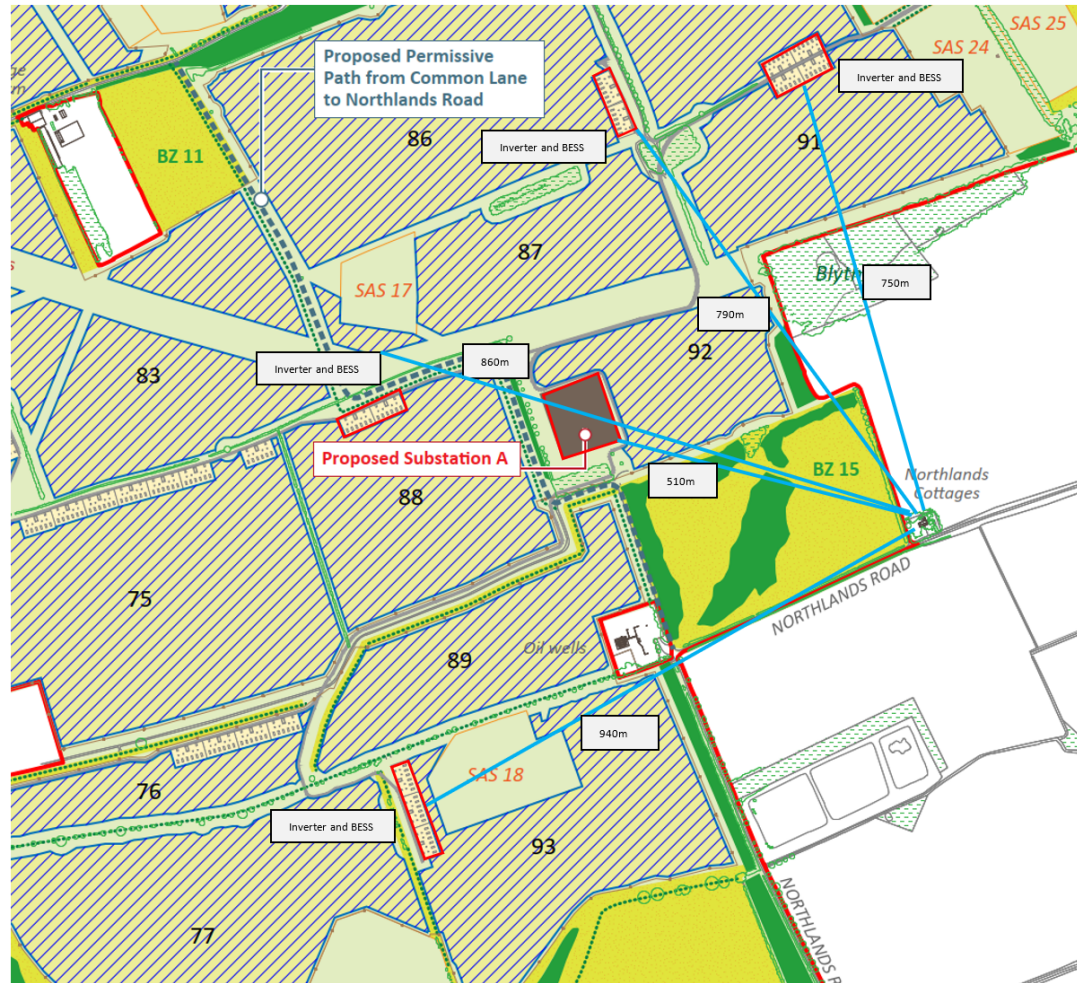
Table B-2: Scenario 1 Predicted 1/3-octave Band Noise Specific Noise Levels at East Cottage

Scenario	Predicted A-weighted Specific Noise Level at East Cottage																												
	Sum	31 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz	12.5 kHz	16 kHz
All Source	29	0	0	1	0	1	14	8	0	5	8	17	22	12	15	20	22	16	20	16	13	8	4	0	0	0	0	0	0
Substation Only	24	0	0	0	0	0	14	0	0	4	4	9	8	5	11	17	15	15	19	11	11	2	0	0	0	0	0	0	0
Inverters, BESS and Tracking Motors Only	27	0	0	0	0	0	0	7	0	1	6	16	21	11	12	17	21	11	13	14	10	7	1	0	0	0	0	0	0

Table B-3: Scenario 3a Predicted 1/3-octave Band Noise Specific Noise Levels at East Cottage

Scenario	Predicted A-weighted Specific Noise Level at East Cottage																													
	Sum	31 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz	12.5 kHz	16 kHz	
All Source	27	0	0	0	0	0	14	6	0	5	7	14	19	10	14	19	20	15	19	14	12	4	1	0	0	0	0	0	0	0
Substation Only	24	0	0	0	0	0	14	0	0	4	3	9	8	5	11	17	15	15	19	11	11	2	0	0	0	0	0	0	0	0
Inverters, BESS and Tracking Motors Only	24	0	0	0	0	0	0	4	0	0	4	13	19	9	10	15	19	7	8	11	4	0	0	0	0	0	0	0	0	

Appendix C Illustrative Site Layout with Distance to Nearest Noise Generating Plant for Scenario 3a



Appendix D 1/3-Octave Band Measured and Predicted Noise Levels for Scenario 1 and 3a

Figure D-1 Weekday maximum and minimum measured $L_{A90,1h}$ 1/3-octave Band Noise Levels (A-weighted) and Predicted Noise

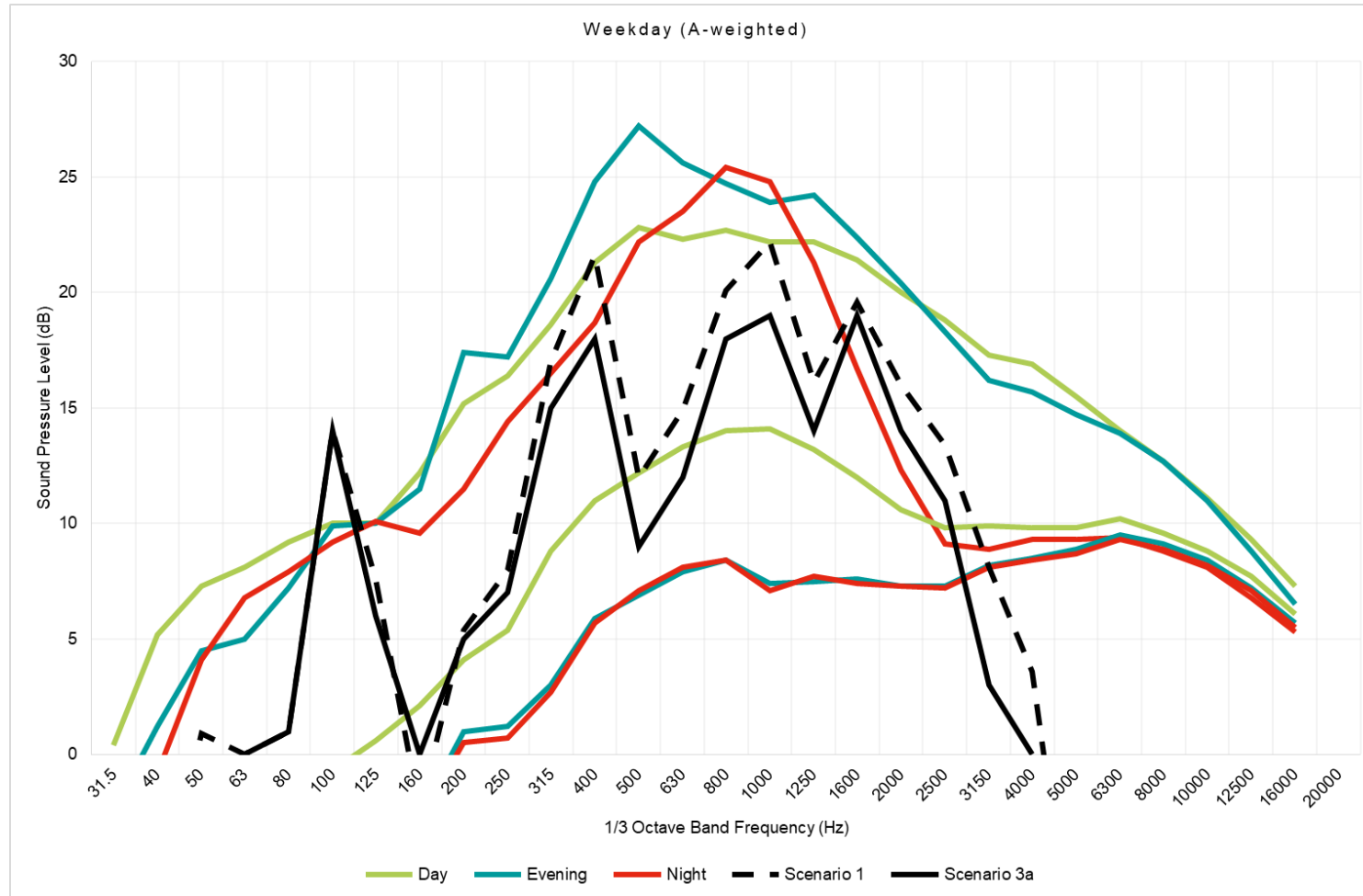
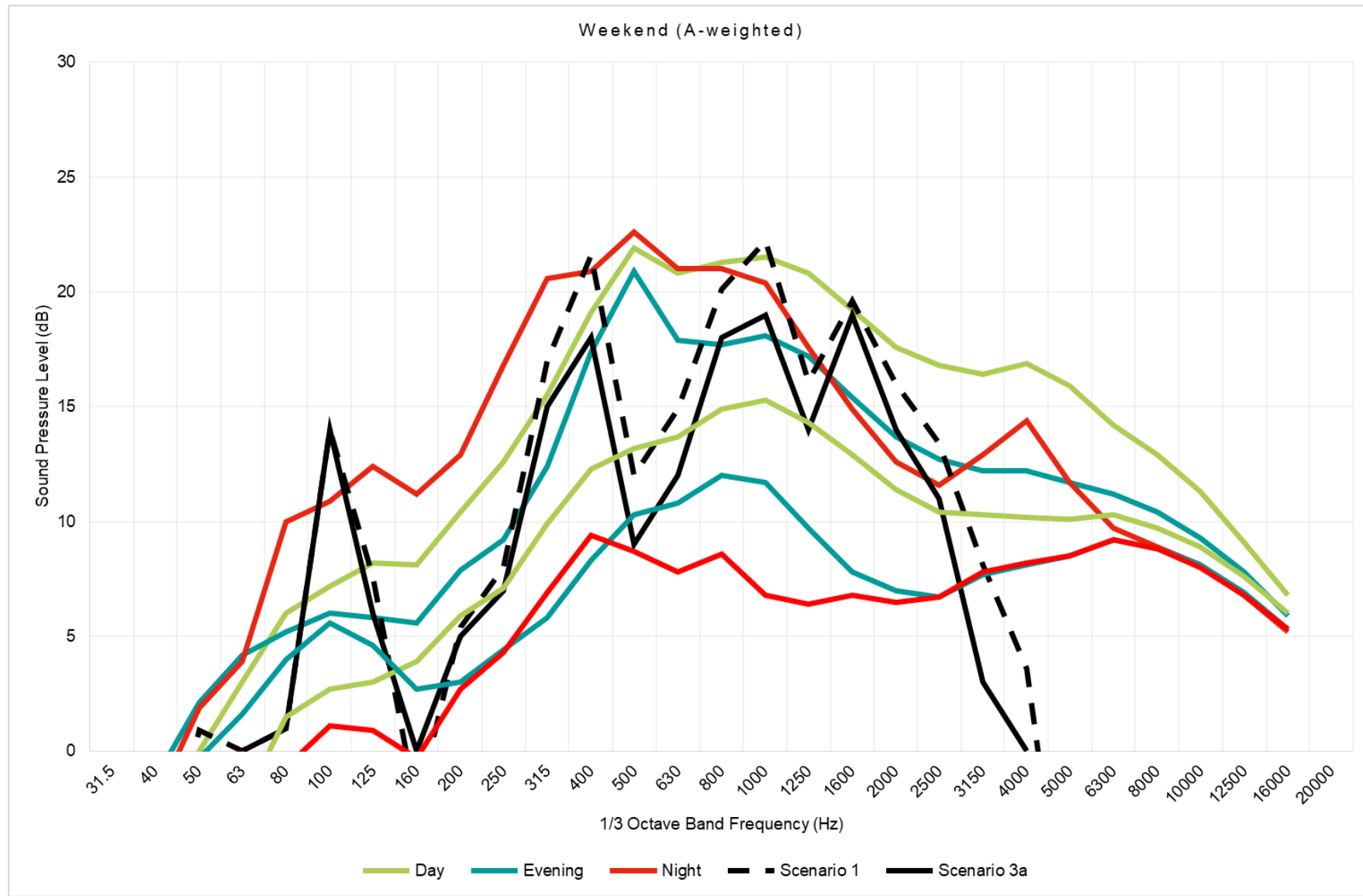


Figure D-2 Weekend maximum and minimum measured $L_{A90,1h}$ 1/3-octave Band Noise Levels (A-weighted) and Predicted Noise



Appendix E Noise Contour Plots

Figure E-1: Scenario 1 All Noise Sources

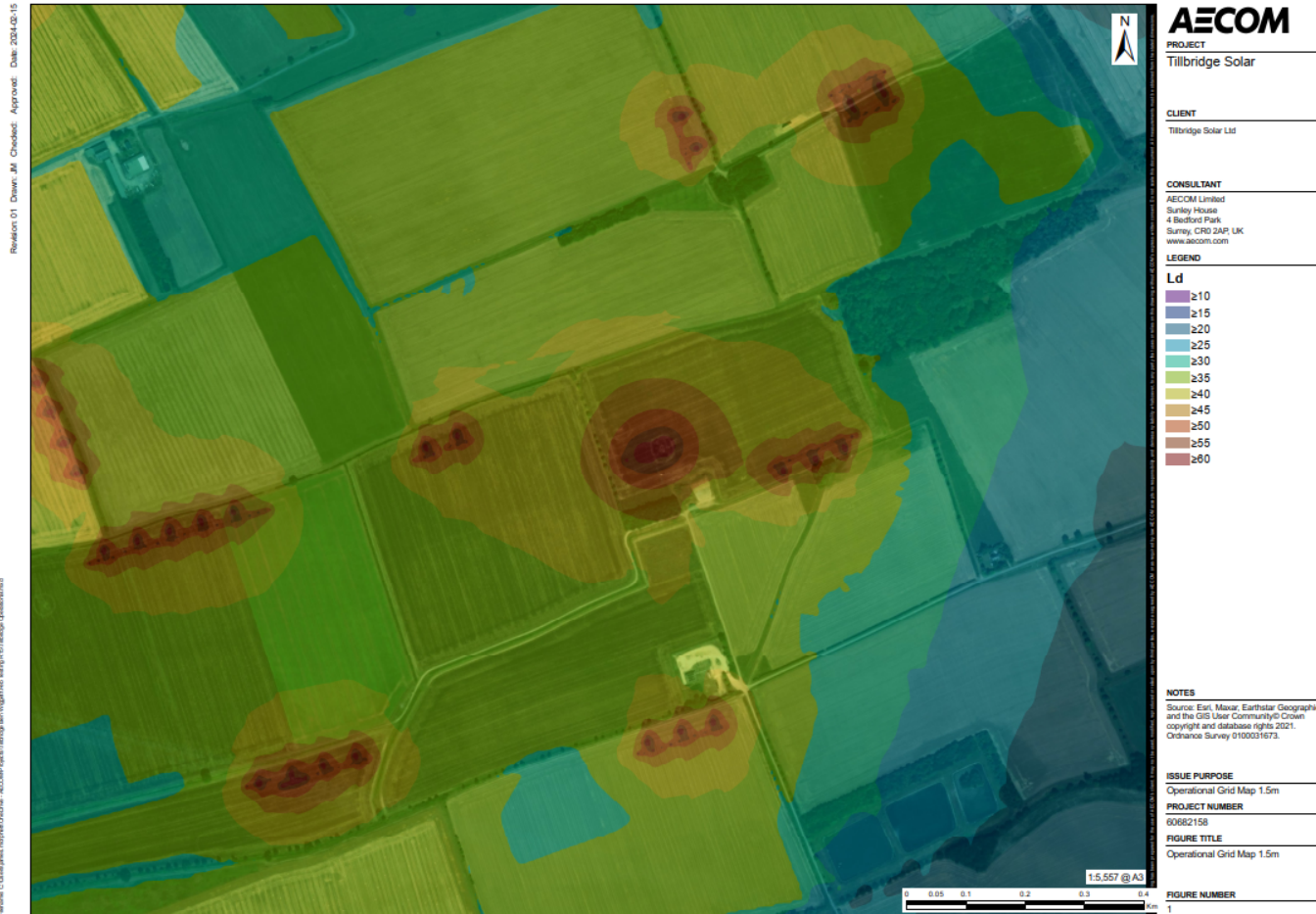


Figure E-2 Scenario 1 and 3a Substation Noise Only

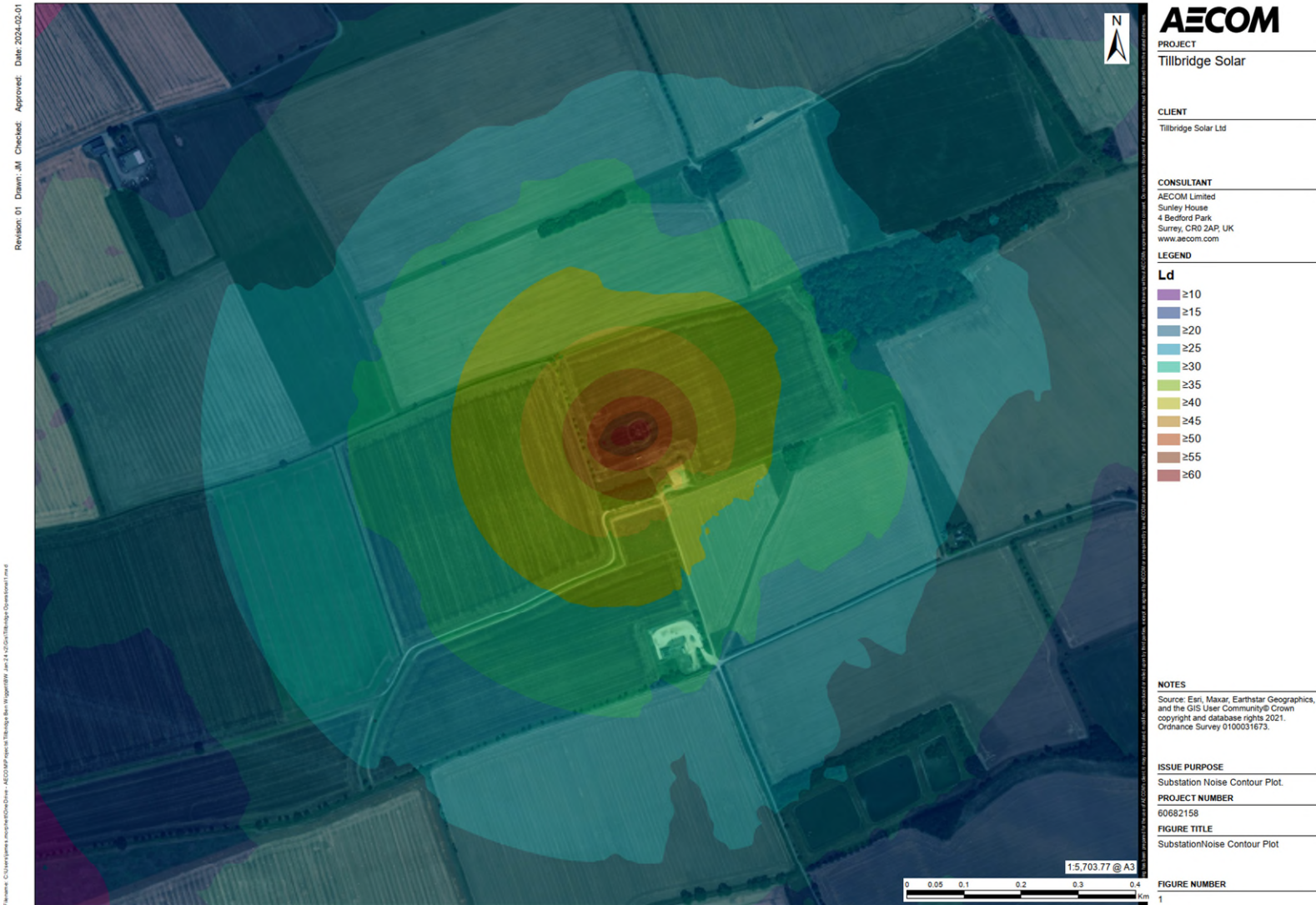


Figure E-3: Scenario 1 Inverter and BESS Noise Only

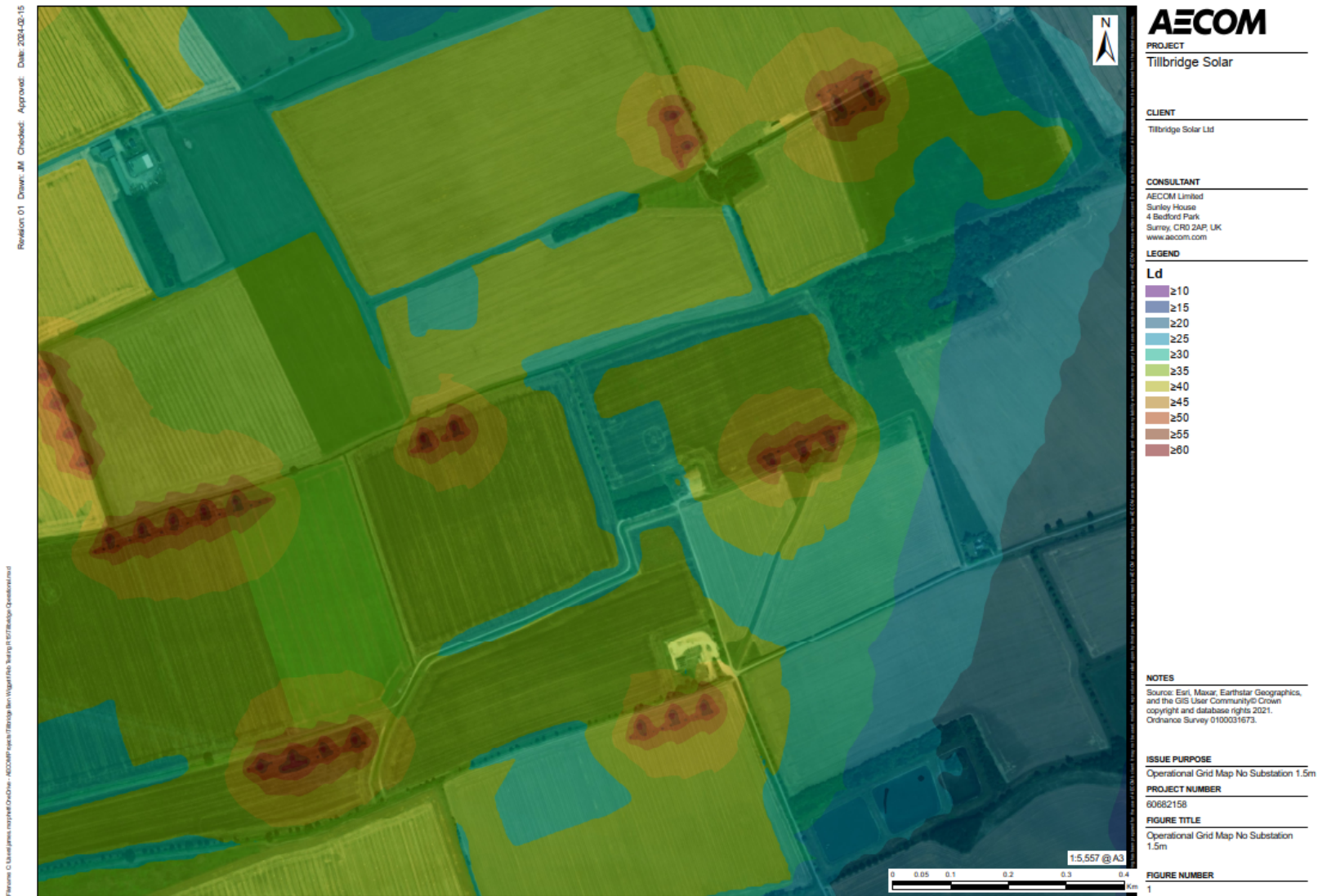


Figure E-4: Scenario 3a All Noise Sources

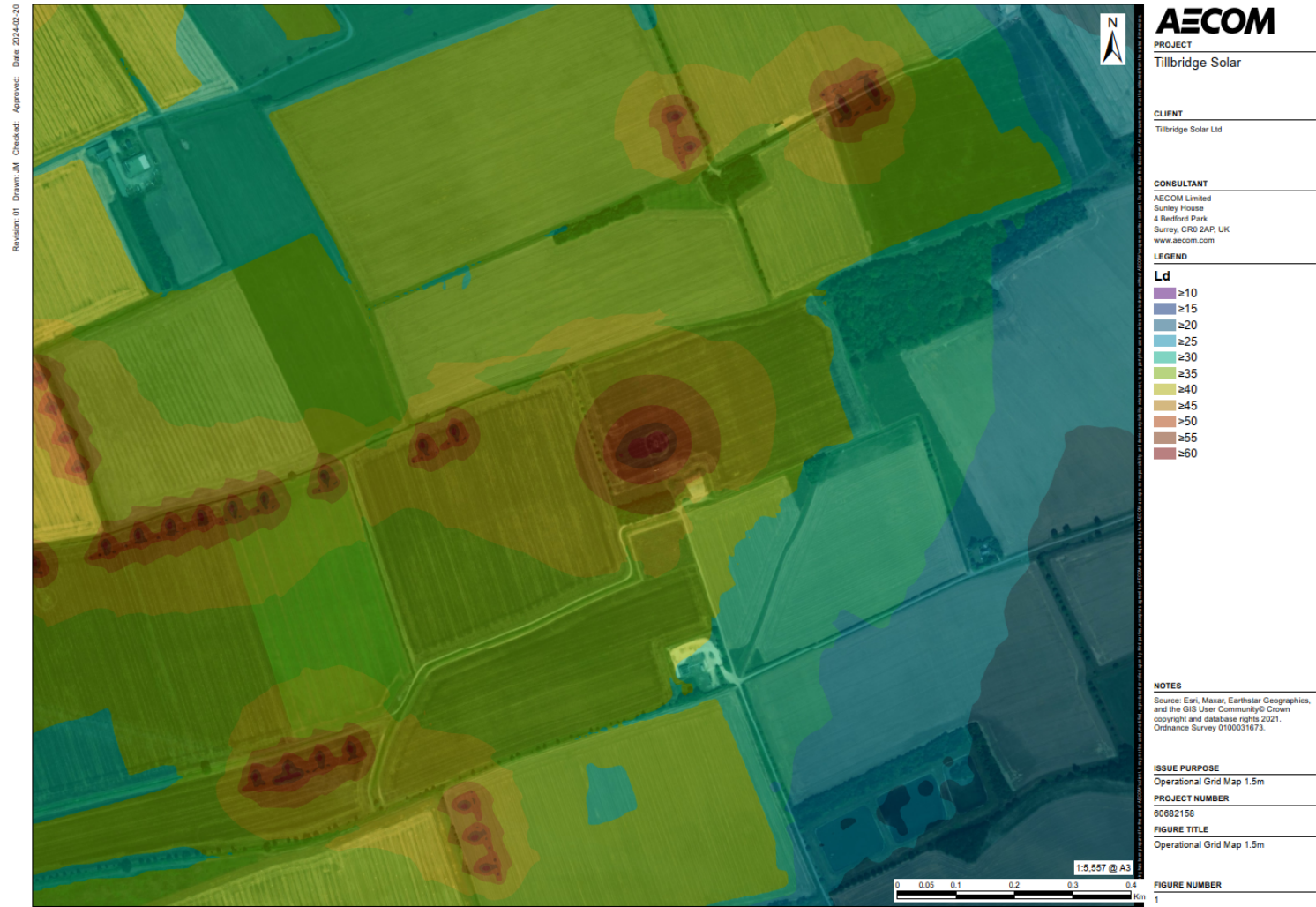
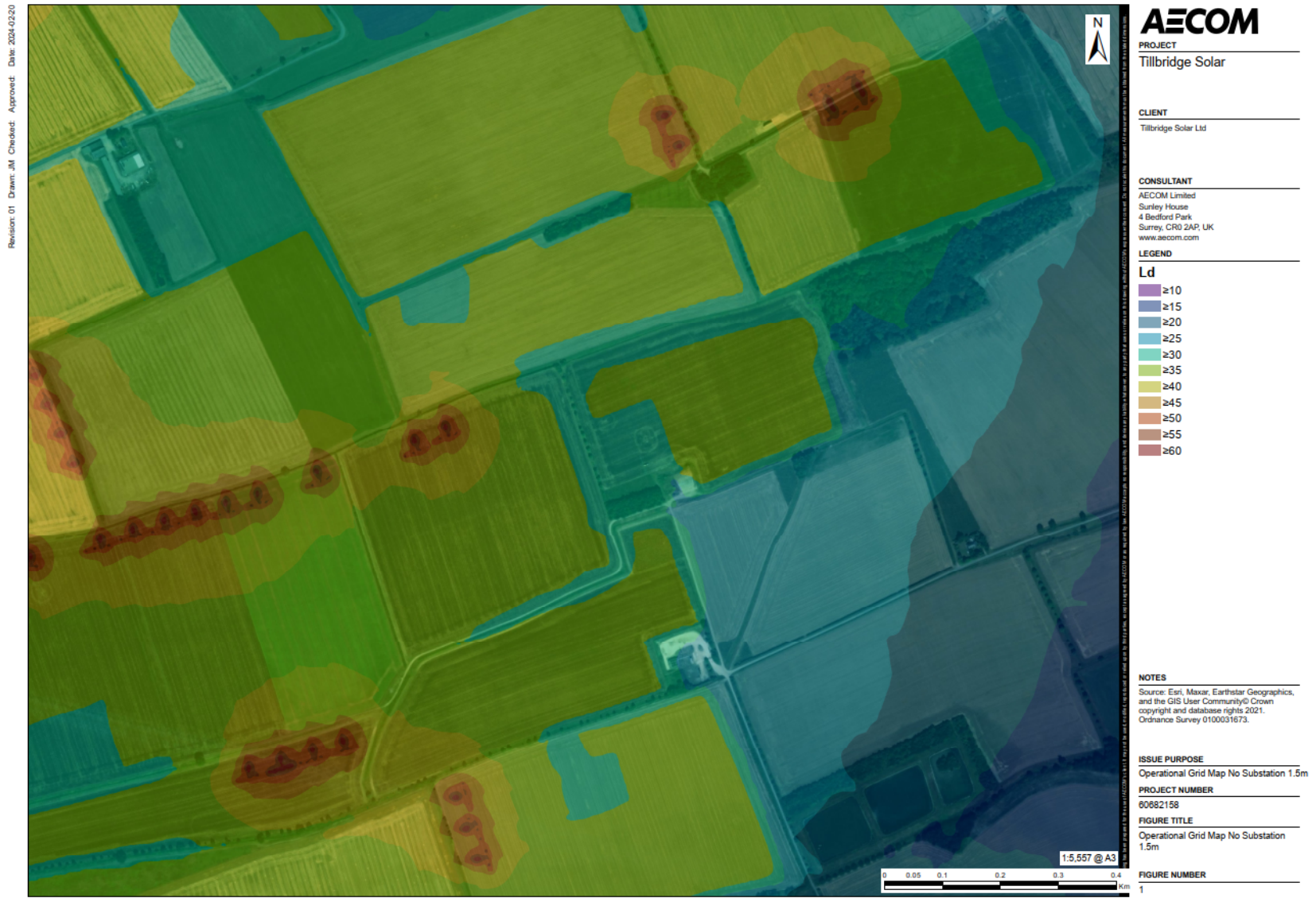


Figure E-5: Scenario 3a Inverter and BESS Noise Only



**Tillbridge Solar Project
EN010142**

**Applicant's Response to Examining Authority's
First Written Questions
Appendix C – Response to ExQ1.10.8
CONFIDENTIAL**

Document Reference: EN010142/APP/9.27

Planning Act 2008
The Infrastructure Planning (Examination Procedure) Rules 2010

December 2024
Revision Number: 00

This appendix is confidential and has been removed.

Appendix D – ExQ1.11.4 Appendix – Applicant's Response to ExQ1.11.4 - Updated Table 2.4

Table 2-4 of Framework Skills, Supply Chain and Employment Plan [APP-232]: Potential Jobs and Skills to be required during Construction, Operation and Decommissioning of the Scheme – Expanded to include Percentage Estimates of Employees (shown in red) in response to ExA First Written Question 1.11.4

Phase	Job Name	Job Description	Skills	Percentage of total manpower
Construction and Decommissioning	Civils Workers	Preparation of the Sites. Work includes: <ul style="list-style-type: none"> • The removal and storage of topsoil and levelling of the land, as required; • Preparation and build of any access roads internal to the Site and for access onto and away from the Site; • The digging of trenches for wiring; and • Preparation for and laying foundations for the solar stations, on-site substations and BESS. 	Use of machinery, such as dump trucks, diggers and compactors.	6%
	Labourers	Labour to place wiring and ducting in the trenches and to transport materials as required around the Sites.	No specific qualifications required.	11%
	Building Construction	Labour to build the storage sheds.	Relevant construction qualifications required.	2%
	Racking Structure Assembler	Manage a ramming machine to create the solar structure and assemble the associated structures.	Skilled workers required to control the ramming machines.	23%

Phase	Job Name	Job Description	Skills	Percentage of total manpower
			Less skilled workers required to assemble other components of the structures.	
	Panel Assembler	Individuals to undertake the process of mounting the solar panels onto the structures.	Knowledge of electromechanics tools required.	23%
	Low Voltage (LV) Electrical Engineers	Connecting the panels with inverters and solar stations.	Skills for LV wiring and installation of equipment required.	8%
	Medium Voltage (MV) Electrical Engineers	Connecting the solar stations with the on-site substations.	Skills for MV wiring and installation of equipment required.	6%
	High Voltage (HV) Electrical Engineers	Connecting the on-site substations and transformers with the transmission network.	Skills for HV wiring and installation of equipment required.	3%
	Security Guards	Protecting the site during the construction process.	No specific qualifications required.	4%

Phase	Job Name	Job Description	Skills	Percentage of total manpower
	CCTV Workers	Setting up the security system.	Installation of CCTV system and equipment experience.	2%
	Fencing Installation Workers	Installation of the perimeter fencing including any gates for access.	Fencing / general building skills.	4%
	Landscape Installation Workers	Landscape planting.	Landscaping experience and general labour.	3%
	Electrical Engineers	To monitor and trouble-shoot any problems.	LV, MV and HV electrical specialists required.	5%
Operation	Performance Managers	To monitor and trouble-shoot any problems via software remotely from the office.	Manage performance, change, planning.	70%
	CCTV and Security	To monitor security of the Site.	No specific qualifications required.	20%
	Landscape Monitoring and Managers	To deliver watering strategy and monitor and maintain the landscape/ecology areas within the Scheme.	General landscape experience, turfing maintenance, tree maintenance and planting.	10%