

Cottam Solar Project

Technical Note on Cumulative Effects of Additional Schemes

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Issue Sheet

Report Prepared for: Cottam Solar Project Ltd.

Technical Note on Cumulative Effects of Additional Schemes

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1 Introduction

1.1 Purpose of this document

- 1.1.1 This report provides an assessment of the cumulative effects of additional schemes in support of the Application for a Development Consent Order for Cottam Solar Project (the 'Scheme') by Cottam Solar Project Limited (the 'Applicant').
- 1.1.2 The report identifies schemes that have not already been considered as part of the cumulative effects assessment (CEA) within the Environmental Statement [APP-036 to APP-057, REP-010, REP-012, REP-014, REP2-008, REP2-010], because at the time this was prepared, there was not sufficient information in the public domain for these projects to be considered as part of the CEA, which was undertaken in accordance with PINS Advice Note 17¹. This report provides an assessment of potential significant environmental effects resulting from these projects cumulatively with the Scheme.
- 1.1.3 Question 1.2.21 of the Examining Authority's (ExA) First Written Questions [PD-011] asked the Local Planning Authorities to identify cumulative developments that should be included in the assessments of the Environmental Statement. West Lindsey District Council (WLDC) [REP2-076] requested that One Earth Solar Farm and Stow Park Solar Farm be included. Nottinghamshire County Council [REP2-075] provided a list of five schemes, including One Earth Solar Farm and Great North Road Solar Park. In addition, in Question 1.4.1, the Examining Authority asked the Applicant to keep the One Earth Solar Farm project under review.
- 1.1.4 In C8.1.15 Applicant Response to ExA First Written Questions [REP2-034]. In response to these questions, the Applicant undertook to review the cumulative effects of these three schemes .
- 1.1.5 Question 2.4.1 of the ExA's Second Written Questions [PD-015] asks the Applicant for an update in relation to the cumulative effects of Stow Park Solar Farm.
- 1.1.6 This report addresses the ExA's questions and the Local Planning Authorities comments.
- 1.1.7 This report should be read alongside C8.1.8 Joint Report on Interrelationships between Nationally Significant Infrastructure Projects [EN010133/EX4/C8.1.8_C] which addresses the cumulative impacts of four Nationally Significant Infrastructure Projects: the Scheme (Cottam Solar Project), West Burton Solar Project, Gate Burton Energy Project and Tillbridge Solar Project.

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/>]

2 Methodology

2.1 Introduction

- 2.1.1 The assessments of the additional schemes follow the methodology set out within ES Chapter 2: EIA Process and Methodology [APP-037] 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 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].
- 2.1.3 Following the methodology set out in ES Chapter 2: EIA Process and Methodology [APP-037], three additional schemes meet the criteria for assessment as part of the Long List: One Earth Solar Farm, Great North Road Solar Park and Stow Park Solar Farm. Three further schemes have been excluded from consideration: The Steeples Renewables Solar Project and West Burton Power Station Finding STEP a Home have not yet submitted scoping reports to the Planning Inspectorate; The North Humber to High Marnham project is an overhead power line rather than a solar park and is outside the zone of influence of the Scheme.
- 2.1.4 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-148].

2.2 Tier Classification

- 2.2.1 The schemes identified in Table 2.1 are 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: 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	2.5km to southwest of Cottam 1	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 to southwest of Cottam 1	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 to southwest of Cottam 1	Scoping Report submitted to PINS. Submission of application expected Q2 2025	2

3 Assessment of Cumulative Effects of Additional Schemes

3.1 Assessment

3.1.1 For each of the topic chapters of the Environmental Statement, the assessment of the cumulative effects of the additional schemes identified above in **Table 2.1** is set out in **Table 3.1**.

3.2 Conclusion

3.2.1 The review of the additional schemes for each topic found that there are no new potential significant cumulative effects.

Table 3.1: Assessment of Cumulative Effects of Additional Schemes

Nature of Effects	Description of Potential Cumulative Effects	Assessment of Significance of Cumulative Effects
Chapter 7: Climate Change		
Effects on climate change	The Schemes in Table 2.1 have been reviewed to consider likely additional impacts on climate change.	No significant cumulative adverse effects. No significant cumulative adverse effects are anticipated during construction, operation, or decommissioning.
Chapter 8 Landscape and Visual Impact		
Effects on landscape character and visual amenity/receptors	The Schemes in Table 2.1 have been reviewed to consider likely additional landscape and visual cumulative effects. There will be no intervisibility between the schemes listed in Table 2.1 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.	No significant cumulative effects. No significant cumulative effects are anticipated during construction, operation, or decommissioning.
Chapter 9 Ecology and Biodiversity		
Cumulative effects on ground nesting birds	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	Significant adverse cumulative effect likely at District Scale. 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 Chapter 9 Ecology and Biodiversity [APP-044].

Nature of Effects	Description of Potential Cumulative Effects	Assessment of Significance of Cumulative Effects
	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.	
Chapter 10 Hydrology, Flood Risk and Drainage		
Effects on Hydrology, Flood Risk and Drainage (Water Environment) receptors across all Schemes listed in Table 2.1 and Scheme	The Schemes in Table 2.1 have been reviewed to consider whether any cumulative effects will occur to the water environment. Given the distance between the schemes, no cumulative effects have been identified.	No significant cumulative effects. No significant cumulative effects are anticipated during construction, operation, or decommissioning.
Chapter 11 Ground Conditions and Contamination		
Effects on ground conditions and contamination receptors across all Schemes listed in Table 2.1 and Scheme	The Schemes in Table 2.1 have been reviewed to consider the potential for there to be additional ground conditions and contamination effects. Given the distance between the schemes, no cumulative effects have been identified.	No significant cumulative effects. No significant cumulative effects are anticipated during construction, operation, or decommissioning.
Chapter 12 Minerals		
Effects on mineral resources across all Schemes listed in Table 2.1 and the Scheme	The Schemes in Table 2.1 have been reviewed to consider the potential for there to be likely additional impacts on mineral resources.	No significant cumulative effects. No significant cumulative effects are anticipated during construction, operation, or decommissioning.

Nature of Effects	Description of Potential Cumulative Effects	Assessment of Significance of Cumulative Effects
	<p>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 2.1, the additional area of safeguarded mineral affected is relatively small and the impact is for a limited time.</p> <p>The Stow Park Farm proposal does not affect any safeguarded mineral deposits and so there are no cumulative mineral impacts arising from that proposal.</p>	
<p>Chapter 13 Cultural Heritage</p>		
<p>Effects on heritage Assets across all Schemes listed in Table 2.1 and the Scheme</p>	<p>The Schemes in Table 2.1 have been reviewed to consider the potential for there to be likely additional impacts to heritage assets. Due to the distance and lack of historical association between the Scheme and those listed in Table 2.1 no cumulative effects have been identified.</p>	<p>No significant cumulative effects. No significant cumulative effects are anticipated during construction, operation, or decommissioning.</p>
<p>Chapter 14 Transport and Access</p>		

Nature of Effects	Description of Potential Cumulative Effects	Assessment of Significance of Cumulative Effects
	<p>The Schemes in Table 2.1 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.</p> <p>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, <i>“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”</i>. 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.</p> <p>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</p>	<p>No significant cumulative effects. No significant cumulative effects are anticipated during construction, operation, or decommissioning.</p>

Nature of Effects	Description of Potential Cumulative Effects	Assessment of Significance of Cumulative Effects
	<p>movements, no significant cumulative effects have been identified.</p> <p>Given the distance from the Scheme to Great North Road Scheme, no cumulative effects have been identified.</p>	
Chapter 15 Noise and Vibration		
Effects on noise sensitive receptors across all Schemes listed in Table 2.1 and the Scheme	The Schemes listed in Table 2.1 have been reviewed to consider the potential for there to be likely additional impacts to noise sensitive receptors. Due to the distance and lack of shared receptors between the schemes and those listed in Table 2.1, no significant cumulative effects have been identified.	No significant cumulative effects. No significant cumulative effects are anticipated during construction, operation, or decommissioning.
Chapter 16 Glint and Glare		
Effects on glint and glare effects across all Schemes listed in Table 2.1 and the Scheme	The Schemes in Table 2.1 have been reviewed to consider the potential for there to be likely additional glint and glare effects. Due to the distance and the lack of shared receptors between the schemes between the Scheme and those listed in Table 2.1 no significant cumulative effects have been identified.	No significant cumulative effects. No significant cumulative effects are anticipated during construction, operation, or decommissioning.
Chapter 17 Air Quality		
Effects on air quality	The Schemes in Table 2.1 have been reviewed to consider the potential for there to be likely additional impacts to air quality.	No significant cumulative effects. No significant cumulative effects are anticipated during construction, operation, or decommissioning.
Chapter 18 Socio-Economics, Tourism and Recreation		

Nature of Effects	Description of Potential Cumulative Effects	Assessment of Significance of Cumulative Effects
<p>Effects on the socio-economic, and tourism and recreation environments</p>	<p>The Schemes in Table 2.1 have been reviewed to consider the potential for there to be additional socio-economics, tourism and recreation effects.</p> <p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p> <p>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].</p> <p>No socio-economic, tourism and recreation receptors are anticipated to experience changes in the level of effect significance identified in the cumulative assessment for the construction and decommissioning phases of the Scheme set out in Chapter 18 of the ES [APP-053].</p>

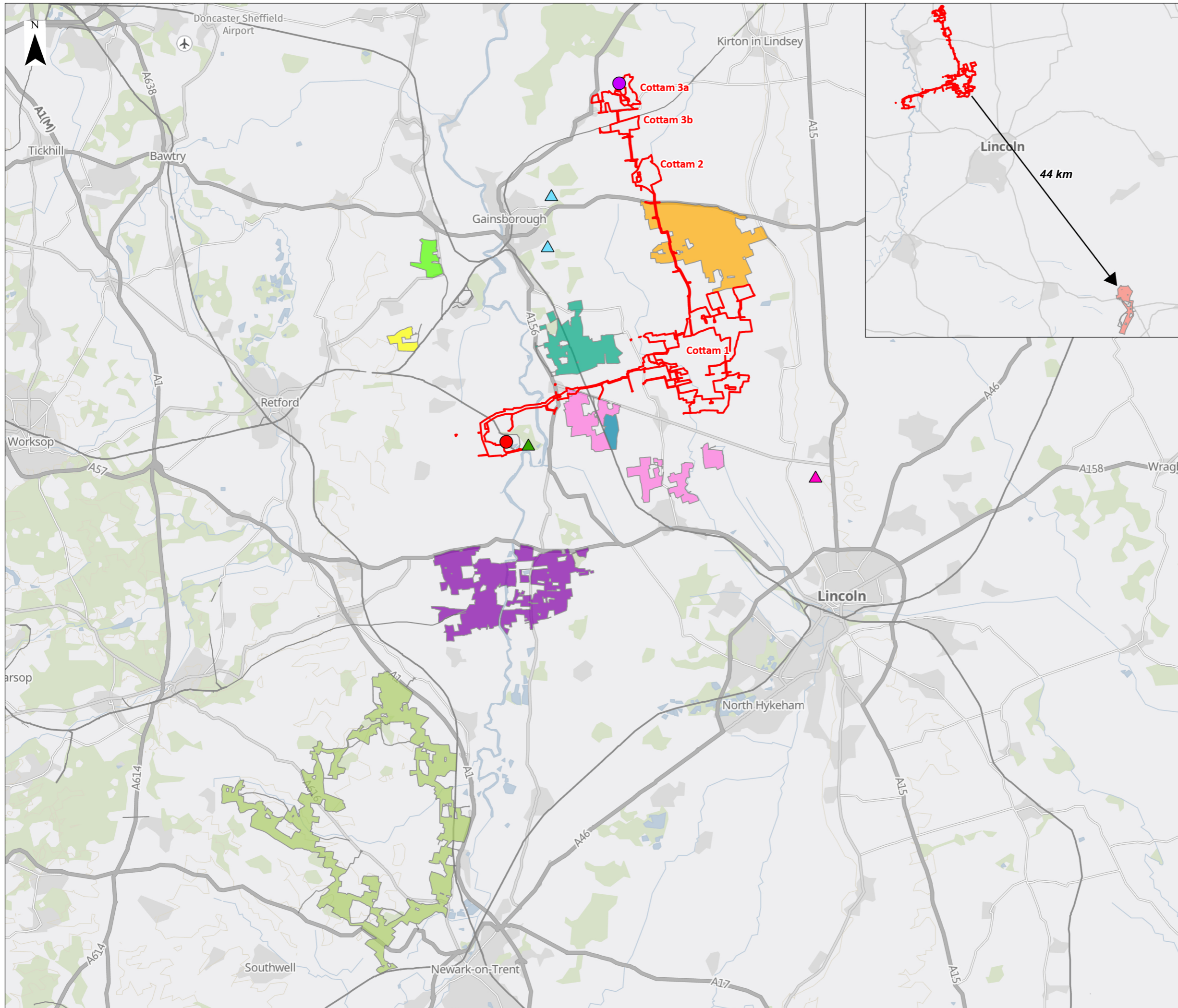
Nature of Effects	Description of Potential Cumulative Effects	Assessment of Significance of Cumulative Effects
		<p>One Earth Solar has a projected construction timescale of 2027-2029, and projected decommissioning timescale of no earlier than 2074. This therefore may create an increased amount of cumulative 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 other NSIPs assessed in C6.2.18 ES Chapter 18 Socio-Economics, Tourism and Recreation [APP-053].</p>
<p>Chapter 19 Soils and Agriculture</p>		
<p>Effects on Agricultural Land Resource, Soil Resource and Farming Circumstances</p>	<p>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.</p> <p>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.</p> <p>No information on agricultural occupancy is provided for any of these sites.</p>	<p>No significant cumulative effects have been identified for Soils and Agriculture.</p> <p>Agricultural land is not lost to or degraded by the temporary solar development.</p> <p>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.</p> <p>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</p>

Nature of Effects	Description of Potential Cumulative Effects	Assessment of Significance of Cumulative Effects
		diverse farm businesses already, minimising the potential for there to be any adverse cumulative effects.
Chapter 20 Waste		
Effects on waste and recycling handling	<p>The Schemes in Table 2.1 have been reviewed to consider the potential for there to be likely additional waste effects.</p> <p>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).</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>Therefore, there are no new significant adverse effects compared to those identified in C6.2.20 ES Chapter 20: Waste [APP-055].</p>
Chapter 21 Other Environmental Matters		
Effects on electromagnetic fields	The Schemes in Table 2.1 have been reviewed to consider the potential for there to be likely additional EMF effects. Given the minimal level of effects and distance between the schemes, no cumulative effects have been identified.	No significant cumulative effects.

Nature of Effects	Description of Potential Cumulative Effects	Assessment of Significance of Cumulative Effects
Effects on telecommunications, utilities, and television reception	The Schemes in Table 2.1 have been reviewed to consider the potential for there to be likely additional telecommunications, utilities, and television reception effects. Given the minimal level of effects and distance between the schemes, no cumulative effects have been identified.	No significant cumulative effects.
Effects on light pollution	The Schemes in Table 2.1 have been reviewed to consider the potential for there to be likely additional light pollution effects. Given the minimal level of effects and distance between the schemes, no cumulative effects have been identified.	No significant cumulative effects.
Effects on human health and wellbeing	<p>The Schemes in Table 2.1 have been reviewed to consider the potential for there to be likely additional impacts to human health and wellbeing effects.</p> <p>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.</p>	<p>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.</p> <p>No additional significant effects are anticipated from Great North Road Solar Park due to its distance from the other cumulatively assessed projects.</p> <p>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.</p> <p>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</p>

Nature of Effects	Description of Potential Cumulative Effects	Assessment of Significance of Cumulative Effects
		<p>C8.4.21.1 ES Addendum 21.1: Human Health [EN010133/EX4/C8.4.21.1], which are:</p> <ul style="list-style-type: none"> • a major-moderate beneficial effect on access to employment as an index of multiple deprivation during the cumulative construction period; • a moderate beneficial effect on access to education as an index of multiple deprivation during the cumulative construction period; • a peak moderate adverse effect on the Trent Valley Way (long distance recreation route) during the cumulative construction period; • a moderate adverse effect on mental health and wellbeing to residents in the Till Valley area during the cumulative operational lifetime of NSIPs in the Till Valley.
<p>Effects major accidents and disasters</p>	<p>The Schemes in Table 2.1 have been reviewed to consider the potential for there to be likely major accident and disaster effects.</p> <p>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.</p>	<p>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..</p> <p>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.</p> <p>Therefore, there are no significant cumulative effects during the cumulative construction, operational, and decommissioning periods.</p>

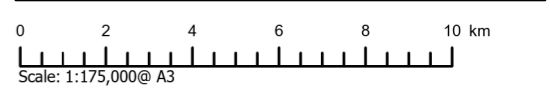
Appendix A – Plan of Additional Schemes



Key

- Order Limits
- Current and Emerging Policy**
 - ▲ Emerging Policy ST6: Cottam Priority Regeneration Area
 - ▲ Policy 48 Gainsborough Northern Neighbourhood SUE Allocation
 - ▲ Policy LP8 Employment Site Land at Lincolnshire Showground
- Cumulative Developments**
 - Decommissioning of Cottam Power Station
 - Automotive Research and Development Centre
 - Bumble Bee Farm
 - Field Farm
 - Gate Burton Energy Park
 - Heckington Fen Solar
 - Tillbridge Solar
 - West Burton Solar
 - Stow Park Solar
 - One Earth Solar
 - Great North Road Solar

Layers: Lanpro, 2024
Base map: Contains OS data © Crown Copyright and database right 2023
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Figure 2.1
Cottam
Cumulative Developments

COTTAM SOLAR PROJECT
EIA Process and Methodology
Environmental Statement (ES)