



Fosse Green Energy

Preliminary Environmental Information Report

VOLUME

1

**Chapter 16: Summary of Significant
Effects**

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16. Summary of Environmental Effects

16.1 Introduction

- 16.1.1 This chapter of this Preliminary Environmental Information (PEI) Report summarises the significant residual effects of the Proposed Development. 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 6 to 14, PEI Report Volume 1**.
- 16.1.2 Each technical chapter contains detailed consideration of both the beneficial and adverse effects identified as likely to arise from the Proposed Development. The criteria applied to define the significance of residual effects are presented within **Chapter 5: Environmental Impact Assessment Methodology, PEI Report Volume 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).
- 16.1.3 The Environmental Impact Assessment (EIA) for the Proposed Development has been undertaken in parallel with the design process and development of the embedded and additional mitigation identified within **Chapters 6 to 14, PEI Report Volume 1**. A number of measures have been implemented within the design of the Proposed Development to reduce adverse environmental effects. These are illustrated on **Figure 3-2A: Indicative Fixed South Facing Layout** and **Figure 3-2B: Indicative Single Axis Tracker Layout, PEI Report Volume 2**.
- 16.1.4 The residual effects listed within the technical chapters (**PEI Report Volume 1 Chapters 6 to 14**) are described with reference to the scale of effect (for example minor, moderate or major) and whether this is significant or not, and the nature of the effect (i.e. adverse, negligible or beneficial).

16.2 Summary of Significant Effects

- 16.2.1 A summary of the identified significant residual effects (i.e. those identified as moderate or major) for each topic are presented in **Construction**
- 16.2.2 **Table 16-1** for the construction phase, and **Table 16-2** for the operational phase. Decommissioning effects would likely be no greater than those set out for construction in **Construction**
- 16.2.3 **Table 16-1**. This is likely to overestimate the actual effects of decommissioning, which are expected to be shorter in duration and lower in magnitude than construction. Effects assessed as not significant (i.e. those identified as negligible and minor) are included within each technical chapter

(Chapters 6–14, PEI Report Volume 1), but are not specifically referenced in the summary tables below.

- 16.2.4 The conclusions are based on preliminary information and may be revised within the Environmental Statement to be prepared for the DCO application in light of further baseline information or in response to design changes and consultation feedback. In some cases, the assessment is necessarily conservative at this stage and may therefore overestimate the impact and identify significant effects where none may occur. The information presented below reflects a preliminary point in time and thus the assessment findings are subject to change and confirmation.

Construction

Table 16-1: Summary of significant preliminary effects during the construction phase of the Proposed Development

Description of resource / receptor and effect	Sensitivity (value)	Description of impact (construction)	Residual effect
PEI Report Chapter 6: Climate Change			
No significant residual effects on climate change are predicted during the construction of the Proposed Development.			
PEI Report Chapter 7: Cultural Heritage			
Hall Close: a medieval and post-medieval hall complex south of Dovecote Lane, with dovecote, gardens, fishponds, churchyard and cultivation remains (NHLE 1021080)	High	Temporary changes to the setting of the monument.	Moderate adverse (significant)
Late Iron Age/Romano British Enclosures (AEC020)	Medium	Potential disturbance or loss of buried archaeological remains resulting in partial loss of the asset.	Moderate adverse (significant)
PEI Report Chapter 8: Ecology and Nature Conservation			
Navenby Heath Road Verges Local Wildlife Site (LWS) Navenby Green Man Road Verges LWS	Medium	Potential direct impact upon habitats within the LWS due to the construction of the Grid Connection Cable.	Moderate adverse (significant)
PEI Report Chapter 9: Water Environment			
No significant, long term residual effects on water environment are predicted during the construction of the Proposed Development.			
PEI Report Chapter 10: Landscape and Visual Assessment			
Landscape receptors			
Cable Corridor	High	Change to landscape character	Major adverse (significant)

Description of resource / receptor and effect	Sensitivity (value)	Description of impact (construction)	Residual effect
LLCA 13: Low Fields South LLCA 14: Low Fields Noth LLCA 15: Lincoln Cliff	High	Change to landscape character	Moderate adverse (significant)
LLCA 03: Tunman Hill LLCA 08: Thurlby Fenland	Medium-high	Change to landscape character	Major adverse (significant)
Principal Site	Medium	Change to landscape character	Major adverse (significant)
Sub-area 5: Witham and Brant Vales LLCA 04: Thorpe on the Hill	Medium	Change to landscape character	Moderate adverse (significant)
Sub-area 2: Terrace Sandlands	Low-medium	Change to landscape character	Moderate adverse (significant)
Visual receptors			
Residents of Coleby Residents of Boothby Graffoe Recreational users of Vikings Way (PRoW Cole/2/1 and BooG/2/2)	High	Change to visual amenity	Moderate adverse (significant)
Residents of Church Farm and Low Barn	Medium-high	Change to visual amenity	Major adverse (significant)
Residents of Thorpe on the Hill Residents of Scotland Farm Residents of Housham Wood Farm Residents of Eagle Barnsdale Residents of Morton Residents of High Walks Farm	Medium-high	Change to visual amenity	Moderate adverse (significant)

Description of resource / receptor and effect	Sensitivity (value)	Description of impact (construction)	Residual effect
Residents of Witham St. Hughs (east) Residents of River Farm (north) Residents of Tonge's Farm Residents of Bassingham Residents of Thurlby Residents of Malborough Residents of North Field Farm Residents of Grange Cottage			
Recreational users of PRoW west of Thorpe on the Hill (TOTH/7/2, TOTH/21/1, TOTH/6/2, TOTH/6/3) Recreational users of PRoW Aubo/12/2 Recreational users of PRoW Aubo/8/1 Recreational users of PRoW TOTH/11/1 Recreational users of PRoW TOTH/12/3 Recreational users of PRoW TOTH/15/1 Recreational users of PRoW Aubo/10/1	Medium	Change to visual amenity	Major adverse (significant)
Recreational users of PRoW TOTH/6/1 and TOTH/6A/1 Recreational users of PRoW Bass/1/1, NoDi/1/2, NoDi/4/1, ThuN/5/1 Recreational users of PRoW ThuN/2/1 Recreational users of PRoW Bass/22/1, Bass/21/2, Bass/20/1 Users of Clay Lane and Bassingham Road	Medium	Change to visual amenity	Moderate adverse (significant)
Recreational users of PRoW TOTH/18/1	Low-medium	Change to visual amenity	Moderate adverse (significant)

Description of resource / receptor and effect	Sensitivity (value)	Description of impact (construction)	Residual effect
PEI Report Chapter 11: Noise and Vibration			
R35 (Housham Grange, Newark Road)	Residential	Construction Noise - Noise Generating Activities 1 (NGA1) - Construction of the BESS, Solar Stations, and ground mounted solar PV panel arrays	Moderate adverse (significant)
R26 (Grange Cottage, Bassingham Road), R35 (Housham Grange, Newark Road), and R50 (19 Park Crescent)	Residential	Construction Vibration - Noise Generating Activities 1 (NGA1) - Construction of the BESS, Solar Stations, and ground mounted solar PV panel arrays	Moderate adverse (significant)
PEI Report Chapter 12: Socio-Economics and Land Use			
No significant residual effects on socio-economics are predicted during the construction of the Proposed Development.			
PEI Report Chapter 13: Traffic and Transport			
No significant residual effects on traffic and transport are predicted during the construction of the Proposed Development.			
PEI Report Chapter 14: Other Environmental Topics			
No significant residual effects on air quality; glint and glare; ground conditions; materials and waste; major accidents and disasters; telecommunications, television reception and utilities; and electromagnetic fields are expected during the construction of the Proposed Development.			

Operation (and Maintenance)

Table 16-2: Summary of significant preliminary effects during the operation phase of the Proposed Development

Description of resource / receptor and effect	Sensitivity (value)	Description of impact (operation)	Residual effect
PEI Report Chapter 6: Climate Change			
Global atmosphere	High	Avoidance of atmospheric greenhouse gas (GHG) emissions from fossil fuel electricity generation as a consequence of operational of the Proposed Development.	Beneficial (significant)
PEI Report Chapter 7: Cultural Heritage			
Hall Close: a medieval and post-medieval hall complex south of Dovecote Lane, with dovecote, gardens, fishponds, churchyard and cultivation remains (NHLE 1021080) Somerton Castle (NHLE 1005015)	High	Potential long-term (reversible) changes to the setting of the monument.	Moderate adverse (significant)
Grade I Listed Buildings at Somerton Castle (NHLE 1061975, NHLE 1061974 and NHLE 1360511)	High	Potential long-term (reversible) impact on setting and views.	Moderate adverse (significant)
Grade II Listed Building Morton Grange (NHLE 1317323) Grade II Listed Building Morton Manor (NHLE 1061930) Grade II Listed Building Grange Cottage (NHLE 1061951) Grade II Listed Building River Farmhouse (NHLE 1168186)	Medium	Potential long-term (reversible) impact on setting and views.	Moderate adverse (significant)

Description of resource / receptor and effect	Sensitivity (value)	Description of impact (operation)	Residual effect
PEI Report Chapter 8: Ecology and Nature Conservation			
No significant residual effects on ecology are predicted during the operation of the Proposed Development.			
PEI Report Chapter 9: Water Environment			
No significant residual effects on water environment are predicted during the operation of the Proposed Development.			
PEI Report Chapter 10: Landscape and Visual Assessment			
Landscape receptors			
LLCA 03: Tunman Hill LLCA 08: Thurlby Fenland	Medium-high	Long-term (reversible) change to landscape character	Major adverse (significant) at year 1 reducing to Moderate adverse (significant) at year 15 (winter and summer)
Principal Site	Medium	Long-term (reversible) change to landscape character	Major adverse (significant) at year 1 reducing to Moderate adverse (significant) at year 15 (winter and summer)
Sub-area 5: Witham and Brant Vales	Medium	Long-term (reversible) change to landscape character	Moderate adverse (significant) at year 1 reducing to not significant at year 15
Sub-area 2: Terrace Sandlands	Low-medium	Long-term (reversible) change to landscape character	Moderate adverse (significant) at year 1 reducing to not significant at year 15

Description of resource / receptor and effect	Sensitivity (value)	Description of impact (operation)	Residual effect
Visual receptors			
Residents of Housham Wood Farm Residents of Church Farm and Low Barn	Medium-high	Long term (reversible) change to visual amenity	Moderate adverse (significant) in year 1 reducing to not significant in year 15
Residents of Grange Cottage	Medium-high	Long term (reversible) change to visual amenity	Moderate adverse (significant) in year 1 and year 15 (winter); not significant in year 15 (summer)
Recreational users of PRoW Aubo/8/1	Medium	Long term (reversible) change to visual amenity	Major adverse (significant) in year 1 and year 15 (winter and summer)
Recreational users of PRoW west of Thorpe on the Hill (TOTH/7/2, TOTH/21/1, TOTH/6/2, TOTH/6/3)	Medium	Long term (reversible) change to visual amenity	Major adverse (significant) in year 1 and year 15 (winter) Moderate adverse (significant) in year 15 (summer)
Recreational users of PRoW Bass/22/1, Bass/21/2, Bass/20/1 Recreational users of PRoW TOTH/11/1 Recreational users of PRoW TOTH/12/3 Recreational users of PRoW TOTH/15/1	Medium	Long term (reversible) change to visual amenity	Moderate adverse (significant) in year 1 and year 15 (winter); not significant in year 15 (summer)

Description of resource / receptor and effect	Sensitivity (value)	Description of impact (operation)	Residual effect
Recreational users of PRoW Aubo/10/1 Recreational users of PRoW Aubo/12/2 Recreational users of PRoW Bass/1/1, NoDi/1/2, NoDi/4/1, ThuN/5/1 Recreational users of PRoW ThuN/2/1 Recreational users of PRoW TOTH/6/1 and TOTH/6A/1 Users of Clay Lane and Bassingham Road	Medium	Long term (reversible) change to visual amenity	Moderate adverse (significant) in year 1 reducing to not significant in year 15

PEI Report Chapter 11: Noise and Vibration

R5 (North Field Farm, Aubourn Road), R26 (Grange Cottage, Bassingham Road)	Residential	Operational noise from the BESS Compound Operational noise from the BESS Compound (should this option be built and to maximum parameter) and based on the cooling fans operating at 100% load at night-time, which is unlikely to occur in the UK climate	Moderate adverse (significant)
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PEI Report Chapter 12: Socio-Economics and Land Use

No significant residual effects on socio-economics are predicted during the operation of the Proposed Development.

PEI Report Chapter 13: Traffic and Transport

No significant residual effects on traffic and transport are predicted during the operation of the Proposed Development.

PEI Report Chapter 14: Other Environmental Topics

No significant residual effects on air quality; glint and glare; ground conditions; materials and waste; major accidents and disasters; telecommunications, television reception and utilities; and electromagnetic fields are expected during the operation of the Proposed Development.