



Mallard Pass

Solar Farm

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Environmental Statement Volume 1 Chapter 17: Summary of Effects and Mitigation [Clean]

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Table of Contents

17.0 Summary of Significant Effects and Mitigation	17-1
17.1 Introduction	17-1
17.2 Summary of Mitigation	17-1
17.3 Summary of Effects	17-1

List of Tables

Table 17-1 Summary of Effects and Additional Mitigation.....	17-3
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17.0 Summary of Significant Effects and Mitigation

17.1 Introduction

- 17.1.1. This chapter presents a summary of all the likely significant effects, additional mitigation and residual effects assessed in the technical chapters of this ES.
- 17.1.2. Mitigation measures are identified and described in further detail within the individual topic chapters (Chapters 6 – 15) of this ES. These mitigation measures have been incorporated into the Proposed Development and/or control documents, as agreed with the project team and stakeholders (where necessary), to control residual effects.

17.2 Summary of Mitigation

- 17.2.1. As set out in **Chapter 2: Overview of EIA Process** of this ES, the Proposed Development has been through three main stages of design development which resulted in the identification of mitigation measures that have been embedded into the design and layout of the Proposed Development, referred to as embedded mitigation (or primary mitigation).
- 17.2.2. Embedded mitigation was taken into account in the assessment of potential effects. Following the assessment of potential effects, the need for additional mitigation measures to avoid, prevent or reduce and, if possible, offset significant adverse effects was considered.
- 17.2.3. **Appendix 17.1** sets out the Mitigation Schedule of all embedded and additional mitigation and how this is secured through the DCO process.

17.3 Summary of Effects

- 17.3.1. **Table 17-1** presents the potential significant effects of the Proposed Development, additional mitigation measures and the residual effects for each of the environmental topics assessed within this ES.

- 17.3.2. Prior to the implementation of additional mitigation, significant effects are predicted in relation to:
- a. Landscape and Visual;
 - b. Noise and Vibration;
 - c. Glint and Glare; and
 - d. Climate Change (beneficial).
- 17.3.3. Prior to the implementation of additional mitigation, significant effects are not predicted in relation to the following topics and these are therefore not discussed further in this chapter:
- a. Cultural Heritage and Archaeology;
 - b. Access and Highways;
 - c. Air Quality;
 - d. Water Resources and Ground Conditions;
 - e. Socio-economics;
 - f. Arboriculture; and
 - g. Major Accidents and Disasters.
 - h. Agricultural Land Use
- 17.3.4. Following the implementation of additional mitigation significant adverse effects are only anticipated in relation to Landscape and Visual.
- 17.3.5. The Proposed Development would have a moderate beneficial effect (which is significant) on climate change due to the CO₂ emissions displaced by the renewable energy generated.

Table 17-1 Summary of Effects and Additional Mitigation

Environmental Effect	Significance of Potential Effect	Additional Mitigation Measures	Type of Mitigation: Avoidance, Reduction, Compensation, Remediation, Enhancement	Significance of Residual Effect
Landscape and Visual Impact				
Operation effects to Rutland Plateau (Dii) Clay Woodlands LCA within the Order limits – Year 1 and Year 15	Major adverse Significant (Year 1) Major – Moderate adverse Significant (Year 15)	The embedded mitigation which includes sensitive siting of the PV Arrays and substantial new native planting to provide visual screening have minimised effects on landscape character as far as possible. No additional mitigation could be implemented to further ameliorate adverse effects.	N/A	Major adverse Significant (Year 1) Major – Moderate adverse Significant (Year 15)
Operation effects to Kesteven Uplands LCA within the Order limits - Year 1 and Year 15	Major adverse (Year 1) Major – Moderate adverse (Year 15) Significant	The embedded mitigation which includes sensitive siting of the PV Arrays and substantial new native planting to provide visual screening have minimised effects on landscape character as far as possible. No additional mitigation could	N/A	Major adverse Significant (Year 1) Major – Moderate adverse Significant (Year 15)

Environmental Effect	Significance of Potential Effect	Additional Mitigation Measures	Type of Mitigation: Avoidance, Reduction, Compensation, Remediation, Enhancement	Significance of Residual Effect
		be implemented to further ameliorate adverse effects.		
Construction and Operation effects on Receptor Group 1 (Visual receptor groups within or immediately bordering the Solar PV Site)	Major adverse Significant (construction) Major adverse Significant (Year 1) Major – Moderate adverse Significant (Year 15)	The embedded mitigation which includes sensitive siting of the PV Arrays and substantial new native planting to provide visual screening have minimised effects on this visual receptor group as far as possible. No additional mitigation could be implemented to further ameliorate adverse effects.	N/A	Major – Moderate adverse Significant (construction) Major adverse Significant (Year 1) Major – Moderate adverse Significant (Year 15)
Construction and Operation effects on Bridleway E169 and Bridleway E182 (BrAW/1/1)	Major – Moderate adverse Significant (construction) Major adverse Significant (Year 1) Major – Moderate adverse Significant (Year 15)	The embedded mitigation which includes sensitive siting of the PV Arrays and substantial new native planting to provide visual screening have minimised effects on this visual receptor group as far as possible. No additional mitigation could be implemented to further ameliorate adverse effects.	N/A	Major – Moderate adverse Significant (construction) Major adverse Significant (Year 1)

Environmental Effect	Significance of Potential Effect	Additional Mitigation Measures	Type of Mitigation: Avoidance, Reduction, Compensation, Remediation, Enhancement	Significance of Residual Effect
				Major – Moderate adverse Significant (Year 15)
Ecology and Biodiversity				
Construction - loss of hedgerow within Essendine hedgerow south side MacMillan Way LWS	Significant at the District level but not significant in EIA terms	The embedded mitigation which is the replacement of the habitat with new planting of species rich hedgerow have mitigated the effects on this receptor as far as possible. No additional mitigation could be implemented to further ameliorate adverse effects.	N/A	Significant at the District level but not significant in EIA terms
Construction - loss of grassland within Essendine Verge SE of the Freewards (N Side) LWS and Essendine Verge (NE Side) Near North Lodge Farm LWS	Significant at the District level but not significant in EIA terms	The embedded mitigation which is the replacement of the habitat with new planting and re-seeding have mitigated the effects on this receptor as far as possible. No additional mitigation could be implemented to further ameliorate adverse effects.	N/A	Significant at the District level but not significant in EIA terms

Environmental Effect	Significance of Potential Effect	Additional Mitigation Measures	Type of Mitigation: Avoidance, Reduction, Compensation, Remediation, Enhancement	Significance of Residual Effect
Noise and Vibration				
Construction noise on residential receptors	Moderate adverse Significant	HDD activities should be interrupted at night if possible and safe to undertake. If they are required to continue at night, they should be controlled not to exceed a level of 45 dB L _{Aeq} at the closest neighbouring residential properties. This may be achieved in some cases without the need for further mitigation. As a worst-case, this may require local temporary solid screening of a height and mass providing at least a 5 dB(A) reduction in sound pressure level. This acoustic screening performance would be achieved for example using temporary solid barriers with a height of at least that of the main drilling equipment located in proximity (around 10 m or less) of the HDD work area,	Reduction/ Avoidance	Negligible - Minor adverse Not Significant

Environmental Effect	Significance of Potential Effect	Additional Mitigation Measures	Type of Mitigation: Avoidance, Reduction, Compensation, Remediation, Enhancement	Significance of Residual Effect
		<p>between the drilling equipment and the nearest noise-sensitive property(ies). The duration of HDD works and night-time noise generation should also be minimised as much as possible. The closest residents to the works shall be notified of the start and completion of the works if undertaken at night-time.</p> <p>As secured by the oCEMP, if percussive piling is used for the support structures/foundations for the Mounting Structures, this should be further restricted to no more than two periods of four hours each with at least one hour of no piling between these four-hour periods and restricted to the hours of 08:00 to 18:00 Monday to Friday and 08:00 to 12:00 on Saturdays.</p>		

Environmental Effect	Significance of Potential Effect	Additional Mitigation Measures	Type of Mitigation: Avoidance, Reduction, Compensation, Remediation, Enhancement	Significance of Residual Effect
Glint and Glare				
Glint and Glare effects on one dwelling during Year 1 of operation	Moderate adverse Significant	Additional screening in the form of hedgerows or tree belts is implemented to obstruct the reflecting panels from view.	Avoidance	Minor adverse Not Significant
Climate Change				
Effect on Climate Change (CO ₂ emissions) during construction, operation and decommissioning	Moderate beneficial Significant	None	N/A	Moderate beneficial Significant

