

Tillbridge Solar Project
EN010142

Volume 6
Environmental Statement
Chapter 19: Summary of Significant Environmental Effects
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19. Summary of Significant Environmental Effects

19.1 Introduction

19.1.1 This chapter of the Environmental Statement (ES) summarises the significant residual effects of the Tillbridge Solar Project (hereafter referred to as 'the Scheme'). Residual effects are defined as those effects that remain following the implementation of mitigation measures. Residual effects and mitigation measures are discussed in full in the relevant technical chapters (**Chapters 6 to 18**) of this ES [EN010142/APP/6.1].

19.1.2 At Deadline 3, this chapter has been updated in response to comments received within Lincolnshire County Council's Local Impact Report [REP1A-001] and the Examining Authority's First Written Questions. The document references have not been updated from the original submission. For the most up-to-date documents, the reader should access these through the Guide to the Application [EN010142/APP/1.2 (Rev05)] and Schedule 13 of the Draft DCO [EN010142/APP/3.1(Rev04)].

~~19.1.2~~ 19.1.3 Each technical chapter contains detailed consideration of both the beneficial and adverse effects identified as likely to arise from the Scheme. The criteria applied to define the significance of effects are defined within **Chapter 5: EIA Methodology** of this ES [EN010142/APP/6.1], with further detail provided within the individual technical chapters. Where technical chapters have deviated from this standard methodology, this is explained in the respective chapters and justification for the reason provided (for example to align with industry-standard guidance for that discipline).

~~19.1.3~~ 19.1.4 The Environmental Impact Assessment (EIA) for the Scheme has been undertaken in parallel with the design process and development of the embedded and additional mitigation identified within **Chapters 6-18** of this ES [EN010142/APP/6.1]. Several measures have been embedded within the design of the Scheme to reduce adverse environmental effects, such as implementing buffer areas from sensitive environmental and heritage receptors and adopting landscape design to create habitat and screen views of the Scheme. These are illustrated on **Figure 3-1: Indicative Principal Site Layout Plan** of this ES [EN010142/APP/6.3].

~~19.1.4~~ 19.1.5 The significant residual effects listed within the technical chapters (**Chapters 6 to 18**) of this ES [EN010142/APP/6.1] are described with reference to the scale of effect (i.e. moderate or major) and whether this is significant or not, and the nature of the effect (i.e. adverse or beneficial).

19.2 Summary of Likely Significant Effects

19.2.1 A summary of the identified significant residual effects (i.e. moderate and major (adverse and beneficial) effects) for each topic is presented in **Table 19-1** for the construction phase and **Table 19-2** for the operational phase.

19.2.2 Decommissioning effects would be no greater than those set out for construction in **Table 19-1**. This is likely to overestimate the actual effects, which are expected to be shorter in duration and lower in magnitude.

19.2.3 Negligible and minor effects (adverse and beneficial) are not included in the following tables, as these have been considered as not significant.

Table 19-1: Significant Residual Effects during the Construction Phase

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
Chapter 6: Air Quality			
No significant residual effects on Air Quality are predicted during construction of the Scheme.			
Chapter 7: Climate Change			
No significant residual effects on Climate Change are predicted during construction of the Scheme.			
Chapter 8: Cultural Heritage			
No significant residual effects on Cultural Heritage are predicted during construction of the Scheme.			
Chapter 9: Ecology and Nature Conservation			
No significant residual effects on Ecology and Nature Conservation are predicted during construction of the Scheme.			
Chapter 10: Water Environment			
No significant residual effects on Water Environment are predicted during construction of the Scheme.			
Chapter 11: Human Health			
No significant residual effects on Human Health are predicted during construction of the Scheme.			
Chapter 12: Landscape and Visual Amenity			
Temporary impact on the character of Local Landscape Character Area (LLCA) 2B: Lincoln Cliff – High Harpswell.	High	Indirect impacts during construction of the Principal Site through perception of the proposed works adjacent to this receptor.	Moderate Adverse (significant)
Temporary impact on the character of LLCA 2C: Lincoln Cliff – Open Farmland.	Medium	Direct construction impacts from Access Route 4 and indirect impacts caused by works adjacent to this receptor.	Moderate Adverse (significant)

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
Temporary impact on the character of LLCA 3: Till Vale – Open Farmland.	Low	Extensive change across the LLCA.	Moderate Adverse (significant)
Temporary impact on viewpoint (VP) 1 A631 Hemswell Road junction during the construction period at the Principal Site.	Low	Noticeable change in the composition of the view	Moderate Adverse (significant)
Temporary impact on VP2a Common Lane, east of Hermitage Low Farm (looking east) during the construction period at the Principal Site.	Medium		Moderate Adverse (significant)
Temporary impact on VP2b Common Lane, east of Hermitage Low Farm (looking west) during the construction period at the Principal Site.	Medium		Major Adverse (significant)
Temporary impact on VP4 B1398 Middle Street, above Harpswell during the construction period at the Principal Site.	Medium		Moderate Adverse (significant)
Temporary impact on VP7 B1398 Middle Street, Glentworth Cliff during the construction period at the Principal Site.	High		Moderate Adverse (significant)
Temporary impact on VP9 Kexby Road, west of Glentworth Grange: junction with bridleway Gltw/85/1 during the construction period at the Principal Site.	High		Major Adverse (significant)
Temporary impact on VP13 Public footpath (Hems/787/82), Millfield, Hemswell during the construction period at the Principal Site.	High		Major Adverse (significant)

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
Temporary impact on VP19 Grange Cottages, School Lane, Springthorpe during the construction period at the Principal Site.	Medium		Moderate Major Adverse (significant)
Temporary impact on VP20 A631 east of Corringham windmill during the construction period at the Principal Site.	Low		Moderate Adverse (significant)
Temporary impact on VP28 Yawthorpe during the construction period at the Principal Site.	High		Moderate Adverse (significant)
Temporary impact on VP29 Common Lane, west of Billyards Farm during the construction period at the Principal Site.	Low		Moderate Adverse (significant)
Temporary impact on visual amenity during the construction period at the Cable Route Corridor (CRC). Effects on the following VPs: <ul style="list-style-type: none"> VP CRC6 Footpath (Bram66/1/) south of Trent Port, Marton; and VP CRC7 Trent Valley Way, Cottam. 	Medium	Noticeable change in the composition of the view.	Moderate Adverse (significant)

Chapter 13: Noise and Vibration

No significant residual effects on Noise and Vibration are predicted during construction of the Scheme.

Chapter 14: Socio-economics and Land Use

No significant residual effects on Socio-economics and Land Use are predicted during construction of the Scheme.

Chapter 15: Soils and Agriculture

No significant residual effects on Soils and Agriculture are predicted during construction of the Scheme.

Chapter 16: Transport and Access

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
B1241, North of Fleets Road	Medium	Severance/ pedestrian delay/ non-motorised user amenity on the B1241, North of Fleets Road during the construction phase.	Moderate Adverse (significant)

Chapter 17: Other Environmental Topics

No significant residual effects on Other Environmental Topics are predicted during construction of the Scheme.

Chapter 18: Cumulative Effects and Interactions

Hermitage Low Farmhouse, Common Lane Non-motorised users of A631 Non-motorised users of School Lane	High	Increased sense of disturbance due to the combined effects from air quality, noise and vibration, transport and access, and landscape and visual impacts.	Moderate adverse (significant) effect interaction
Temporary impact on the character of the following LLCAs: <ul style="list-style-type: none"> • LLCA 2c Lincoln Cliff – Open Farmland • LLCA5a Trent Valley Meadowlands 	Medium	Cumulative impacts on landscape character	Moderate adverse (significant) cumulative effect
Temporary impact on the character of the following LLCAs: <ul style="list-style-type: none"> • LLCA3a Till Vale Open Farmland 	Low	Cumulative impacts on landscape character	Large adverse (significant) cumulative effect
Temporary impact on the following VPs: <ul style="list-style-type: none"> • VP4 Middle Street above Harpswell; • VP7 B1398 Middle Street, Glentworth Cliff Farm; • VP CRC3 Flat Tops, Normanby by Stow; 	Medium to High	Cumulative impacts on representative views	Moderate adverse (significant) cumulative effect

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
<ul style="list-style-type: none"> • VP CRC5 Marton - Poplar Farm (Footpath Mton/68/1); • VP CRC6 Footpath (Bram/66/1), South of Trent Port, Marton; and • VP CRC7 Trent Valley Way, Cottam (Cottam FP1). 			
<p>Temporary impact on the following VPs:</p> <ul style="list-style-type: none"> • VP9 Kexby Road, west of Glentworth Grange; and • VP13 Public footpath (Hems/787/2) on Lincoln Cliff, Hemswell (Millfield). 	High	Cumulative impacts on representative views	Large adverse (significant) cumulative effect
Construction employment	Medium	Generation of construction employment at local scale (within West Lindsey and Bassetlaw Districts)	Moderate beneficial (significant) cumulative effect

Table 19-2: Significant Residual Effects during the Operational Phase

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
Chapter 6: Air Quality			
No significant residual effects on Air Quality are predicted during operation of the Scheme.			
Chapter 7: Climate Change			
Global atmosphere	High	The Scheme will provide significant carbon savings in energy generation and will play a part in transitioning to net zero required by nationally set policy commitments.	Beneficial (significant)
Chapter 8: Cultural Heritage			
No significant residual effects on Cultural Heritage are predicted during operation of the Scheme.			
Chapter 9: Ecology and Nature Conservation			
Habitat – broad-leaved woodland (semi-natural), and individual trees (including veteran trees).	Medium (County)	Enhancement of habitat	Moderate Beneficial (significant)
Running Water	Up to Medium (County)	Enhancement of habitat	Moderate Beneficial (significant)
Hedgerows	Up to Medium (County)	Enhancement of habitat	Moderate Beneficial (significant)
Breeding birds (General breeding bird assemblage)	Medium (County)	Enhancement of habitat	Moderate Beneficial (significant)
Chapter 10: Water Environment			

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
No significant residual effects on Water Environment are predicted during operation of the Scheme.			
Chapter 11: Human Health			
No significant residual effects on Human Health are predicted during operation of the Scheme.			
Chapter 12: Landscape and Visual Amenity			
Short term impact (Year 1 effects during winter before planting has been established) on the character of LLCAs during operation period at the Principal Site. Effects on the following LLCAs: <ul style="list-style-type: none"> • LLCA 2B: Lincoln Cliff – Harpswell; and • LLCA 3A: Till Vale – Open Farmland. 	Low to High	Direct and indirect impacts on the character of the LLCA from the presence of the Scheme during the operational phase.	Moderate Adverse (significant)
Long term impact (Year 15 during summer as planting has been established) on the character of LLCAs during operation period at the Principal Site. Effects on the following LLCAs: <ul style="list-style-type: none"> • LLCA 3A: Till Vale – Open Farmland 	Low	Direct and indirect impacts on the character of the LLCA from the presence of the Scheme during the operational phase.	Moderate Adverse (significant)
Short term impact (Year 1 effects during winter before planting has been established) on VP1 A631, Hemswell Road junction during the operation period at the Principal Site.	Low	Noticeable change in the composition of the view.	Moderate Adverse (significant)
Short term impact (Year 1 effects during winter before planting has been established) on VP2a Common Lane, east of Hermitage Low Farm (looking east) during the operation period at the Principal Site.	Medium		Moderate Adverse (significant)

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
Short term impact (Year 1 effects during winter before planting has been established) on VP2b Common Lane, east of Hermitage Low Farm (looking west) during the operation period at the Principal Site.	Medium		Major Adverse (significant)
Short term impact (Year 1 effects during winter before planting has been established) on VP4 B1398 Middle Street, above Harpswell during the operation period at the Principal Site.	Medium		Moderate Adverse (significant)
Short term impact (Year 1 effects during winter before planting has been established) on VP7 B1398 Middle Street, Glentworth Cliff during the operation period at the Principal Site.	High		Moderate Adverse (significant)
Short term impact (Year 1 effects during winter before planting has been established) on VP9 Kexby Road, west of Glentworth Grange: junction with bridleway Gltw/85/1 during the operation period at the Principal Site.	High		Major Adverse (significant)
Short term impact (Year 1 effects during winter before planting has been established) on VP13 Public footpath (Hems/787/82), Millfield, Hemswell during the operation period at the Principal Site.	High		Major Adverse (significant)
Short term impact (Year 1 effects during winter before planting has been established) on VP19 Grange Cottages, School Lane, Springthorpe during the operation period at the Principal Site.	Medium		Major Adverse (significant)

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
Short term impact (Year 1 effects during winter before planting has been established) on VP20 A631 east of Corringham windmill during the operation period at the Principal Site.	Low		Moderate Adverse (significant)
Short term impact (Year 1 effects during winter before planting has been established) on VP28 Yawthorpe during the operation period at the Principal Site.	High		Moderate Adverse (significant)
Short term impact (Year 1 effects during winter before planting has been established) on VP29 Common Lane, West of Billyards Farm during the operation period at the Principal Site.	Low		Moderate Adverse (significant)
Long term impact (Year 15 during summer as planting has been established) on VP7 B1398 Middle Street, Glentworth Cliff during the operation period at the Principal Site.	High	Noticeable change in the composition of the view.	Moderate Adverse (significant)
Long term impact (Year 15 during summer as planting has been established) on VP9 Kexby Road, west of Glentworth Grange: junction with bridleway Gltw/85/1 during the operation period at the Principal Site.			Moderate Adverse (significant)
Long term impact (Year 15 during summer as planting has been established) on VP13 Public footpath (Hems/787/82), Millfield, Hemswell during the operation period at the Principal Site.			Major Adverse (significant)

Chapter 13: Noise and Vibration

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
No significant residual effects on Noise and Vibration are predicted during operation of the Scheme.			
Chapter 14: Socio-economics and Land Use			
No significant residual effects on Socio-economics and Land Use are predicted during operation of the Scheme.			
Chapter 15: Soils and Agriculture			
Soil Resource	Medium	Recovery of soil functional capacity for agricultural production.	Moderate Beneficial (significant)
Farming Circumstances	Medium	Sensitivity of the farm businesses to the creation of a new diversified farm enterprise.	Moderate Beneficial (significant)
Chapter 16: Transport and Access			
No significant residual effects on Transport and Access are predicted during operation of the Scheme.			
Chapter 17: Other Environmental Topics			
No significant residual effects on Other Environmental Topics are predicted during operation of the Scheme.			
Chapter 18: Cumulative Effects and Interactions			
Moorlands Magin Moor, Harpswell Lane A631 Hemswell Grange, Harpswell Lane A631 Springthorpe Grange, School Lane Harpswell Low Farm, Harpswell Lane A631 Grange Cottage / Grange Bungalow / Harpswell Grange, Harpswell Lane A631 Hermitage Low Farmhouse, Common Lane Billyards Farm, Common Lane	High	Increased sense of disturbance from due to combined noise and landscape and visual effects.	Moderate adverse (significant) reducing to slight or neutral (not significant) effect interaction with the maturing of landscaping

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
<p>Short term impact (Year 1 effect during winter before planting has been established) and long term impact (Year 15 during summer as planting has been established) on the character of the following LLCAs:</p> <ul style="list-style-type: none"> • LLCA3a Till Vale Open Farmland. 	Low	Cumulative impacts on landscape character	Large adverse (significant) cumulative effect
<p>Short term impact (Year 1 effect during winter before planting has been established) on the following VPs:</p> <ul style="list-style-type: none"> • VP4 Middle Street above Harpswell; and • VP7 B1398 Middle Street, Glentworth Cliff Farm. 	Medium to High	Cumulative impacts on representative views	Moderate adverse (significant) cumulative effect
<p>Short term impact (Year 1 effect during winter before planting has been established) on the following VPs:</p> <ul style="list-style-type: none"> • VP9 Kexby Road, west of Glentworth Grange; and • VP13 Public footpath (Hems/787/2) on Lincoln Cliff, Hemswell (Millfield). 	High	Cumulative impacts on representative views	Large adverse (significant) cumulative effect
<p>Long term impact (Year 15 during summer as planting has been established) on the following VPs:</p> <ul style="list-style-type: none"> • VP7 B1398 Middle Street, Glentworth Cliff Farm. 	High	Cumulative impacts on representative views	Moderate adverse (significant) cumulative effect
<p>Long term impact (Year 15 during summer as planting has been established) on the following VPs:</p>	High	Cumulative impacts on representative views	Large adverse (significant) cumulative effect

Description of resource/receptor	Sensitivity (Value)	Description of Impact	Residual Effect
<ul style="list-style-type: none">VP13 Public footpath (Hems/787/2) on Lincoln Cliff, Hemswell (Millfield).			