

Gate Burton Energy Park Environmental Statement

Volume 1, Chapter 17: Summary of Significant Environmental Effects
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17. Summary of Significant Environmental Effects

17.1 Introduction

- 17.1.1 This chapter of the Environmental Statement (ES) summarises the significant residual effects of the Scheme. Residual effects are defined as those effects that remain following the implementation of embedded and additional mitigation measures. Residual effects and mitigation measures are discussed in full in the relevant technical chapters in **ES Volume 1: Chapters 6 – 15 [EN010131/APP/3.1]**.
- 17.1.2 Each technical chapter contains detailed consideration of both the beneficial and adverse residual effects identified as likely to arise from the Scheme. The criteria applied to define the significance of residual effects are defined within **ES Volume 1, Chapter 5: EIA Methodology [EN010131/APP/3.1]**, 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).
- 17.1.3 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 **ES Volume 1, Chapters 6 to 15 [EN010131/APP/3.1]**. A number of measures have been implemented within the design of the Scheme to reduce adverse environmental effects. These are illustrated on **ES Volume 2, Figure 2-4: Indicative Site Layout Plan [EN010131/APP/3.2]**.
- 17.1.4 The residual effects listed within the technical chapters (**ES Volume 1, Chapters 6 to 15 [EN010131/APP/3.1]**) of this ES 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, negligible or beneficial).

17.2 Summary of Significant Effects

- 17.2.1 A summary of the identified significant residual effects for each topic are presented in Table 17-1 for the construction phase, Table 17-2 for the operational phase, and Table 17-3 for decommissioning. Negligible and minor (adverse and beneficial) effects (i.e. not considered significant effects) are included within an appendix for each technical chapter (**ES Volume 3: Chapters 6-15 [EN010131/APP/3.3]**).

Table 17-1 Summary of significant residual effects during the construction phase of the Scheme

Description of resource / receptor and effect	Sensitivity (Value)	Description of Impact	Residual Effect
6. Climate Change			
No significant residual effects on climate change are predicted during the construction of the Scheme.			
7. Cultural Heritage			
No significant residual effects on cultural heritage are predicted during the construction of the Scheme.			
8. Ecology and Nature Conservation			
No significant residual effects on ecology and nature conservation are predicted during the construction of the Scheme.			
9. Water Environment			
No significant residual effects on water environment are predicted during the construction of the Scheme.			
10. Landscape and Visual Amenity			
Landscape Receptors (Construction)			
LLCA 02 – Ancient Woodland Ridge	Medium	Large alteration to the LLCA	Major Significant (temporary)
LLCA 06 – Clay Farmlands	Medium	Large alteration to the LLCA	Moderate Significant (temporary)
LLCA 10 – Cottam Plain	Low	No direct impact to the LLCA, potential indirect impacts	Moderate Significant (temporary)
Visual Receptors (Construction)			
Recreational users / Vehicle users (Viewpoint 4)	Medium	Noticeable change to the composition of the view	Moderate Significant (temporary)

Description of resource / receptor and effect	Sensitivity (Value)	Description of Impact	Residual Effect
Vehicle users, Outdoor workers / Farmers, Recreational users (Viewpoint 8)	Medium	Noticeable change to the composition of the view	Moderate Significant (temporary)
Recreational users, Vehicle users, Residents (Viewpoint 9)	Medium	Unobtrusive change to the composition of the view	Moderate Significant (temporary)
Vehicle users, Residents (Viewpoint 10-1)	High	Noticeable change to the composition of the view	Moderate Significant (temporary)
Vehicle users, Residents (Viewpoint 10-2)	High	Noticeable change to the composition of the view	Moderate Significant (temporary)
Vehicle users, Recreational users (Viewpoint 2)	Medium	Noticeable change to the composition of the view	Moderate Significant (temporary)
Vehicle users (Viewpoint 13)	Medium	Pronounced change to the composition of the view	Major Significant (temporary)
Vehicle users, Residents (Viewpoint 17)	Medium	Noticeable change to the composition of the view	Moderate Significant (temporary)
Vehicle users, Recreational users (Viewpoint 18)	Medium	Noticeable change to the composition of the view	Moderate Significant (temporary)
Vehicle users, Recreational users, Residents	Medium	Noticeable change to the composition of the view	Moderate

Description of resource / receptor and effect	Sensitivity (Value)	Description of Impact	Residual Effect
(Viewpoint 19)			Significant (temporary)
Recreational users (Viewpoint 21-1)	Medium	Noticeable change to the composition of the view	Moderate Significant (temporary)
Recreational users, Vehicle users (Viewpoint 21-2)	Medium	Noticeable change to the composition of the view	Moderate Significant (temporary)
Recreational users, Vehicle users (Viewpoint 22)	Medium - Low	Noticeable change to the composition of the view	Moderate Significant (temporary)
Residential, Recreational users, Vehicle users (Viewpoint 23)	Low	Noticeable change to the composition of the view	Moderate Significant (temporary)

11. Noise and Vibration

No significant residual effects on noise and vibration are predicted during the construction of the Scheme.

12. Socio Economics and Land Use

No significant residual effects on socio-economics and land use are predicted during the construction of the Scheme.

13. Transport and Access

No significant residual effects on transport and access are predicted during the construction of the Scheme.

14. Human Health and Wellbeing

No significant residual effects on human health and wellbeing are predicted during the construction of the Scheme.

15. Other Environmental Topics

Description of resource / receptor and effect	Sensitivity (Value)	Description of Impact	Residual Effect
No significant residual effects on air quality; glint and glare; ground conditions, major accidents and disasters; telecommunications, television reception and utilities; and waste are expected during the construction phase.			

Table 17-2 Summary of significant residual effects during operation of the Scheme

Description of resource / receptor and effect	Sensitivity (Value)	Description of Impact	Residual Effect
6. Climate Change			
Global Climate	High	The impact of GHG emissions arising over the lifetime of the Scheme on the climate	Beneficial Significant (permanent)
7. Cultural Heritage			
No significant residual effects on cultural heritage are predicted during the operation of the Scheme.			
8. Ecology and Nature Conservation			
Broad-leaved woodland occurring within, or adjacent to, the Order limits	Medium	Natural re-generation of areas surrounding woodland within the Order limits, along with enhanced planting, will allow the expansion of existing woodlands, as well as providing further natural buffers to ancient woodlands. This will secure the long-term future of these woodlands.	Moderate Beneficial Significant (permanent)
Hedgerows	Medium	Gaps in currently defunct hedges will be planted with suitable native species to enhance the biodiversity and connectivity of the hedgerows within and adjacent to the Order limits. New areas of planting will be provided to create screening from the Scheme infrastructure, improve habitat connectivity and increase the area of hedgerow within the Order limits.	Moderate Beneficial Significant (permanent)
Breeding Birds	Medium	Planting of gaps in hedgerows, creation of new hedgerows, tree planting and conversion of arable land to grassland habitats will provide increased foraging and nesting opportunities. These areas have been set aside within the Scheme design for creation of biodiverse habitats.	Moderate Beneficial Significant (permanent)
9. Water Environment			
No significant residual effects on water environment are predicted during the operation of the Scheme.			
10. Landscape and Visual Amenity			

Description of resource / receptor and effect	Sensitivity (Value)	Description of Impact	Residual Effect
Landscape Receptors			
LLCA 02 – Ancient Woodland Ridge	Medium	Large alteration to the LLCA – Year 1 and Year 15	Major Significant
LLCA 06 – Clay Farmlands	Medium	Large alteration to the LLCA – Year 1 and Year 15	Moderate Significant
Visual Receptors			
Outdoor workers / Farmers (Viewpoint 1)	Low	Noticeable change to the composition of the view – Year 1	Moderate Significant
Outdoor workers / Farmers (Viewpoint 2)	Low	Noticeable change to the composition of the view – Year 1 and Year 15	Moderate Significant
Recreational users/Vehicle users (Viewpoint 4)	Medium	Pronounced change to the composition of the view – Year 1	Major Significant (Worst Case Scenario)
Vehicle users, Outdoor workers / Farmers, Recreational users (Viewpoint 8)	Medium	Noticeable change to the composition of the view – Year 1 and Year 15	Moderate Significant
Recreational users, Vehicle users, Residents (Viewpoint 9)	Medium	Noticeable change to the composition of the view – Year 1	Moderate Significant
Vehicle users, Residents (Viewpoint 10-1)	High	Noticeable change to the composition of the view – Year 1	Moderate Significant
Vehicle users, Residents (Viewpoint 10-2)	High	Noticeable change to the composition of the view – Year 1	Moderate Significant

Description of resource / receptor and effect	Sensitivity (Value)	Description of Impact	Residual Effect
Vehicle users, Recreational users (Viewpoint 12)	Medium	Pronounced change to the composition of the view – Year 1	Major Significant
Vehicle users (Viewpoint 13)	Medium	Pronounced change to the composition of the view – Year 1	Moderate Significant
Vehicle Users (Viewpoint 16)	Medium	Noticeable change to the composition of the view – Year 1	Moderate Significant
Vehicle Users, Residents (Viewpoint 17)	Medium	Noticeable change to the composition of the view – Year 1 and Year 15	Moderate Significant
Vehicle users, Recreational users (Viewpoint 18)	Medium	Pronounced change to the composition of the view – Year 1	Major Significant <i>(Worst Case Scenario)</i>
Vehicle users, Recreational users, Residents (Viewpoint 19)	Medium	Noticeable change to the composition of the view – Year 1	Moderate Significant
Recreational Users, Residents (Viewpoint LCC 5)	High	Noticeable change to the composition of the view – Year 1	Moderate Significant

11. Noise and Vibration

No significant residual effects on noise and vibration are predicted during the operation of the Scheme.

12. Socio-Economics and Land Use

No significant residual effects on socio-economics and land use are predicted during the operation of the Scheme.

13. Transport and Access

No significant residual effects on transport and access are predicted during the operation of the Scheme.

14. Human Health and Wellbeing

No significant residual effects on human health and wellbeing are predicted during the operation of the Scheme.

Description of resource / receptor and effect	Sensitivity (Value)	Description of Impact	Residual Effect
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15. Other Environmental Topics

No significant residual effects on air quality; glint and glare; ground conditions, major accidents and disasters; telecommunications; television reception and utilities; and waste are predicted during the operation of the Scheme.

Table 17-3 Summary of significant residual effects during decommissioning of the Scheme

Description of resource / receptor and effect	Sensitivity (Value)	Description of Impact	Residual Effect
6. Climate Change			
No significant residual effects on climate change are predicted during the decommissioning of the Scheme.			
7. Cultural Heritage			
No significant residual effects on cultural heritage are predicted during the decommissioning of the Scheme.			
8. Ecology and Nature Conservation			
No significant residual effects on ecology and nature conservation are predicted during the decommissioning of the Scheme.			
9. Water Environment			
No significant residual effects on water environment are predicted during the decommissioning of the Scheme.			
10. Landscape and Visual Amenity			
Landscape Receptors			
LLCA 02 – Ancient Woodland Ridge	Medium	Large alteration to the LLCA	Moderate Significant (temporary)
Visual Receptors			
Vehicle users, Outdoor workers / Farmers, Recreational users (Viewpoint 8)	Medium	Noticeable change to the composition of the view	Moderate Significant (temporary)
Recreational users, Vehicle users, Residents (Viewpoint 9)	Medium	Noticeable change to the composition of the view	Moderate Significant (temporary)
Vehicle users (Viewpoint 13)	Medium	Pronounced change to the composition of the view	Major Significant

Description of resource / receptor and effect	Sensitivity (Value)	Description of Impact	Residual Effect
Vehicle users, Residents (Viewpoint 17)	Medium	Noticeable change to the composition of the view	(temporary) Moderate Significant (temporary)
Vehicle users, Recreational users, Residents (Viewpoint 19)	Medium	Noticeable change to the composition of the view	(temporary) Moderate Significant (temporary)

11. Noise and Vibration

No significant residual effects on noise and vibration are predicted during the decommissioning of the Scheme.

12. Socio-Economics and Land Use

No significant residual effects on socio-economics and land use are predicted during the decommissioning of the Scheme.

13. Transport and Access

No significant residual effects on transport and access are predicted during the decommissioning of the Scheme.

14. Human Health and Wellbeing

No significant residual effects on human health and wellbeing are predicted during the decommissioning of the Scheme.

15. Other Environmental Topics

No significant residual effects on air quality; glint and glare; ground conditions; major accidents and disasters; telecommunications, television reception and utilities; and waste are predicted during the decommissioning of the Scheme.

17.3 Likely Significant Residual Environmental Effects

17.3.1 The residual effects (i.e. those that remain following implementation of mitigation measures), which are categorised as moderate or major and therefore considered to be ‘likely significant environmental effects’ of the Scheme, are summarised below.

Construction Phase

17.3.2 Throughout the construction of the Scheme, there is the potential for several adverse significant effects to a number of landscape and visual receptors. The majority of adverse effects identified during the construction phase will be temporary, due to the transient nature of the construction works. A number of environmental management and mitigation measures have been included within the **Framework Construction Environmental Management Plan [EN010131/APP/7.3]**. This includes commitments and mitigation measures proposed throughout the ES across all topic areas, as set out in **Chapters 6 to 15** of the ES [EN010131/APP/3.1].

Operational Scheme

17.3.3 The Scheme is likely to have significant adverse landscape and visual amenity impacts on a number of residential and recreational receptors, as well as landscape character during operation.

17.3.4 The operation of the Scheme will create a significant beneficial effect on the global climate, due to the nature of the Scheme (renewable energy) playing a part in achieving the rate of transition required by nationally set policy commitments and supporting trajectory towards net-zero. The Scheme demonstrates carbon savings, and therefore is beneficial and has a positive impact on climate.

17.3.5 The Scheme will deliver enhancements for biodiversity, including significant beneficial effects to broad-leaved woodland, including ancient woodland, hedgerows and breeding birds, particularly farmland birds associated with hedgerows and field margins.

Decommissioning Phase

17.3.6 Similar to the construction phase, the presence of construction plant and machinery during decommissioning will have significant adverse effects on a number of landscape and visual receptors including the local landscape character and several visual receptors. These impacts are reduced compared to the construction phase on the account of the containment provided by the proposed vegetation planting which would have reached maturity.

17.3.7 Also similar to the construction phase, decommissioning would not have any impact on cultural heritage beyond the already-disturbed footprint of the

Scheme; therefore, it is not anticipated that decommissioning activities would have a direct physical impact upon archaeological remains.