

Gate Burton Energy Park Environmental Statement

Volume 3, Appendix 10-H: Landscape & Visual Cumulative Effects Document Reference: EN010131/APP/3.3 January 2023

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Gate Burton Energy Park Limited



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1. Landscape & Visual Cumulative Effects

1.1 Introduction

- 1.1.1 Schemes to form the basis of a cumulative landscape and visual assessment were agreed in consultation with Lincolnshire and Nottinghamshire County Council, and are set out in ES Volume 1, Chapter 16: Cumulative Effects and Interactions [EN01031/APP/3.1]. An assessment has been made with reference to the methodology and guidance set out in Chapter 5: EIA Methodology [EN01031/APP/3.1] to determine if they give rise to cumulative landscape and visual effects.
- 1.1.2 This appendix sets out the relevant extracts from published landscape character assessments and associated studies across the study area, which have been used to inform the assessment of landscape effects. This information should be read in combination with **ES Volume 2: Figures 10-4 to 10-8 [EN01031/APP/3.2]**.
- 1.1.3 The significance of landscape and visual effects has been determined by considering the relationship between the sensitivity of the receptor and the magnitude of effect.
- 1.1.4 A guide to this relationship is set out in the matrix in Table 1. However, should professional judgement consider that the effect is different to that in the matrix, then a reasoned justification is presented in the LVIA. Similarly, where the matrix allows for different levels of significance of effect a reasoned explanation is provided in the assessment as to the conclusion.

Sensitivity or	r Magnitude of Effect				
value of resource/ receptor	High	Medium	Low	Very Low	None
Very High	Major	Major or Moderate	Moderate or Minor	Minor or Negligible	Neutral
High	Major or Moderate	Moderate	Moderate or Minor	Minor or Negligible	Neutral
Medium	Major or Moderate	Moderate or Minor	Minor or Negligible	Negligible	Neutral
Low	Moderate or Minor	Minor	Minor or Negligible	Negligible	Neutral
Very Low	Minor	Minor or Negligible	Negligible	Negligible	Neutral

 Table 1: Sensitivity of Receptor in Relation to Magnitude of Effect

 sitivity or
 Magnitude of Effect



1.2 Landscape Assessment of Cumulative Schemes in Construction

ID	Name / Location / Approximate distance	Assessment	Cumulative Significance
1	West Burton C Power Station Construction, operation and decommissioning of a gas fired electricity generating station. Approximately 3km north- west of the Order limits.	The ID1 cumulative scheme lies within LLCA 03 West Burton Plain, on which the Scheme in isolation, has no significant effect in construction. There will be locations within LLCA 10 – Cottam Plain; LLCA 11 – Rampton Fringe & Hawk Hills; LLCA 12 – Leverton Plain; LLCA 03 – West Burton Plain; LLCA 13 – Trent Plain, and LLCA 09 – Trent Plain South, where construction of the grid connection and ID1 will be visible together if occurring simultaneously, due to the height of the power station elements primarily. Construction of the solar farm (excluding grid connection) will be unlikely to add to cumulative indirect effects on the host LLCAs (LLCA 01/02/05/06/08/09/10). In addition to the direct influence of construction on the LLCAs, involving localised vegetation loss/soil stripping (for example to construct the grid connection) there will be increased perception of vehicle/machinery and activity adversely impacting landscape character in the rural context. However, the distance between the ID1 cumulative scheme and the Scheme, is such there will be limited intervisibility and localised geographical extent of indirect effects on landscape character. Direct effects in the same LLCA from both schemes will not occur. Cumulative effects on landscape character will be of very low adverse magnitude for both Scenario 1 and Scenario 2 for grid connection and for construction of the main Scheme elements, neutral. Consequently, for medium and low sensitivity LLCAs, cumulative construction effects between ID1 and the Scheme will be of very low/neutral magnitude and maximum negligible significance.	Negligible
2	Demolition of West Burton C Power Station Demolition of Power Station. Approximately 3km north-	As described for scheme ID 1.	Negligible
	west of Order limits.		
3	Land east of Bumble Bee Farm Solar Development Solar farm at Saundby, with export capacity of up to 49.9 MW.	The distance between the ID 3 cumulative scheme and the Scheme, coupled with the limited intervisibility and localised geographical extent of indirect effects on landscape character from the Scheme grid connection are such that intervisibility of construction is highly unlikely. Direct effects in the same LLCA from both schemes will not occur and hence direct cumulative change at the LLCA scale will be mitigated. Cumulative effects on landscape character will be neutral for both the construction of the Scheme and grid connection Scenario 1 and Scenario 2.	Neutral
	Approximately 5.1km north- west of Order limits.		
4	Farm Wood Lane Solar Development	As described for scheme ID 3.	Neutral



ID	Name / Location / Approximate distance	Assessment	Cumulative Significance
	Solar PV development at Sturton Le Steeple.		
	Approximately 4km west of Order limits.		
5	Solar Photovoltaic Farm Development of a solar photovoltaic farm at Bole	As described for scheme ID 3.	Neutral
	Approximately 5km north- west of Order limits.		
6	Cottam Power Station demolition Demolition of Power Station. Adjacent to site at southern section of Grid Connection Corridor	The ID 6 cumulative scheme and the Scheme both lie within LLCA 10 – Cottam Plain, on which the Scheme in isolation, has a significant effect in construction. There will be locations within LLCA 10 – Cottam Plain; LLCA 11 – Rampton Fringe & Hawk Hills; LLCA 12 – Leverton Plain; LLCA 03 – West Burton Plain; LLCA 13 – Trent Plain and LLCA 09 – Trent Plain South where construction/demolition of both schemes will be visible if occurring simultaneously. In addition to the direct influence on LLCA 10 – Cottam Plain there will be increased perception of construction activity adversely impacting landscape character. Cumulative indirect effects on landscape character will however be localised and perceived in the context of LLCA 10 already influenced by the presence of industrial elements such as the power station and overhead powerline. There will be direct cumulative effects on the landscape elements and character of LLCA 10 with ID6 in construction if occurring simultaneously with the grid connection (primarily). Adding the Scheme to the likely scale and extent of construction/demolition of ID6 within LLCA 10 will increase the overall magnitude of effect on LLCA 10 but given the scale of ID6 effects will primarily be derived from it rather than addition of the under Scenario 1. Under Scenario 2 the timescale of effects will also increase but this will likely extend beyond timescales of ID6 demolition and hence overall magnitude, with addition of the Scheme, will not increase. The significance of effects on immediately adjacent LLCAs will remain as described for the Scheme in isolation. Overall effects from the addition of the Scheme for medium and low sensitivity LLCAs, will be of minor cumulative significance.	Minor
7	Sturton le Steeple Quarry New sand/gravel quarry.	The ID 7 cumulative scheme lies within LLCA 03 West Burton Plain, on which the Scheme in isolation, has no significant effect in construction. There will be locations within LLCA 10 – Cottam Plain; LLCA 11 – Rampton Fringe & Hawk Hills; LLCA 12 – Leverton Plain; LLCA 03 – West Burton Plain; LLCA 13 – Trent Plain and LLCA 09 – Trent Plain South where construction of both schemes will be potentially visible if occurring simultaneously. In addition to the direct influence on	Negligible
	Approximately 4.6km north- west of Order limits.	the LLCAs there will be increased perception of construction activity adversely impacting landscape character in the wider rural context. However, the distance between ID 7 and the Scheme, is such there will be limited intervisibility and localised geographical extent of indirect effects in construction on landscape character. Direct effects in the same LLCA from both schemes will not occur. Cumulative effects on landscape character as a result of addition of construction of the	



ID	Name / Location / Approximate distance	Assessment	Cumulative Significance
		Scheme will be of very low adverse magnitude for both Scenario 1 and Scenario 2. Consequently, for medium and low sensitivity LLCAs, effects will be of negligible significance.	
8	Bole Ings Ash Disposal Site Variation of condition to enable full ash recovery at West Burton Power Station, Retford. Approximately 3.5km west of Order limits	As described for scheme ID 1.	Negligible
9.1 9.2 9.3	West Burton Solar Project Solar PV Development across three areas of land. (West Burton 1-3): adjacent to south-east of Grid Connection Corridor at closest point.	The ID9 cumulative scheme lies primarily within LLCA 07 – Stow Fringe and LLCA 08 – Stow Plain and the grid connection Scheme lies primarily within LLCA 10 – Cottam Plain, on which the Scheme in isolation, has a significant effect in construction. There will be locations within LLCA 02 – Ancient Woodland Ridge; LLCA 06 – Clay Farmlands; LLCA 07 – Stow Fringe; LLCA 01 – Gate Burton Estate; LLCA 09 – Trent Plain South and LLCA 08 – Stow Plain where construction of both schemes will be visible if is occurring simultaneously. In addition to the indirect influence on LLCAs from the Scheme on LLCA 07 and LLCA 08 and LLCA 10, there will be increased perception of construction activity within adjacent LLCAs, adversely impacting landscape character. Under Scenario 1 for the Grid Connection Corridor there will be no intensification of machinery, soil stripping and activity primarily within LLCA 10 Cottam Plain. Under Scenario 2 there will be no intensification of construction within LLCA 10 Cottam Plain but the prolongation of such effects compared to the Scheme in isolation. Scenario 1 will not increase significance of effect as the primary elements and effect on landscape character will not be new or substantially different to those for the Scheme in isolation. Scenario 2 will extend and potentially double (assuming West Burton grid connection follows the Scheme) the time period of direct and indirect effects on landscape character. Overall, the addition of the Scheme will locally add to construction effects from ID9 in isolation such that cumulative effects will be of low additional magnitude on LLCA 06 – Clay Farmlands and LLCA 10 under Scenario 2 and very low for other LLCAs. Overall, the significance of cumulative effects from addition of the Scheme will be minor.	Minor
10.1 10.2 10.3a 10.3b	Cottam Solar Project Solar PV Development across three areas of land. (Cottam 1-3): 1.1km east of the Order limits.	The ID10 cumulative scheme lies within LLCA 07 – Stow Fringe and LLCA 05 - Somerby and Knaith Woodlands. There will be locations within LLCA 01 – Gate Burton Estate, LLCA 02 – Ancient Woodland Ridge; LLCA 05 - Somerby and Knaith Woodlands; LLCA 06 – Clay Farmlands; LLCA 07 – Stow Fringe; and LLCA 08 – Stow Plain where construction of both schemes will be visible if occurring simultaneously. In addition to the direct influence on LLCA 01, LLCA 02, LLCA 05, LLCA 06, LLCA 07 and LLCA 08 from construction of the Scheme there will be increased perception of construction activity with ID10 within adjacent LLCAs, adversely impacting landscape character. Under Scenario 1 for the Grid Connection Corridor there will be intensification of machinery, soil stripping and activity primarily within LLCA 10 Cottam Plain. Under Scenario 2 there will be no intensification of construction within LLCA 10 Cottam Plain, but the prolongation of such effects compared to the Scheme in isolation. Scenario 1 will not increase significance of effect as the primary	Minor



ID	Name / Location / Approximate distance	Assessment	Cumulative Significance
		elements and effect on landscape character will not be new or substantially different to those for the Scheme in isolation. Scenario 2 will extend and potentially double the time period of direct and indirect effects on landscape character. Overall, the addition of the Scheme will locally add to construction effects from ID9 in isolation such that cumulative effects will be of low additional magnitude on LLCA 06, LLCA 07 and LLCA 10 under Scenario 2 and very low for other LLCAs. Overall, the significance of cumulative effects from addition of the Scheme will be minor.	
11	Cottam Power Station Redevelopment Local Plan – Priority Regeneration Area. Adjacent to site at southern section of Grid Connection Corridor.	The ID11 cumulative scheme lies within LLCA 10 – Cottam Plain, on which the Scheme in isolation, has a significant effect in construction. There will be locations within LLCA 07 – Stow Fringe; LLCA 08 – Stow Plain, LLCA 09 – Trent Plain South, LLCA 11 – Rampton Fringe & Hawk Hills; LLCA 12 – Leverton Plain and LLCA 13 – Trent Plain where construction of both schemes will be visible if occurring simultaneously. In addition to the direct influence on LLCA 01, LLCA 02, LLCA 05, LLCA 06, LLCA 07 and LLCA 08 from construction of the Scheme there will be increased perception of construction activity within adjacent LLCAs from ID11, adversely impacting landscape character. Under Scenario 1 for the Grid Connection Corridor there will be intensification of machinery, soil stripping and activity primarily within LLCA 08 – Stow Plain, LLCA 09 – Trent Plain South and LLCA 10 Cottam Plain. Under Scenario 2 there no intensification of construction within LLCA 10 Cottam Plain but the prolongation of such effects compared to the Scheme in isolation. Scenario 1 will not increase significance of effect as the primary elements and effect on landscape character will not be new or substantially different to those for the Scheme in isolation. Scenario 2 will extend and potentially double the time period of direct and indirect effects on landscape character. Overall, the addition of the Scheme will locally add to construction effects from ID11 in isolation such that cumulative effects will be of low additional magnitude on LLCA 10 under Scenario 2 and very low for other LLCAs. Overall, the significance of cumulative effects from addition of the Scheme will be minor.	Minor
12	Stow Park Road Residential Development Application for approval of reserved matters for 39 dwellings at Marton, Gainsborough, Lincolnshire. Within Order limits	The ID 12 scheme lies within LLCA 08 – Stow Plain and LLCA 09 – Trent Plain South. Construction of the properties simultaneous to the Scheme will add to construction activity from the solar farm Solar and Energy Storage Park and the Grid Connection Corridor. Cumulative direct and indirect effects from ID 12 will be localised within LLCA 01, LLCA 02, LLCA 08 and LLCA 09 primarily. There will be a perception of increased construction in those LCAs including with the grid connection works which extend beyond the Scheme site and in proximity to ID12. Under Scenario 1 the intensification will be increased compared to the Scheme in isolation. Under Scenario 2 the duration of construction in combination with ID12 may extend beyond the 18-month timescale of Scenario 1. Overall, the addition of the Scheme will locally add to construction effects from ID12 in isolation such that cumulative effects will be of low additional magnitude on LLCA 08 and LLCA 09 under Scenario 2 and very low for other LLCAs. Overall, the significance of cumulative effects from addition of the Scheme will be minor.	Minor
13	Willingham Road Residential Development Application for approval of reserved matters for 60 dwellings at Lea, Gainsborough.	Intervening woodland within LLCA 05 - Somerby and Knaith Woodlands will limit/reduce inter-visibility and likely cumulative effects from simultaneous construction, including within the Grid Connection Corridor such that effects will be neutral.	Neutral



ID	Name / Location / Approximate distance	Assessment	Cumulative Significance
	Approximately 1km north of Order limits.		
14	Gainsborough Southern Sustainable Urban Extension Development Foxby Lane, Gainsborough.	As described for scheme ID 13.	Neutral
	Approximately 1.5km north of Order limits.		
15	Foxby Lane Residential Development Application for 454 dwellings.	As described for scheme ID 13.	Neutral
	Approximately 2.8km north of Order limits.		
16	Highfields Roundabout Residential Development Outline planning application for up to 750 dwellings at Corringham Road, Gainsborough.		Neutral
	Approximately 5km north of the Order limits.		
17	Tillbridge Solar Farm development. Approximately 4.5km north- east of the Order limits.	The ID 17 cumulative scheme lies partly within LLCA 05 - Somerby and Knaith Woodlands, on which the Scheme in isolation, has a direct impact but no significant effect in construction. There will be locations within LLCA 05; LLCA 07 – Stow Fringe and potentially LLCA 06 Clay Farmlands where construction of both schemes will be visible if occurring simultaneously. In addition to the direct influence on LLCA 05 from both schemes there is potential for increased perception of construction activity adversely impacting landscape character in the wider rural context. The distance between the ID17 cumulative scheme and the Scheme, is such there will be limited intervisibility and any influence on LLCA 05 or adjacent LLCAs will therefore be very localised. Cumulative effects on landscape character from both	Negligible



IC	Name / Location / Approximate distance	Assessment	Cumulative Significance
		Scenario 1 and Scenario 2 will be unlikely due to distance. Consequently, for medium and low sensitivity LLCAs, effects will be of negligible significance ¹ .	

1.3 Landscape Assessment of Cumulative Schemes in Operation

ID	Name / Location / Approximate distance	Assessment	Cumulative Significance
1	West Burton C Power Station Construction, operation and decommissioning of a gas fired electricity generating station. Approximately 3km north- west of the Order limits.	The ID 1 cumulative scheme lies within LLCA 03 West Burton Plain, on which the Scheme in isolation, has no significant effect in operation. It is unlikely that there will be significant cumulative effects from both schemes in operation given the distance, limited intervisibility and the fact that a power station is present at West Burton in the baseline. Any dual influence on LLCA 01 or LLCA 02, LLCA 05 or LLCA 06 which host the operational Scheme will be extremely localised. There will be no or very limited perceived changes in landscape character from cumulative effects given the power station at West Burton is within the baseline. Consequently, for medium and low sensitivity LLCAs, effects on landscape will be of very low magnitude and negligible significance.	Negligible
2	Demolition of West Burton C Power Station Demolition of Power Station. Approximately 3km north-	As described for scheme ID 1 and/or not relevant to the operational assessment (power station elements demolished in construction).	Negligible
	west of Order limits.		
3	Land east of Bumble Bee Farm Solar Development Solar farm at Saundby, with export capacity of up to 49.9 MW.	ID 3 is distant from the Scheme, and within a different landscape context, with intervening areas not directly impacted by either scheme. Coupled with the limited intervisibility and localised geographical extent of indirect effects on landscape character from the Scheme, the magnitude of cumulative effects on landscape character in operation will be very low. Direct effects in the same LLCA from both schemes will not occur and indirect cumulative change at the LLCA scale will not occur. Cumulative effects on landscape character will be neutral in operation.	Neutral

¹ This assessment is based on information available for Tillbridge Solar as of November 2022.



ID	Name / Location / Approximate distance	Assessment	Cumulative Significance
	Approximately 5.1km north- west of site.		
4	Farm Wood Lane Solar Development Solar PV development at Sturton Le Steeple.	As described for scheme ID 3.	Neutral
	Approximately 4km west of Order limits.		
5	Solar Photovoltaic Farm Development of a solar photovoltaic farm at Bole	As described for scheme ID 3.	Neutral
	Approximately 5km north- west of Order limits.		
6	Cottam Power Station demolition Demolition of Power Station.	Not relevant to the operational assessment (power station elements demolished in construction).	n/a
	Adjacent to site at southern section of Grid Connection Corridor.		
7	Sturton le Steeple Quarry New sand/gravel quarry.	The ID 7 cumulative scheme lies within LLCA 03 - West Burton Plain, on which the Scheme in isolation, has no significant effect in operation. The extent of any locations within LLCA 01 – Gate Burton Estate; LLCA02 – Ancient Woodland Ridge; LLCA 03 – West Burton Plain; and LLCA 05 -	Neutral
	Approximately 4.6km north- west of Order limits.	Somerby and Knaith Woodlands where the two developments are theoretically visible is extremely limited. Direct effects in the same LLCA from both schemes will not occur. Cumulative effects on landscape character in operation will be of very low adverse magnitude in operation and the nature of ID7 is such that there will be no reinforcement of solar farms as a landscape element cumulatively with it. Consequently, for medium and low sensitivity LLCAs, cumulative effects will be negligible significance.	
8	Bole Ings Ash Disposal Site	As described for scheme ID 1.	Negligible



ID	Name / Location / Approximate distance	Assessment	Cumulative Significance
	Variation of condition to enable full ash recovery at West Burton Power Station, Retford.		
	Approximately 3.5km west of Order limits		
9.1 9.2 9.3	West Burton Solar Project Solar PV Development across three areas of land.	The ID 9 cumulative scheme lies primarily within LLCA 07 – Stow Fringe and LLCA 08 – Stow Plain and the Scheme lies within LLCA01 – Gate Burton Estate; LLCA 02 – Ancient Woodland Ridge; LLCA 05 - Somerby and Knaith Woodlands; LLCA 06 – Clay Farmlands, on which the Scheme in isolation, has a significant effect in operation. There will be locations within LLCA 01 – Gate Burton Estate; LLCA 02 – Ancient Woodland Ridge; LLCA 05 - Somerby and Knaith Woodlands; LLCA 06 – Clay	Moderate (significant)
	(West Burton 1-3): adjacent to south-east of Grid Connection Corridor at closest point.	Farmlands; LLCA 07 – Stow Fringe; LLCA 08 – Stow Plain and LLCA 09 – Trent Valley South where operation of both schemes will be visible and exert a cumulative effect on landscape character. As a result of proximity between ID9, addition of the Scheme will locally increase influence of solar farms within LLCA 06/LLCA 07 and in the northern extents of LLCA 08 and LLCA 09 around Marton. Addition of the Scheme, albeit with a limited extent of intervisibility will extend large-scale solar farms and reinforce solar use and infrastructure as a landscape component. There will be an increased magnitude of change for LLCA 05 and LLCA 06, in particular, which is assessed as medium magnitude on both and of moderate significance cumulatively.	
10.1 10.2 10.3a	Cottam Solar Project Solar PV Development across three areas of land.	The ID 10 cumulative scheme lies within LLCA 07 – Stow Fringe and LLCA 05 - Somerby and Knaith Woodlands. Locations within LLCA 01 – Gate Burton Estate, LLCA 02 – Ancient Woodland Ridge; LLCA 05 - Somerby and Knaith Woodlands; LLCA 06 – Clay Farmlands; LLCA 07 – Stow Fringe; and	Minor
10.3b	(Cottam 1-3): 1.1km east of the Order limits.	LLCA 08 – Stow Plain where both schemes will be visible in operation will be localised due to intervening landform/vegetation and distance. The extent to which the Scheme will add cumulatively to effects from ID10 on LLCA 07 is likely to be very limited and cumulative effects on LLCA 07 and the host LLCAs for the Scheme will be low magnitude. Consequently, for medium and low sensitivity LLCAs, cumulative effects will be maximum minor significance in operation.	
11	Cottam Power Station Redevelopment Local Plan – Priority Regeneration Area.	The ID 11 cumulative scheme lies within LLCA 10 – Cottam Plain, on which the Scheme in isolation, has no significant effect in operation. There will be no locations in LLCA 01, LLCA 02, LLCA 05 and LLCA 06 were the cumulative effects of redevelopment / regeneration of the Cottam power station (given it is within the baseline as an industrial element) will be greater than very low magnitude. Consequently, for medium and low sensitivity LLCAs, cumulative effects will be negligible significance or neutral in operation.	Negligible



ID	Name / Location / Approximate distance	Assessment	Cumulative Significance
	Adjacent to site at southern section of the Grid Connection Corridor.		
12	Stow Park Road Residential Development Application for approval of reserved matters for 39 dwellings at Marton, Gainsborough, Lincolnshire.	The ID 12 scheme lies will reinforce and strengthen housing within Marton as an element of LLCA 08 Stow Plain and LLCA 09 – Trent Valley South. The extent to which new housing in the context of Marton coupled with the Scheme will impact the character of the host LLCAs cumulatively given the presence of Marton within LLCA 07/LLCA 09 and influencing the fringes of LLCA 01, LLCA 02 and LLCA 05 will be localised and very low magnitude. Consequently, for medium and low sensitivity LLCAs, cumulative effects will be negligible significance or neutral in operation.	Negligible
_	Within Order limits.		
13	Willingham Road Residential Development Application for approval of reserved matters for 60 dwellings at Lea, Gainsborough.	Intervening woodland within LLCA 05 - Somerby and Knaith Woodlands will limit/reduce inter-visibility and resulting in no cumulative effects in operation.	Neutral
	Approximately 1km north of Order limits.		
14	Gainsborough Southern Sustainable Urban Extension Development Foxby Lane, Gainsborough.	As described for scheme ID 13.	Neutral
	Approximately 1.5km north of Order limits.		
15	Foxby Lane Residential Development Application for 454 dwellings.	As described for scheme ID 13.	Neutral



ID	Name / Location / Approximate distance	Assessment	Cumulative Significance
	Approximately 2.8km north of site.		
16	Highfields Roundabout Residential Development Outline planning application for up to 750 dwellings at Corringham Road, Gainsborough.	ID 16 is distant from and separated by intervening urban development in Gainsborough such that no cumulative effects on landscape character are likely in operation.	Neutral
	Approximately 5km north of the Order limits.		
17	Tillbridge Solar Farm development. Approximately 4.5km north- east of the Order limits.	The ID 17 cumulative scheme lies partly within LLCA 05 - Somerby and Knaith Woodlands, on which the Scheme in isolation, has a direct impact but no significant effect in operation. There will be locations within LLCA 05; LLCA 07 – Stow Fringe and potentially LLCA 06 Clay Farmlands where both schemes will be visible in operation and influence perception of landscape character. In addition to the direct influence on LLCA 05 from both schemes there is potential for increased perception of construction activity adversely impacting landscape character in the wider rural context. The distance between the ID 17 cumulative scheme and the Scheme, is such there will be limited intervisibility and any influence on LLCA 05 or adjacent LLCAs will therefore be very localised and low or very low magnitude. Consequently, for medium and low sensitivity LLCAs, effects will be of minor or negligible significance.	Minor
18	Solar Farms ID9/ ID10 and ID17 and the Scheme.	In operation ID9/ ID10, ID17, and the Scheme will potentially introduce 4 solar farms within or partially within the 5km study area. At the County and District Landscape Character Area scale all 4 schemes will lie within the Trent Valley LCA. Although inter-visibility between the schemes will be limited and views in combination typically dominated by the closest solar farm, others are likely to be visible as a distant but discernible element in the view. The relatively flat nature of the landform (albeit rising to the Willingham ridgeline) is such that no elevated views of the footprint of the solar farms will be obtained. Experience of them as an element influencing landscape character will typically be in sequence through repeated views from footpaths or roads. The scale of addition to the landscape of the Trent Valley LCA assuming each scheme includes mitigation through hedgerow or other planting is such that solar farms will be a notable localised element rather than a key characteristic. The Trent Valley LCA will not be defined by solar farms or become a "solar farm landscape" in which they are the defining characteristic. Locally at the scale of LLCA 06/LLCA 07 and LLCA 08 solar farms will represent a medium magnitude of change through addition and longevity such that effects on landscape character will be of moderate significance.	Moderate (Significant)



ID	Name / Location /	Assessment	Cumulative
	Approximate distance		Significance

1.4 Visual Assessment of Cumulative Schemes in Construction

ID	Name / Receptor Groups / Approximate distance	Assessment	Cumulative Significance
1	Viewpoint C1-1 View southeast from access track northeast of Burton Wood	Cumulative schemes ID1-ID8 and ID10.2-17 will not be visible from C1-1 due to intervening landform or the view facing away. Similarly, grid connection construction under Scenario 1 or Scenario 2 will be substantially screened by intervening landform and vegetation. Construction involving taller equipment/cranes will theoretically be visible in a small extent of the northern most	Negligible
	Outdoor workers / farmers	areas of ID9.1-9.3, on the skyline. Construction of ID9.1-9.3 at ground/solar panel level will be screened by intervening landform but taller cranes will be theoretically visible albeit likely to be	
	0m from the Scheme	screened by vegetation and or indistinguishable as a result of distance (>2km). Ground level construction of ID10.1 and taller elements such as cranes will be visible based on a bare-earth analysis of landform but with likely significant screening by intervening vegetation. The primary cumulative effects on visual amenity at this location in construction will therefore be very localised views of a small area of ID9.1-9.3 and a distant theoretical view of ID10.1, experienced in the context of close proximity of the Scheme construction. Consequently, the magnitude of cumulative change at this location in construction will be very low and of negligible significance. Assessment of cumulative effects at this viewpoint will be applicable to other locations in the immediate vicinity of the Scheme.	
2	Viewpoint C1-2 View northeast from access track northeast of Burton Wood	Cumulative schemes ID1-ID9.3 and ID10.2-ID16 will not be visible from C1-2 due to intervening landform, irrespective of any vegetation also intervening or the view facing away. Similarly grid connection construction under Scenario 1 or Scenario 2 will be substantially screened by intervening landform and vegetation. Construction of ID10.1 at ground/solar panel level will be	Minor
	Outdoor workers / farmers	mostly screened by intervening landform but taller cranes will be theoretically visible albeit likely to be screened by vegetation and or indistinguishable as a result of distance (>3.8km). Ground level	
	0m from the Scheme	construction of ID10.1 and taller elements such as cranes will be visible based on a bare-earth analysis of landform but with likely significant screening by intervening vegetation. The southernmost section of construction of ID 17 will theoretically be visible based on landform analysis, but intervening vegetation and distance will likely render it imperceptible or barely noticeable. The primary cumulative effects on visual amenity due to combined views at this location in construction will therefore be very localised views of sections of ID10.1 and a distant theoretical	



ID	Name / Receptor Groups / Approximate distance	Assessment	Cumulative Significance
		ID17, experienced in the context of close proximity of the Scheme construction. Consequently, the magnitude of cumulative change at this location in construction will be low and of minor significance. Assessment of cumulative effects at this viewpoint will be applicable to other locations in the immediate vicinity of the Scheme.	
3	Viewpoint C1-3 View east from access track northeast of Burton Wood	Cumulative schemes ID1-ID9.3 and ID10.2-ID16 will not be visible from C1-3 due to intervening landform, irrespective of any vegetation also intervening or the view facing away. Similarly grid connection construction under Scenario 1 or Scenario 2 will be substantially screened by intervening landform and vegetation.	Negligible
	Outdoor workers / farmers	Construction of the northern most sections of ID10.1 at ground/solar panel level will be mostly screened by intervening landform and solar arrays of the Scheme itself. However, taller cranes will	
	0m from the Scheme	be theoretically visible albeit likely to be screened by vegetation, the solar arrays of the Scheme itself and as a result of distance (>6km). Sections of construction of ID 17 will theoretically be visible based on landform analysis, but intervening solar arrays of the Scheme and /or vegetation and distance will likely render it barely noticeable. The primary cumulative effects on visual amenity at this location in construction will therefore be very localised glimpsed views of sections of distant ID10.1 and ID17, experienced in the context of close proximity of the Scheme construction. Consequently, the magnitude of cumulative change at this location in construction will be low and of negligible significance. Assessment of cumulative effects at this viewpoint will be applicable to other locations in the immediate vicinity of the Scheme.	
4	Viewpoint C2-1 View south / southeast from Marton Road	Cumulative schemes ID1-ID8 and ID10.2-17 will not be visible due to intervening landform, irrespective of any vegetation also intervening or the view facing away. Similarly grid connection construction for the Scheme under Scenario 1 or Scenario 2 will be substantially screened by	Negligible
	Vehicle users, Recreational users	intervening landform and vegetation apart from the immediate short section adjacent to the Solar and Energy Storage Park. Construction involving taller equipment/cranes will theoretically be visible in a small extent of the northernmost areas of ID9.1-ID9.3, on the skyline. Construction of ID9.1-ID9.3 at ground/solar	
	174m from the Scheme	panel level will be screened by intervening landform, including taller cranes (10m). Ground level construction of ID10.1 and taller elements such as cranes will be visible based on a bare-earth analysis of landform but with likely substantial screening by intervening vegetation. The primary cumulative effects on visual amenity due to combined views at this location in construction will therefore be localised middle-distance views of a small areas of ID9.1-ID9.3 and ID10.1, experienced in conjunction with the Scheme construction in proximity to the southwest. Consequently, the magnitude of cumulative change at this location in construction will be very low and of negligible significance. Assessment of cumulative effects at this viewpoint will be applicable to other locations in the vicinity of Willingham by Stow.	



ID	Name / Receptor Groups / Approximate distance	Assessment	Cumulative Significance
5	Viewpoint C2-2 View south / southwest from Marton Road Vehicle users, Recreational users 174m from the Scheme	Similar to C2-1 cumulative schemes ID1-ID8, ID9.1, ID9.2 and ID10.1-17 will not be visible due to intervening landform, irrespective of any vegetation also intervening or the view facing away. Similarly grid connection construction for the Scheme under Scenario 1 or Scenario 2 will be substantially screened by intervening landform and vegetation apart from the immediate short section adjacent to the Solar and Energy Storage Park. Construction involving taller equipment/cranes will theoretically be visible in a small extent of the northernmost areas of ID9.3, on the skyline. Construction of ID9.3 at ground/solar panel level will be screened by intervening landform, including taller cranes (10m). The primary cumulative effects on visual amenity due to combined views at this location in construction will therefore be localised middle-distance views of a small areas of ID9.3, experienced in conjunction with the Scheme construction in proximity to the southwest in this view. Consequently, the magnitude of cumulative change at this location in construction will be very low and of negligible significance. Assessment of cumulative effects at this viewpoint will be applicable to other locations in the vicinity of Willingham by Stow.	Negligible
6	Viewpoint C3-1 View west / northwest from B1241 south of Normanby by Stow Vehicle users / Recreational users	Construction of the Cumulative schemes ID1-ID9.3 and ID10.2-ID17 will not be visible from C3-1 due to intervening landform and intervening vegetation. Grid connection construction for the Scheme under Scenario 1 or Scenario 2 will not be visible as the view is facing away. Scheme construction at ground level within the eastern part of the site will theoretically be visible along with taller equipment/cranes over much of the site. Ground level construction of ID10.1 grid connection including taller elements such as cranes will be visible based on a bare-earth analysis of landform but with likely partial screening by intervening vegetation.	l
	1.2km from the Scheme and 0.2km from Cottam Solar Project	The primary cumulative effects on visual amenity at this location in construction will therefore be very localised near distance and combined views of the grid connection of ID10.1, experienced in conjunction with partial views the Scheme construction in the middle distance to the northwest. However, likely combined views will be substantially screened by intervening roadside vegetation. Consequently, the magnitude of cumulative change at this location in construction will be low and of negligible significance. Assessment of cumulative effects at this viewpoint will be applicable to other locations in the immediate vicinity of Stow and Normanby.	
7	Viewpoint C3-2 View east / northeast from B1241 south of Normanby by Stow	Construction of the Cumulative schemes ID1-ID9.3 and ID10.2-ID16 will not be visible from C3-2 due to the view facing away. Grid connection construction for the Scheme under Scenario 1 or Scenario 2 will not be visible as the view is facing away. Scheme construction at ground level within the eastern part of the site will not be visible as the view is facing away. Ground level construction of ID10.1 including taller elements such as cranes will be visible based on a bare-earth analysis of landform and will likely be partially visible in the middle distance but interfered with by intervening	Negligible
	Vehicle users / Recreational users	landform and will likely be partially visible in the middle distance but interfered with by intervening vegetation.	



ID	Name / Receptor Groups / Approximate distance	Assessment	Cumulative Significance
	0.2km from Cottam Solar Project	Construction of the Cumulative schemes ID10.2-ID17 will not be visible from C3 due to intervening landform, intervening vegetation and the effects of distance. Ground level construction of ID10.1 and taller elements such as cranes will be visible in the middle distance based on a bare-earth analysis of landform but with be partially screened by intervening vegetation.	
_		The primary cumulative effects on visual amenity at this location in construction will therefore be very localised views of ID10.1. Views will be sequential in nature. Consequently, the magnitude of cumulative change at this location in construction will be low and of negligible significance.	
8	Viewpoint C4 View west / northwest from Tillbridge Lane viewpoint	The elevated nature of the viewpoint (approximately 56m AOD) on the ridgeline to the east of the site results in an expansive view westward, although the intervening Trent valley ridgeline north and south of Gate Burton screens views of land further west in the Trent valley. Consequently, to the west of the Scheme only the very tall elements of construction at ID6 and potentially ID 1 will be	Negligible
	Recreational users	visible, albeit at a distance of over 12km and 15km respectively. The width and elevation of the panorama is such that construction of ID9-ID10 and ID12 – ID17 are all potentially visible along with	
	9.6km from the Scheme 3.9km Cottam 1 Solar Project 3.3km West Burton 1 Solar Project	grid connection construction under Scenario 1 or Scenario 2. Views will also be partially screened by intervening vegetation associated with successive field boundaries and woodland in the vicinity of the Scheme. However, at a distance of 9.5km from the Scheme the magnitude of cumulative visual impact with other schemes in construction, including allowing for tall elements (>10m) will not exceed very low and effects will be of negligible significance.	
9	Viewpoint C5 View west from B1398 Middle Street at entrance to Cliff Park Farm	The elevated nature of the viewpoint on the ridgeline to the east of the site results in an expansive view westward, although the intervening Trent valley ridgeline north and south of Gate Burton screens views of land further west in the Trent valley. Consequently, to the west of the Scheme only the very tall elements of construction at ID6 and potentially ID 1 will be visible, albeit at a distance of over 12km and 15km respectively. The width and elevation of the panorama is such that	Negligible
	Vehicle users, Recreational users	construction of ID9-ID10 and ID12 – ID17 are all potentially visible along with grid connection construction under Scenario 1 or Scenario 2. Views will also be partially screened by intervening vegetation associated with successive field boundaries and woodland in the vicinity of the Scheme.	
	8.5km from the Scheme 2.1km Cottam 1 Solar Project 9.2km West Burton 3 Solar Project 3.2km Tillbridge Solar	However, at a distance of 8.5km from the Scheme the magnitude of cumulative visual impact with other schemes in construction, including allowing for tall elements (>10m) will not exceed very low and effects will be of negligible significance.	



1.5 Visual Assessment of Cumulative Schemes in Operation

ID	Name / Receptor Groups / Approximate distance	Assessment	Cumulative Significance
1	Viewpoint C1-1 View southeast from access track northeast of Burton Wood	C1-1 is located within the operational area of the Scheme. Cumulative schemes ID1-ID8 and ID10.2-17 will not be visible from C1-1 due to intervening landform or the view facing away. An outer line of solar panels will theoretically be visible in a small extent of the northern most areas of ID9.1-ID9.3, on the skyline. ID9.1 and ID9.2 solar panels will be screened by intervening landform but taller elements such as a substation will be theoretically visible, albeit	Negligible
	Outdoor workers / farmers	there may be some screening by vegetation and the solar arrays of the Scheme itself. As a result of distance, the extent that ID9.1 and ID9.2 will add to cumulative visual impact is	
	0m from the Scheme	assessed neutral. Solar panels and any substation associated with ID10.1 will be partially visible based on a bare-earth analysis of landform but with likely significant screening by intervening vegetation. Any visibility of the solar panels will at a distance of 5km, on rising landform, appear as a dark line, similar to a hedgerow. The primary cumulative effects on visual amenity at this location in operation will therefore be very localised, combined views of a small area of ID9.3 and a distant theoretical view of ID10.1, experienced in the context of close proximity of the Scheme. Consequently, the magnitude of cumulative change at this location in operation will be very low and of negligible significance.	
2	Viewpoint C1-2	C1-2 is located within the operational area of the Scheme. Cumulative schemes ID1-ID9.3 and	Negligible
	View northeast from access track northeast of Burton Wood	ID10.2-ID16 will not be visible from C1-2 due to intervening landform and intervening vegetation or the view facing away. The eastern extents of ID10.1 will theoretically be visible in the middle distance extending into the background. Solar panels will be intermittently visible but are considerably screened by the intervening solar panels of the Scheme itself and	
	Outdoor workers / farmers	intervening vegetation. Taller elements such as a substation will be theoretically visible, albeit there may be also screening by vegetation and the intervening solar arrays of the Scheme	
	0m from the Scheme	itself . As a result of the distance to ID10.1, approximately 3.4km, the extent that ID10.1 will add to cumulative visual impact is assessed low. Solar panels and any substation associated with ID10.1 will be partially visible based on a bare-earth analysis of landform but with likely significant screening by intervening vegetation and the solar arrays of the Scheme itself. The primary cumulative effects on visual amenity at this location in operation will be localised, glimpsed views in combination of sections of ID10.1 and a distant theoretical view of elements of ID17, experienced in the context of close proximity of the Scheme. Considerable intervening vegetation and the distance, of approximately 6km, between the Scheme and ID17 visual effects will be imperceptible or negligible. Consequently, the magnitude of cumulative change at this location in operation will be low and of minor significance.	



ID	Name / Receptor Groups / Approximate distance	Assessment	Cumulative Significance
3	Viewpoint C1-3 View east from access track northeast of Burton Wood Outdoor workers / farmers Om from the Scheme	C1-3 is located within the operational area of the Scheme. Cumulative schemes ID1-ID9.3 and ID10.2-ID16 will not be visible from C1-3 due to intervening landform, intervening vegetation or the view facing away. The northern extents of ID10.1 will theoretically be visible in the background. The southern extends of ID17 Solar panels will be theoretically intermittently visible in the background but are considerably screened by intervening vegetation and the solar arrays of the Scheme itself. Taller elements such as a substation will be theoretically visible, but will be screened by the solar arrays of the Scheme. As a result of the distance to ID10.1 and ID17 (approximately 6km), the extent that ID10.1 and ID17 will add to cumulative visual impact is assessed as very low. Solar panels and any substation associated with ID10.1 and ID17 will be partially visible based on a bare-earth analysis of landform but with likely significant screening by intervening vegetation and solar arrays related to the Scheme. The primary cumulative effects on the visual amenity at this location in operation will be localised views in combination of sections of ID10.1 and ID17 experienced in the context of close proximity of the Scheme. Cumulative visual effects will be imperceptible or negligible as a result of considerable intervening vegetation and the effects of distance. Consequently, the magnitude of cumulative change at this location in operation will be low and of negligible significance.	Negligible
4	Viewpoint C2-1 View south / southeast from Marton Road Vehicle users, Recreational users 174m from the Scheme	Cumulative schemes ID1-ID17 will not be visible from C2-1 due to intervening landform and vegetation or the view facing away. Solar panels within ID10.1 and taller elements such as a substation will be visible based on a bare-earth analysis of landform but will be screened by intervening vegetation and landform. Consequently, the magnitude of cumulative change at this location in operation will be very low and imperceptible / negligible significance.	Neutral
5	Viewpoint C2-2 View south / southwest from Marton Road Vehicle users, Recreational users 174m from the Scheme	Cumulative schemes ID1-ID17 will not be visible from C2-2 due to intervening landform and vegetation or the view facing away. Solar panels and taller features of ID10.1 will be located east and are not within the viewshed of this view. Consequently, the magnitude of cumulative change at this location in operation will be very low and imperceptible / negligible significance.	Neutral



ID	Name / Receptor Groups / Approximate distance	Assessment	Cumulative Significance
6	Viewpoint C3-1 View west / northwest from B1241 south of Normanby by Stow Vehicle users / Recreational users	Cumulative schemes ID1-ID17 will not be visible from C3 due to intervening landform and vegetation. The Scheme will be theoretically visible in middle distance at approximately 1.1km. However, intervening roadside vegetation will screen the Scheme including taller elements such as the substation. Solar panels and taller features of ID10.1 will be located east and are not within the viewshed of this view. Consequently, the magnitude of cumulative change at this location in operation will be very low and of imperceptible / negligible significance.	Neutral
	1.2km from the Scheme and 0.2km from Cottam Solar Project		
7	Viewpoint C3-2 View east / northeast from B1241 south of Normanby by Stow	Cumulative schemes ID1-ID9.3 and ID10.2-ID16 will not be visible from C3-2 due to the view facing east and away from those developments. Solar panels and taller features of ID10.1 will be visible in the middle distance at approximately 450m but will be partially screened by intervening vegetation. The Scheme will not be visible in this view as it is located in the other direction to the west	Negligible
	Vehicle users / Recreational users	The primary cumulative effects on visual amenity at this location will therefore be localised views of ID10.1. Combined views of the scheme and ID10.1 will not be possible. Sequential views are theoretically possible along short sections of the B1241 but are depending on the	
	0.2km from Cottam Solar Project	height of roadside hedgerows. If views become available, they will be of either the Scheme or ID10.1. Consequently, the magnitude of cumulative change at this location in construction will be low and of negligible significance. Assessment of cumulative effects at this viewpoint will be applicable to other locations in the immediate vicinity of Stow and Normanby.	
8	Viewpoint C4	The elevated nature of the viewpoint (approximately 56m AOD) on the ridgeline to the east of	Negligible
	View west / northwest from Tillbridge Lane viewpoint	the site results in an expansive view westward, although the intervening Trent valley ridgeline north and south of Gate Burton screens views of land further west in the Trent valley. Consequently, only the very tall elements of ID6 and potentially ID1 will be visible, albeit at a	
	Recreational users	distance of over 12 and 15km respectively. The width and elevation of the panorama is such that ID9-ID10 and ID12–ID17 are all potentially visible. The solar farms in the view will be, as a	
	9.6km from the Scheme 3.9km Cottam 1 Solar Farm 3.3km West Burton 1 Solar Farm	result of distance, largely read as a truncated or intermittent dark lines, partially broken by intervening vegetation. However, at a distance of 9.5km from the Scheme, the magnitude of cumulative visual effects in combined views with other schemes, including allowing for tall elements (>10m), will not exceed very low and effects will be of negligible significance.	



ID	Name / Receptor Groups / Approximate distance	Assessment	Cumulative Significance
9	Viewpoint C5 View west from B1398 Middle Street at entrance to Cliff Park Farm	The elevated nature of the viewpoint on the ridgeline to the west of the site results in expansive views westward, although the intervening Trent valley ridgeline north and south of Gate Burton screens views of land further west in the Trent valley. Consequently, to the west of the Scheme only the very tall elements of ID6 and potentially ID 1 will be visible, albeit at a distance of over 12km and 15km respectively. The width and elevation of the panorama is	Negligible
	Vehicle users, Recreational users	such that ID10 and ID13 – ID17 are all potentially visible. The solar farms in the view will, as a result of distance, largely read as a truncated or intermittent dark lines, partially broken by intervening vegetation. Views will also be partially screened by intervening vegetation	
	8.5km from the Scheme 2.1km Cottam 1 Solar Project 9.2km West Burton 3 Solar Project 3.2km Tillbridge Solar	associated with successive field boundaries and woodland in the vicinity of the Scheme. However, at a distance of 8.5km from the Scheme the magnitude of cumulative visual impact with other schemes, including allowing for tall elements (>10m) will not exceed very low and effects will be of negligible significance.	



1.6 References

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