Cottam Solar Project

Environmental Statement Addendum:
Cumulative Effects

Prepared by: Lanpro Services
February 2024

PINS reference: EN010133
Document reference: EX5/C8.4.23.1
Infrastructure Planning (Examination Procedure) Rules 2010

Cottam
SOLAR PROJECT

Contents

Issue Sheet

Report Prepared for: Cottam Solar Project Ltd.
Deadline 5

Environmental Statement Addendum: Cumulative Effects

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1 Introduction

1.1 Summary and Introduction

1.1.1 Cottam Solar Project is a proposed solar photovoltaic (PV) array electricity generating facility and electrical storage facility, each with a total capacity exceeding 50 megawatts (MW), and an export connection to the National Grid (the Scheme).

1.1.2 An Environmental Statement (ES) has been prepared on behalf of the Applicant in relation to an application to be made to the Secretary of State (SoS) for Department for Energy Security and Net Zero (ESNZ), under Section 37 of the Planning Act 2008.

1.1.3 The Application is for a Development Consent Order (DCO) for the construction, operation and maintenance, and decommissioning of the Scheme. The Scheme is classified as a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008. An Environmental Impact Assessment (EIA) has been undertaken for the Scheme and as such, the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) apply.

1.1.4 Each technical chapter of the ES considers in detail the beneficial and adverse residual effects of the Scheme after the implementation of mitigation measures, both through the design of the Scheme (embedded mitigation) and through further measures (additional mitigation). The assessment in the ES covers the construction, operation and decommissioning phases of the Scheme. The ES also includes a cumulative effects assessment, which was undertaken in accordance with the Planning Inspectorate's Advice Note Seventeen: Cumulative effects assessment. [1]

1.2 Purpose of this Document

1.2.1 This Addendum provides a compilation of the cumulative effects of all schemes that have the potential for cumulative impacts on this scheme in support of the Application for a DCO the Scheme by Cottam Solar Project Limited (the Applicant).

1.2.2 In response to the query raised by the Examining Authority in question 2.4.2 of its Second Written Questions (ExQ2) **[PD-015]**, the Applicant agreed to submit a Cumulative Effects Addendum at Deadline 5 which would form part of the ES and provide a more detailed explanation of the reviews undertaken since the submission of the DCO Application and any changes made to Chapter 23 of the ES **[REP2-010]**. This document is that addendum. It includes the information contained in the latest version of the Joint Report on Interrelationships with other NSIPs **[EN010133/EX5/C8.1.8_D]** and the information in Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**. The Applicant proposed to submit this addendum because it considers that it would be unusual and disproportionate to have to update the text in all of the ES Chapters and their associated appendices to

[1] Planning Inspectorate, 'Advice Note Seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects', August 2019 (version 2) [https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-17/]

account for any changes that have taken places since the DCO Application was submitted, as this would result in a rewrite of the entire ES.

1.2.3 This ES Addendum forms part of the application to the Planning Inspectorate (PINS) for a DCO for the Scheme. It does not replace the cumulative effects assessment set out in the technical chapters of the ES **[EN010133/APP-039 to APP-061, REP-010]**, rather it provides an update which takes into account the further information which has entered the public domain since the ES was first prepared in respect of local schemes that might result in cumulative effects in combination with the effects from the Scheme.

2 Methodology

2.1 Introduction

2.1.1 The Technical Note on Cumulative Effects of Additional Schemes [REP4-059] identifies three additional schemes that have the potential to result in new or different cumulative environmental effects as compared to the cumulative effects assessment set out in the ES **[APP-039** to **APP-061**, **REP-010]**. The assessments of the additional schemes follow the methodology set out within ES Chapter 2: EIA Process and Methodology **[APP-040]** and used for the Environmental Statement, as well as the process described in PINS Advice Note 17.

2.1.2 The proposed schemes listed in Table 2.1 were all initially identified through C6.3.2.3 ES Appendix 2.3: Cumulative Assessment Sites **[APP-069]** as the most likely sites with potential for cumulative effects within the Zone of Influence for all ES topics. As such, they formed part of the assessment of cumulative effects in the ES **[APP-039** to **APP-061**, **REP-010]**. Since the DCO application for the Scheme was submitted, the Applicant has monitored the progress of these schemes, to continually consider whether any information about them in the public domain would result in any changes to the conclusions of the cumulative effects assessment set out in the ES **[APP-039** to **APP-061**, **REP-010]**. This information is set out in Table 2-2 'Cumulative Assessment - Review Against Now Published Environmental Information' of the Joint Report on Interrelationships with other NSIPs **[EN010133/EX5/C8.1.8_D]**.

2.1.3 Since the Scheme was accepted for Examination, following the methodology set out in ES Chapter 2: EIA Process and Methodology **[APP-040]**, three additional schemes (as set out in Table 2.2 below) have been identified as constituting sites for the Long List in addition to the sites listed in ES Appendix 2.3: Cumulative Assessment Sites **[APP-065]**. As set out in the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]** these are: One Earth Solar Farm, Great North Road Solar Park and Stow Park Solar Farm.

2.1.4 When this exercise was undertaken, three further schemes were excluded from consideration, the first two being the Steeples Renewables Solar Project and the West Burton Power Station Finding STEP a Home. Neither of these schemes have yet submitted scoping reports to the Planning Inspectorate. The North Humber to High Marnham project is an overhead power transmission line rather than an energy generating station, and is outside the zone of influence of the Scheme.

2.1.5 The locations of the additional schemes are also shown in Appendix A, which is an updated version of ES Figure 2.1: Cumulative Assessments Site Plan **[APP-140]**.

2.2 Tier Classification

2.2.1 The schemes identified in Tables 2.1 and 2.2 have been assigned a tier in accordance with the classification set out in PINS Advice Note 17. The three tiers are defined as follows descending from Tier 1 (most certain) to Tier 3 (least certain) to reflect a

diminishing degree of certainty which can be assigned to each development being implemented:

Tier 1

- Under construction;
- Permitted application, whether under the Planning Act 2008 or other regimes, but not yet implemented;
- Submitted application, whether under the Planning Act 2008 or other regimes, but not yet determined.

Tier 2

- Projects on the Planning Inspectorate's programme of projects where a scoping report has been submitted.

Tier 3

- Projects on the Planning Inspectorate's programme of projects where a scoping report hasn't been submitted;
- Identified in the Development Plan (and emerging plan – with appropriate weight given as they move closer to adoption);
- Identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where development is reasonably likely to come forward.

Table 2.1: Cumulatively Assessed and Inter-relationship Schemes

Application Reference	Applicant and Description	Distance from Scheme	Status	Tier
NSIP EN010132	West Burton Solar Project	1.50km from Cottam	Under Examination.	1
NSIP EN010131	Gate Burton Energy Park	1km from Cottam	Examination Completed, yet to be determined.	1
NSIP EN010142	Tillbridge Solar	1km from Cottam	Scoping Report Submitted, statutory consultation undertaken in Summer 2023. Application due to be submitted in Spring 2024.	2

Table 2.2: Additional Schemes

Application Reference	Applicant and Description	Distance from Scheme	Status	Tier
West Lindsey DC 147710	Luminous Energy Ground mounted 49.9MW solar PV farm Stow Park Farm, Stow Park, Lincoln, LN1 2AN	1.5km from Cottam	Scoping Report submitted to LPA.	2
NSIP EN010159	One Earth Solar Farm Solar farm and battery energy storage system with a generating capacity exceeding 50MW	8km from Cottam	Scoping Report submitted to PINS. Submission of application expected Q1 2025.	2
NSIP EN010162	Great North Road Solar Park Elements Green Trent Limited Solar farm battery energy storage system with a maximum generation capacity of 800MW	18.5km from Cottam	Scoping Report submitted to PINS. Submission of application expected Q2 2025.	2

3 Cumulative Review

3.1 Climate Change Cumulative Effects

DCO Application Assessment (Section 7.11 of ES Chapter 7 [REP-014])

3.1.1 The assessment of cumulative climate change effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 7.11 of **C6.2.7_A ES Chapter 7: Climate Change Revision A [REP-014]**.

3.1.2 This concludes that there is anticipated to be a **major beneficial** cumulative effect in terms of climate change resilience with West Burton, Gate Burton and Tillbridge during operation given that the combined effect of the renewable energy will serve to counter the effects of Climate Change (paragraph 7.11.8 **[REP-014]**).

Cumulative Assessment - Review Against Now Published Environmental Information

3.1.3 Following discussions the Issue Specific Hearings for the Scheme in specific regard to climate change (see agenda item 4 of the Written Summary of the Applicant's Oral Submissions & Responses at Issue Specific Hearing 4 and Responses to Action Points **[REP3-035]**), the following paragraphs were added to Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**:

"Each scheme has concluded significant beneficial cumulative impacts for the respective scheme in isolation. For both Cottam and West Burton a cumulative beneficial cumulative effect has been identified as four solar projects being developed at the same time would result in a quicker reduction in CO_2e emissions from legacy sources than a single project alone. This approach takes into account professional judgment and interpretation of the IEMA Guidance."

"A more conservative approach has been taken by Gate Burton and Tillbridge and no additional cumulative beneficial effects have been identified as a result of their interpretation of the guidance. This interpretation takes 'cumulative effects' as not possible to assess for climate change given the national rather than local scale of the impact."

"In light of this difference in interpretation, the SoS may decide to place limited weight on the beneficial CEA identified (albeit that there are beneficial effects for each Scheme assessed as assessed individually). Discussion between the different authors of the Climate Change Assessments for the projects has taken place to align to the above approach."

Assessment of Cumulative Effects of Additional Schemes

3.1.4 The Schemes in Table 2.2 have been reviewed to consider any changes to or additional likely significant effects on climate change. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059] ,** no additional significant cumulative adverse effects are anticipated during construction, operation, or decommissioning.

3.2 Landscape and Visual Impact Cumulative Effects

DCO Application Assessment (Section 8.10 of ES Chapter 8 [REP2-008])

3.2.1 The assessment of cumulative landscape and visual impact effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 8.10 of **C6.2.8_A ES Chapter 8: Landscape and Visual Impact Revision A [REP2-008]**.

3.2.2 This concludes that there is anticipated to be a **moderate adverse effects** at construction and operation (Year 1) on Land Use, Topography and Watercourses and Communications and Infrastructure for the Cottam Sites 1, 2, 3a and 3b; **moderate adverse effects** at construction and operation (Year 1) on Regional Scale LCT 4a Unwooded Vales for the Cottam Substation Sites 1 West A, 1 West B, 2, 3a and 3b; and **moderate adverse effects** at construction and operation (Year 1) for Viewpoint Receptor LCC-C-D: Blackthorn Lane (as set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**).

Cumulative Assessment - Review Against Now Published Environmental Information

3.2.3 Reviews of the cumulative landscape and visual impact effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES **[REP2-008]**. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.2.4 The Schemes in Table 2.2 have been reviewed to consider likely additional landscape and visual cumulative effects. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, there will be no intervisibility between the schemes listed in Table 2.2 and the Scheme due to the distance of the schemes, intervening topography, built structures and vegetation. Cumulative landscape and visual effects resulting from simultaneous construction as well as during operation (year 1 and year 15) and decommissioning will not be significant.

3.2.5 Therefore no additional significant cumulative effects are anticipated during construction, operation, or decommissioning.

3.3 Ecology and Biodiversity Cumulative Effects

DCO Application Assessment (Section 9.9 of ES Chapter 9 [APP-044])

3.3.1 The assessment of cumulative ecology and biodiversity effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 9.9 of **C6.2.9 ES Chapter 9: Ecology and Biodiversity [APP-044]**.

3.3.2 This concludes that there is anticipated to be a cumulative **moderate beneficial effect** during operation on reptiles and amphibians at District Level (paragraph 9.9.10 **[APP-044]**); a cumulative **moderate adverse effect** during construction and operation on skylark, yellow wagtail, grey partridge and quail at a local to District level (depending on what mitigation is adopted) (paragraph 9.9.11 **[APP-044]**); and that a cumulative adverse effect during construction is possible for hedgerows, trees, ditches and watercourses within the Shared Cable Route Corridor (depending on final designs, methods, routing and duration/sequence) (Section 9.9 **[APP-044]**).

Cumulative Assessment - Review Against Now Published Environmental Information

3.3.3 Following review of published environmental information in September 2023, the following paragraphs in relation to updated cumulative ecology and biodiversity effects were added to Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**:

"Moderate cumulative adverse effect during construction and operation on skylark, yellow wagtail, grey partridge and quail at a District (rather than Local to District) level with West Burton, Gate Burton and Tillbridge.

No other significant cumulative effects beyond those provided in the Cottam ES have been identified since the publication of the latest environmental information for the other three schemes."

3.3.4 Further review of published environmental information in December 2023 and February 2024 identified no further changes to the cumulative effects assessed in the ES.

Assessment of Cumulative Effects of Additional Schemes

3.3.5 The Schemes in Table 2.2 have been reviewed to consider likely additional cumulative ecology and biodiversity effects.

3.3.6 As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, with the publication of the EIA Scoping Reports for the One Earth Solar Farm and Great North Road Solar Park (GNRSP), it is assessed that already-identified cumulative effects upon ground nesting birds are likely to be exacerbated to a degree, although this is dependent on any mitigation to be provided within these schemes. However, as the GNRSP lies between 19.25km and 31.1km from the Scheme's generating stations and the One Earth Solar Farm lies between 8.2km and 22.8km from the Scheme's generating stations, it is considered that the addition of these projects, even in the absence of mitigation, is unlikely to

increase the scale at which the above cumulative adverse effect is felt beyond District level due to the considerable physical separation.

3.3.7 Therefore, a cumulative **significant adverse effect** is likely at the District level on ground nesting birds. This is also the same assessment significance and scale predicted to occur when considering the Gate Burton and Tillbridge schemes with the Scheme and so is consistent with the conclusion set out in paragraph 9.9.11 of **ES Chapter 9 Ecology and Biodiversity [APP-044]**. As such, no significant additional cumulative effects are identified during construction, operation, or decommissioning.

Assessment of Cumulative Effects on Humber Estuary Ramsar Site

3.3.8 In response to comments made in the relevant representations, and in response to question 2.4.3 in the Examining Authority's second written questions and requests for information **[PD-015]**, the following was included at paragraphs 9.3.11-12 of **C8.4.9.1 ES Addendum 9.1: Ecology and Biodiversity [REP4-067]**:

"The presence of the other identified local schemes (West Burton Solar Project, Gate Burton Energy Park and Tillbridge Solar) is not considered to bring about novel or increased risks of impact or impact pathways in combination with the Scheme. As with the assessment for the Humber Estuary SAC and SPA, this is due primarily to the physical separation, and the low risk construction methods anticipated to be employed during the construction of all projects."

"The large distances and presence of intervening land, infrastructure and settlements, together with the inherently low capacity for, and likelihood of, pollution events within the solar energy generation and storage schemes means that significant effects upon the Ramsar Site, even in the absence of specific mitigation measures, are considered unlikely. This conclusion is in line with Natural England consultation advice."

3.4 Hydrology, Flood Risk and Drainage

DCO Application Assessment (Section 10.10 of ES Chapter 10 [APP-045])

3.4.1 The assessment of cumulative hydrology, flood risk and drainage effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 10.10 of **C6.2.10 ES Chapter 10: Hydrology, Flood Risk and Drainage [APP-045]**.

3.4.2 This concludes there are no significant cumulative effects.

Cumulative Assessment - Review Against Now Published Environmental Information

3.4.3 Reviews of the cumulative hydrology, flood risk and drainage effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out (under the heading "Water Environment") in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.4.4 The Schemes in Table 2.2 have been reviewed to consider whether any cumulative effects will occur to the water environment. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, given the distance between the schemes and this Scheme, no significant additional cumulative effects have been identified during construction, operation, or decommissioning.

3.5 Ground Conditions and Contamination Cumulative Effects

DCO Application Assessment (Section 11.11 of ES Chapter 11 [APP-046])

3.5.1 The assessment of cumulative ground conditions and contamination effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 11.11 of **C6.2.11 ES Chapter 11: Ground Conditions and Contamination [APP-046]**.

3.5.2 This concludes there are no significant cumulative effects.

Cumulative Assessment – Review Against Now Published Environmental Information

3.5.3 Reviews of the cumulative ground conditions and contamination effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.5.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be additional ground conditions and contamination effects. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, given the distance between the schemes and the Scheme, no significant additional cumulative effects have been identified during construction, operation, or decommissioning.

3.6 Minerals Cumulative Effects

DCO Application Assessment (Section 12.10 of ES Chapter 12 [APP-047])

3.6.1 The assessment of cumulative minerals effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 12.10 of **C6.2.12 ES Chapter 12: Minerals [APP-047]**.

3.6.2 This concludes there are no significant cumulative effects.

Cumulative Assessment - Review Against Now Published Environmental Information

3.6.3 Reviews of the cumulative minerals effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out (under the heading "Ground Conditions") in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.6.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional impacts on mineral resources.

3.6.5 As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, the Great North Road Solar Park and One Earth Solar Farm proposals both affect large areas of safeguarded fluvial sand and gravel deposits associated with the River Trent. The One Earth Solar Farm proposal within Lincolnshire also lies with an Area of Search for future sand and gravel supplies. Any proposals for development that sterilises additional areas of these deposits has the potential to impact on the future supply of sand and gravel. The potential additional cumulative impact however is considered small as there is an extensive area of sand and gravel deposits extending well beyond the boundary the Scheme and those listed in Table 2.2, the additional area of safeguarded mineral affected is relatively small and the impact is for a limited time.

3.6.6 The Stow Park Farm proposal does not affect any safeguarded mineral deposits and so there are no cumulative mineral impacts arising from that proposal. As such, no significant additional cumulative effects are anticipated during construction, operation, or decommissioning.

3.7 Cultural Heritage Cumulative Effects

DCO Application Assessment (Section 13.10 of ES Chapter 13 [APP-048])

3.7.1 The assessment of cumulative cultural heritage effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 13.10 of **C6.2.13 ES Chapter 13: Minerals [APP-048]**.

3.7.2 This concludes slight adverse effects with the potential for up to Moderate Adverse cumulative effects depending on final design (with West Burton and Tillbridge) during operation where views from the Lincoln Cliff contribute to the significance of the following assets: 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) (set out in Section 13.8 **[APP-048]**).

Cumulative Assessment - Review Against Now Published Environmental Information

3.7.3 Following review of published environmental information in September 2023, the following paragraph in relation to updated cumulative cultural heritage effects was added to Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

"Potential for up to Moderate Adverse cumulative impacts with West Burton at Roman Villa west of Scampton (NHLE 1005041) depending upon the effectiveness of the landscape mitigation. Any additional cumulative impacts with the Gate Burton and Tillbridge Solar Schemes would be likely to be negligible. No significant cumulative impacts identified for other heritage assets."

3.7.4 Following review of further published environmental information in December 2023, the following paragraphs in relation to updated cumulative cultural heritage effects were added to Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

"While ZTVs demonstrate that the Gate Burton, Tillbridge, West Burton and Cottam Schemes are theoretically visible from the location of the Scheduled Roman Villa west of Scampton (NHLE 1005041), direct visibility from the asset is filtered by existing hedgerow to the west and other features within the landscape. As a consequence, cumulative impacts to the Roman Villa west of Scampton (NHLE 1005041) have only been identified between the Cottam and West Burton Schemes; any additional cumulative impacts with the Gate Burton and Tillbridge Solar Schemes would be likely to be negligible. Following a site visit, during the winter period, when foliage coverage is at its lowest, and with consideration to the design proposals of the Cottam and West Burton Schemes, including landscape mitigation, it is considered that there would be a Slight Adverse cumulative impact at the Roman Villa west of Scampton (NHLE 1005041)."

"No significant cumulative impacts identified for any heritage assets."

Assessment of Cumulative Effects of Additional Schemes

3.7.5 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional impacts to heritage assets (both archaeological and above ground). As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, due to the distance and lack of historical association between the Scheme and those listed in Table 2.2, no significant additional cumulative effects have been identified during construction, operation, or decommissioning.

3.8 Transport and Access Cumulative Effects

DCO Application Assessment (Section 14.9 of ES Chapter 14 [APP-049])

3.8.1 The assessment of cumulative transport and access effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 14.9 of **C6.2.14 ES Chapter 14: Transport and Access [APP-049]**.

3.8.2 This concludes there are no significant cumulative effects.

Cumulative Assessment – Review Against Now Published Environmental Information

3.8.3 Reviews of the cumulative transport and access effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.8.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional effects on transport and access. In particular, construction vehicle routes to each scheme have been considered.

3.8.5 As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, Stow Park Farm is located to the south of the A1500. Whilst the Stow Park Farm EIA Scoping Report does not identify a construction vehicle route, an assumption has been made that it will use the A1500. If this is the case, there is the potential for overlap with construction vehicles accessing Cottam 1 South, and the Cable Route Corridor, in the event that the construction timetables for the two schemes overlap. At Section 13.3, the Stow Park Farm EIA Scoping Report states, "The trip generation assessment indicates that approximately 100 HGV deliveries are expected over the 34-week construction period, amounting to around 3 one-way HGV trips per week. No abnormal loads will be required for the development". This low level of HGV movement will not result in any significant effect on the local highway network. Therefore, no significant cumulative effects have been identified.

3.8.6 The One Earth Scheme is located to the south of the A57, which is likely to form the main construction vehicle route to it. No construction vehicles associated with the solar array element of the Scheme will use the A57. There will be a small number of construction vehicle trips on the A57 associated with the construction of the Cable Route. Given the nature of the A57, which already accommodates large numbers of HGV movements, no significant cumulative effects have been identified. Given the distance from the Scheme to Great North Road Scheme, no cumulative effects have been identified.

3.8.7 Overall, no significant additional cumulative effects have been identified when considering these three additional schemes during construction, operation, or decommissioning.

3.9 Noise and Vibration Cumulative Effects

DCO Application Assessment (Section 15.9 of ES Chapter 15 [APP-050])

3.9.1 The assessment of cumulative noise and vibration effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 15.9 of **C6.2.15 ES Chapter 15: Noise and Vibration [APP-050]**.

3.9.2 This concludes there are no significant cumulative effects.

Cumulative Assessment – Review Against Now Published Environmental Information

3.9.3 Reviews of the cumulative noise and vibration effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.9.4 The Schemes listed in Table 2.2 have been reviewed to consider the potential for there to be likely additional impacts to noise sensitive receptors. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, due to the distance and lack of shared receptors between the Scheme and the schemes listed in Table 2.2, no significant additional cumulative effects have been identified during construction, operation, or decommissioning.

3.10 Glint and Glare Cumulative Effects

DCO Application Assessment (Section 16.10 of ES Chapter 16 [APP-051])

3.10.1 The assessment of cumulative glint and glare effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 16.10 of **C6.2.16 ES Chapter 16: Glint and Glare [APP-051]**.

3.10.2 This concludes there are no significant cumulative effects.

Cumulative Assessment - Review Against Now Published Environmental Information

3.10.3 Reviews of the cumulative glint and glare effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.10.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional glint and glare effects. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, due to the distance and the lack of shared receptors between the schemes between the Scheme and those listed in Table 2.2 no significant additional cumulative effects have been identified during construction, operation, or decommissioning.

3.11 Air Quality Cumulative Effects

DCO Application Assessment (Section 17.9 of ES Chapter 17 [APP-052])

3.11.1 The assessment of cumulative air quality effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 17.9 of **C6.2.17 ES Chapter 17: Air Quality [APP-052]**.

3.11.2 This concludes there are no significant cumulative effects.

Cumulative Assessment - Review Against Now Published Environmental Information

3.11.3 Reviews of the cumulative air quality effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.11.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional impacts to air quality. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**,, there are no significant cumulative effects anticipated during construction, operation, or decommissioning.

3.12 Socio-Economics and Tourism and Recreation Cumulative Effects

DCO Application Assessment (Section 18.10 of ES Chapter 18 [APP-053])

3.12.1 The assessment of cumulative socio-economics, tourism and recreation effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 18.10 of **C6.2.18 ES Chapter 18: Socio-Economics and Tourism and Recreation [APP-053]**.

3.12.2 This has concluded the following significant effects, which are set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]:**

- Peak cumulative medium-term temporary **moderate beneficial effect**, significant at Local level on construction sector employment construction and decommissioning with Cottam, Gate Burton and Tillbridge (Section 18.10.9 and paragraph 18.10.59 **[APP-053]**)
- Peak cumulative medium term temporary **major-moderate beneficial effect**, significant at Local level on accommodation sector employment during construction and decommissioning with Cottam, Gate Burton and Tillbridge (Section 18.10.11 and paragraph 18.10.62 **[APP-053]**).
- Peak cumulative medium-term temporary **moderate beneficial effect**, significant at Local level on Economic activity and Employment during construction and decommissioning with Cottam, Gate Burton and Tillbridge (Section 18.10.14 and paragraph 18.10.65 **[APP-053]**).
- Peak cumulative medium-term **moderate beneficial effect**, significant at Local level on accommodation stock (housing) during construction with Cottam, Gate Burton and Tillbridge (paragraph 18.10.17 **[APP-053]**).
- Peak cumulative medium-term temporary **major-moderate beneficial effect**, significant at Local level on Access to employment (IMD) during construction with Cottam, Gate Burton and Tillbridge (paragraph 18.10.18 **[APP-053]**)
- Peak cumulative medium-term temporary **moderate beneficial effect**, significant at Local level on Access to education (IMD) during construction with Cottam, Gate Burton and Tillbridge (paragraph 18.10.19 **[APP-053]**)
- Peak cumulative medium-term **moderate beneficial effect**, significant at Local level on construction economy during construction and decommissioning with Cottam, Gate Burton and Tillbridge (paragraphs 18.10.22 and 18.10.68 **[APP-053]**).
- Peak cumulative medium-term temporary **moderate beneficial effect**, significant at Local level on accommodation economy during construction with Cottam, Gate Burton and Tillbridge (paragraph 18.10.24 **[APP-053]**)
- Peak cumulative medium-term temporary **moderate adverse effect**, significant at Local level on the tourism and visitor economy during

construction with Cottam, Gate Burton and Tillbridge (paragraph 18.10.25 **[APP-053]**)

- Peak cumulative medium-term temporary **moderate beneficial effect**, significant at Local level on economic prosperity, and resident and working population income during construction and decommissioning with Cottam, Gate Burton and Tillbridge (paragraphs 18.10.27 and 18.10.76 **[APP-053]**).
- Peak cumulative short to medium-term temporary **moderate adverse effect**, significant at Local level on local landscape attractions during construction with Cottam, Gate Burton and Tillbridge (paragraph 18.10.29 **[APP-053]**).
- Peak cumulative short to medium-term temporary **moderate adverse effect**, significant at Local level on long distance recreation routes during construction with Cottam, Gate Burton and Tillbridge (paragraph 18.10.32 **[APP-053]**).
- Long-term cumulative **moderate adverse effect**, significant at Local level on energy sector employment during operation and decommissioning with Cottam, Gate Burton and Tillbridge (paragraphs 18.10.35 and 18.10.60 **[APP-053]**).

Cumulative Assessment - Review Against Now Published Environmental Information

3.12.3 Reviews of the cumulative socio-economics, tourism and recreation effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.12.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional socio-economics, tourism and recreation effects.

3.12.5 As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, potential cumulative effects are from Stow Park Solar cumulatively with Cottam are likely to be localised in nature. District-level socio-economic, tourism and recreation effects may potentially be increased by One Earth Solar.

3.12.6 Great North Solar is located outside the Local Impact Area (Bassetlaw District and West Lindsey District) and so is not likely to result in additional cumulative effects, except at a regional level. However, these are not anticipated to be significant.

3.12.7 Due to the smaller size of Stow Park solar (<50MW) compared to the Scheme and the lack of additional tourism and recreation receptors likely to be affected, it is considered that there are only minimal changes to the socio-economic, tourism and recreation environment assessed, which do not result in any additional significant cumulative effects at any point of the Scheme's development lifetime.

3.12.8 During its operational lifetime, One Earth Solar Farm is likely to increase the amount of energy employment, and decrease the amount of agricultural employment in the Local Impact Area. No specific data has been provided in the One Earth Solar Scoping Report for the number of jobs generated by, or impacted by the Scheme. Therefore, there is insufficient information to determine if there is likely to be any additional long-term significant cumulative effects in the Local Impact Area as a result of One Earth Solar Farm during the operational phase of the Scheme.

3.12.9 No other socio-economic, tourism and recreation receptors are anticipated to experience changes in the level of effect significance identified in the cumulative assessment for the operational phase of the Scheme set out in Chapter 18 of the ES **[APP-053]**.

3.12.10 One Earth Solar has a projected construction timescale of 2027-2029, and projected decommissioning timescale of no earlier than 2074. This therefore may create an increased amount of cumulative construction and decommissioning works. However, no changes to significant cumulative decommissioning effects are identified as likely due to the staggered timescales for this project comparison to the other NSIPs assessed in Chapter 18 of the ES **[APP-053]** and referred to in the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

3.13 Soils and Agriculture Cumulative Effects

DCO Application Assessment (Section 19.11 of ES Chapter 19 [APP-054])

3.13.1 The assessment of cumulative soils and agriculture effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 19.11 of **C6.2.19 ES Chapter 19: Soils and Agriculture [APP-054]**.

3.13.2 This concludes there are no significant cumulative effects.

Cumulative Assessment - Review Against Now Published Environmental Information

3.13.3 Reviews of the cumulative soils and agriculture effects against published environmental information in January 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.13.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional soils and agriculture effects.

3.13.5 As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, the Stow Park site is a single parcel of land approximately 48ha in extent. It has been subject to a detailed ALC assessment finding land in Grades 3a and 3b.

3.13.6 One Earth and Great North Road sites are larger (1500ha and 2900ha respectively) and are broken up into several separate parcels of land. No detailed ALC assessment work has yet been submitted for these NSIP sites.

3.13.7 No information on agricultural occupancy is provided for any of these sites.

3.13.8 No significant cumulative effects have been identified for Soils and Agriculture. Agricultural land is not lost to or degraded by the temporary solar development. Soil resources associated with that agricultural land will experience minimal disturbance during construction/decommissioning works. Any soils on arable land will benefit from extended fallow period.

3.13.9 A possible cumulative effect for Farming Circumstances could occur where an agricultural occupant owns or rents farmland on multiple separate sites. This is difficult to determine the names of agricultural occupants are not disclosed between applicants for the schemes. However given the geographic separation between the different scheme sites, any common occupancy between Sites would strongly suggest large and diverse farm businesses already, minimising the potential for there to be any adverse cumulative effects.

3.14 Waste Cumulative Effects

DCO Application Assessment (Section 20.10 of ES Chapter 20 [APP-055])

3.14.1 The assessment of cumulative waste effects of the Scheme and the three NSIPs set out in Table 2.1 is included at Section 20.10 of **C6.2.20 ES Chapter 20: Waste [APP-055]**.

3.14.2 This has concluded a **moderate or large adverse effect** on landfill waste handling in Nottinghamshire during the decommissioning phase with West Burton, Gate Burton and Tillbridge (paragraph 20.10.16 **[APP-055]**).

Cumulative Assessment - Review Against Now Published Environmental Information

3.14.3 Reviews of the cumulative waste effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.14.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional waste effects.

3.14.5 As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, the consideration of potential cumulative effects is based on the likely increase in waste arisings from the schemes at all stages of development. This includes recycling handling and landfill capacity for construction, demolition and excavation (C,D&E) waste, and recycling and handling of waste electronics and electrical equipment (WEEE).

3.14.6 Due to the smaller size of Stow Park solar (<50MW) compared to the Scheme, it is considered that there are only minimal changes to the level of waste arisings identified in the cumulative assessment. Waste arisings from Great North Road Solar Park are anticipated to increase the level of waste handling requirements in Nottinghamshire, while One Earth Solar Farm is likely to increase the level of waste handling requirements in both Lincolnshire and Nottinghamshire. However, no changes to the level of significance, nor number of significant cumulative effects are identified at any stage of the Scheme's lifetime taking into an account an assessment of these additional schemes.

3.14.7 Therefore, when taking into account the additional schemes, there are no additional significant adverse effects compared to those identified in C6.2.20 ES Chapter 20: Waste **[APP-055]**.

3.15 Other Environmental Matters (Matters Scoped Out) Cumulative Effects

DCO Application Assessment (Sections 21.2-21.4 of ES Chapter 21 [APP-056])

3.15.1 Electromagnetic fields; telecommunications, utilities and television; and light pollution are addressed respectively in Sections 21.2, 21.3, and 21.4 of **C6.2.21 ES Chapter 21: Other Environmental Matters [APP-056]**. These topics were scoped out of assessment in the ES as confirmed by PINS in the **C6.3.2.2 ES Appendix 2.2: Scoping Opinion [APP-064]**.

3.15.2 There are no significant cumulative effects anticipated in regard to any of these topics.

Cumulative Assessment - Review Against Now Published Environmental Information

3.15.3 With the exception of telecommunications, reviews of the cumulative effects for electromagnetic fields; telecommunications, utilities and television; and light pollution against published environmental information in September 2023, December 2023, and February 2024 have not been undertaken in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**. This is due to these topics being scoped out of the environmental assessment for the Scheme, and for Gate Burton Energy Park **[EN010131]**, West Burton Solar Project **[EN010132]**, and Tillbridge Solar Project **[EN010142]**.

Assessment of Cumulative Effects of Additional Schemes

3.15.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional EMF effects. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, given the minimal level of effects and distance between the schemes, no cumulative effects have been identified.

3.15.5 Similarly, the Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional telecommunications, utilities, and television reception effects. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, given the minimal level of effects and distance between the schemes, no cumulative effects have been identified.

3.15.6 Finally, the Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional light pollution effects. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, given the minimal level of effects and distance between the schemes, no cumulative effects have been identified.

3.16 Other Environmental Matters (Human Health) Cumulative Effects

DCO Application Assessment (Paragraphs 21.5.37-21.5.43 of ES Chapter 21 [APP-056])

3.16.1 The assessment of cumulative human health effects of the Scheme and the three NSIPs set out in Table 2.1 is included at paragraphs 21.5.37-43 of **C6.2.21 ES Chapter 21: Other Environmental Matters [APP-056]** and is supported with greater detail in **C8.4.21.1 ES Addendum 21.1: Human Health and Wellbeing Effects [REP4-068]**.

3.16.2 This concludes that there is anticipated to be peak cumulative **moderate adverse effect** on long distance recreation routes during construction with West Burton, Gate Burton and Tillbridge (paragraph 21.5.41 **[APP-056]**) and **significant beneficial effects** during construction as a result of uplifts in employment and in skills training and education opportunities with West Burton, Gate Burton and Tillbridge. (paragraph 21.5.43 **[APP-056]**).

Cumulative Assessment - Review Against Now Published Environmental Information

3.16.3 Reviews of the cumulative human health effects against published environmental information in September 2023, December 2023, and February 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.16.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely additional impacts to human health and wellbeing effects. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, potential cumulative effects are based on the likely localised health and wellbeing impacts from Stow Park Solar cumulatively with Cottam. District-level health and wellbeing matters may potentially be affected by One Earth Solar. Due to the separation of Great North Solar, there are not anticipated to be cumulative health and wellbeing effects to the previously cumulatively assessed projects.

3.16.5 Due to the comparatively smaller size of Stow Park solar (<50MW), it is considered that there are only minimal changes to the human health and wellbeing impacts identified, which do not result in any additional significant cumulative effects. No additional significant effects are anticipated from Great North Road Solar Park due to its distance from the other cumulatively assessed projects.

3.16.6 One Earth Solar may bring an increase in employment and education and skills opportunities that will beneficially contribute towards deprivation in the Local Impact Area (Bassetlaw and West Lindsey Districts), however, it is not anticipated that the level of significance of the cumulative assessment would change as a result. Therefore, there are no new significant cumulative adverse effects to those identified in Section 21.5 of C6.2.21 ES Chapter 21 Other Environmental Matters [APP-056] and **C8.4.21.1 ES Addendum 21.1: Human Health and Wellbeing**

Effects [REP4-068] at the construction, operation or decommissioning phases of the Scheme

3.17 Other Environmental Matters (Major Accidents and Disasters) Cumulative Effects

DCO Application Assessment (Paragraph 21.6.59 of ES Chapter 21 [APP-056])

3.17.1 The assessment of cumulative major accidents and disaster effects of the Scheme and the three NSIPs set out in Table 2.1 is included at paragraph 21.6.59 of **C6.2.21 ES Chapter 21: Other Environmental Matters [APP-056]**.

3.17.2 This concludes there are no significant cumulative effects.

Cumulative Assessment - Review Against Now Published Environmental Information

3.17.3 Reviews of the cumulative major accidents and disaster effects against published environmental information in January 2024 have identified no changes to the cumulative effects assessed in the ES. This position is set out in Table 2-2 of Appendix E of the **Interrelationships Report [EN010133/EX5/C8.1.8_D]**.

Assessment of Cumulative Effects of Additional Schemes

3.17.4 The Schemes in Table 2.2 have been reviewed to consider the potential for there to be likely major accident and disaster effects. As stated in Table 3.1 of the Technical Note on Cumulative Effects of Additional Schemes **[REP4-059]**, potential cumulative effects are based on the likely localised major accident and disaster impacts from Stow Park Solar cumulatively with West Burton. Due to the separation of Great North Solar and One Earth Solar, and the generally localised impacts from major accidents and disasters, there are not anticipated to be cumulative major accident and disaster effects to the previously cumulatively assessed projects.

3.17.5 Due to the comparatively smaller size of Stow Park solar (<50MW), it is considered that there are only minimal changes to the major accident and disaster impacts identified, which do not result in any additional significant cumulative effects. No additional likely significant effects are anticipated from One Earth Solar and Great North Road Solar Park due to its distance from the other cumulatively assessed projects. Therefore, there are no significant additional cumulative effects during the cumulative construction, operational, and decommissioning periods.