SUNNICA ENERGY FARM

EN010106

Volume 6

Environmental Statement

6.1 Chapter 18: Summary of Significant Environmental Effects

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

18 November 2021

Version number: 00

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Sunnica Energy Farm

Environmental Statement
Chapter 18: Summary of Significant Environmental Effects

Regulation Reference:	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	EN010106
Application Document Reference	EN010106/APP/6.1
Author	Sunnica Energy Farm Project Team

Version	**Date**	**Status of Version**
Rev 00	18 November 2021	Application Version

Table of contents

Table of Tables

18 Summary of Significant Environmental Effects

18.1 Introduction

18.1.1 This chapter of this Environmental Statement (ES) summarises the significant residual effects of 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 **16**) of this Environmental Statement **[EN010106/APP/6.1]**.

18.1.2 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 **Chapter 5: EIA Methodology** of this Environmental Statement **[EN010106/APP/6.1]**, with further detail provided within the individual technical chapters.

18.1.3 The Environmental Impact Assessment (EIA) for the Scheme has been undertaken in parallel with the design process. A number of measures have been implemented within the design of the Scheme to reduce adverse environmental effects, including landscape design to create habitat and screen views of the Scheme.

18.1.4 The residual effects listed within the technical chapters (**Chapters 6** to **16**) of this Environmental Statement **[EN010106/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, negligible or beneficial).

18.2 Summary of Likely Significant Residual Effects

18.2.1 A summary of the identified significant residual effects for each topic are presented in **Table 18-1** for the construction phase, **Table 18-2** for the operational phase, and **Table 18-3** for decommissioning. Negligible and minor effects (adverse and beneficial) are not included in the following tables.

Table 18-1 Summary of significant residual effects during the construction phase of the Scheme

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Climate Change				
No significant residual effects on climate change are predicted during construction of the Scheme.				
Cultural Heritage				
Potential for physical impacts to remains of linear features relating to early field systems across large areas of Fields W04, W06, and W08 (identified from geophysical survey)	Moderate	Adverse, Significant	Mitigation will be agreed with the County Archaeologist and will be confirmed within a Detailed Archaeological Mitigation Strategy (DAMS), which will be prepared following completion of all pre-determination evaluation works. Mitigation will be likely to take the form of strip, map and sample or targeted archaeological excavation.	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Potential for physical impacts to a number of ring ditches (similar in size to those that form the Chippenham Barrow Cemetery, identified through geophysical survey) in the area of Fields W06, W07, and W09 (identified from the geophysical survey)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Potential for physical impacts to a single curvilinear ditch within field E31. May represent as prehistoric ring ditch (identified from evaluation trenching)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Potential for physical impacts to linear features recorded in field E05 (identified from geophysical survey)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Potential for physical impacts to curvilinear (possible barrow) ditch in E10 (identified from evaluation trenching)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Impact on the setting of NHLE1015246, HER MCB8998, MCB8999, MCB9000, MCB9001, MCB5260: Designated and non-designated Bronze Age barrows forming the western extent of the Chippenham Barrow Cemetery Scheduled Monument (MCB8995)	Moderate	Adverse, Significant	Mitigation has been integrated into the design. Archaeological mitigation areas have been set aside throughout the Scheme. These are shown in Figures 3-1 and 3-2 and the Works Plans submitted with the DCO Application. No further mitigation identified	Moderate adverse, Significant
Potential for impacts to enclosure ditches in W03 of probable Middle Iron Age and certainly Late Iron Age/Early Roman date (identified from evaluation trenching)	Moderate	Adverse, Significant	Mitigation will be agreed with the County Archaeologist and will be confirmed within a DAMS, which will be prepared following completion of all pre-determination evaluation works. Mitigation will be likely to take the form of strip, map and sample or targeted archaeological excavation.	Moderate adverse, Significant
Potential for impacts to a probable Roman settlement in the north-western corner of field W04 (identified from evaluation trenching)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Potential for impacts to possible Anglo-Saxon settlement activity in Field W02 (identified from evaluation trenching)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Potential for impacts to MCB9358: Iron Age and Roman pottery scatter, Snailwell Fen	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Impact on the setting of NHLE 1000615: Chippenham Registered Park and Gardens	Moderate	Adverse, Significant	Mitigation has been integrated into the design. Archaeological mitigation areas have been set aside throughout the Scheme. These are shown in Figures 3-1 and 3-2 and the Works Plans submitted with the DCO Application.	Moderate adverse, Significant
Potential for impacts to MCB14997; MCB16947; MCB16948; MCB16946; MCB14998: Assets excavated as part of the Fordham Bypass	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Potential for impacts to 0.5ha concentration of rectilinear anomalies – probable late prehistoric to Romano-British settlement complex (identified through geophysical survey)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Impact to the setting of Beacon Hill and Chalk Hill Round Barrows (MSF215, NHLE 1018097)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Ecology				
No significant residual effects to ecological receptors are predicted during construction of the Scheme.				
Water Environment				
No significant residual effects on the water environment or flood risk are predicted during construction of the Scheme.				
Landscape and Visual *Landscape Receptors – impact on the nature and integrity of the landscape features and characteristics where significant effects have been identified*				

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Freckenham Rural 2: North character area	Major	Adverse, Significant	Mitigation has been incorporated into the design. These measures include landscape offset areas planted with native grassland, trees and hedgerows in places throughout the Sites. These areas are presented in Figures 3-1 and 3-2 and on the Works Plans submitted with the DCO Application. No additional mitigation measures are available or practicable	Major adverse, Significant
Freckenham Rural 3: East	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Sunnica East Site A Site Landscape Character Area	Major	Adverse, Significant	As above	Major adverse, Significant
LLCA East Fen Chalklands	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
LLCA 13 Elms Farmland	Major	Adverse, Significant	As above	Major adverse, Significant
Sunnica East Site B Landscape Character Area	Major	Adverse, Significant	As above	Major adverse, Significant
Lowland Estate Chalklands	Major	Adverse, Significant	As above	Major adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Sunnica West Site A Landscape Character Area	Major	Adverse, Significant	As above	Major adverse, Significant
Sunnica West Site B Landscape Character Area	Major	Adverse, Significant	As above	Major adverse, Significant
Grid Connection Route A Landscape Character Area	Major	Adverse, Significant	As above	Major adverse, Significant
Grid Connection Route B Landscape Character Area	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
LCT Lowland Village Chalklands	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
LT Rolling Estate Chalklands	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
LLCA 11. East Fen Chalklands	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Burwell Fen	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Snailwell	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Burwell Site character (Burwell National Grid Substation Extension Option 1 and 2)	Major	Adverse, Significant	As above	Major adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Visual Receptors – impacts on the views into and appearance of the site from selected viewpoints where significant effects have been identified				
Recreational Users on the River Lark (Visual Receptor Reference 1)	Major	Adverse, Significant	As above	Major adverse, Significant
Recreational Users on the River Lark (Visual Receptor Reference 2A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Visitors to Jude's Ferry (Visual Receptor Reference 2B)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents and motorists on Ferry Lane (Visual Receptor Reference 2C)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on East Fen Road and Residents in East End (Visual Receptor Reference 3)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Weirs Drove (Burwell National Grid Substation Extension Option 1 only)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Visitors to the Ark Church (Visual Receptor Reference 4)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents in Isleham and motorists on Sheldrick's Road (Visual Receptor Reference 4A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Beck Road (Visual Receptor Reference 5)	Major	Adverse, Significant	As above	Major adverse, Significant
Residents adjacent to the B1104 (Visual Receptor Reference 6)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents in Freckenham (Visual Receptor Reference 8)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users of Public Right of Way (PRoW) 257/002/0 (Visual Receptor Reference 9A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Recreational users of PRoW 257/002/0 (Visual Receptor Reference 11)	Major	Adverse, Significant	As above	Major adverse, Significant
Residents in Beck Road Property (Visual Receptor Reference 11A)	Major	Adverse, Significant	As above	Major adverse, Significant
Residents in Lee Farm (Visual Receptor Reference 12)	Major	Adverse, Significant	As above	Major adverse, Significant
Motorists on Ferry Lane (Visual Receptor Reference 12A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Ferry Lane (Visual Receptor Reference 12B)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists and pedestrians on B1102 (Visual Receptor Reference 14)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents adjacent to B1102 (Visual Receptor Reference 14A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Recreational users including equestrian riders on U6006 (Visual Receptor Reference 15A)	Major	Adverse, Significant	As above	Major adverse, Significant
Recreational users including equestrian riders on U6006 (Visual Receptor Reference 15B)	Major	Adverse, Significant	As above	Major adverse, Significant
Recreational users including equestrian riders on U6006 (Visual Receptor Reference 16)	Major	Adverse, Significant	As above	Major adverse, Significant
Recreational users on Weirs Drove (Visual Receptor Reference 53)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users on Burwell Lode (Visual Receptor Reference 54)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users of Hightown Drove (Visual Receptor Reference 55)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Motorists on Elms Road (Visual Receptor Reference 18)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users on PRoW (footpath) W257/003/0 (Visual Receptor Reference 20)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Badlingham Road (Visual Receptor Reference 21)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents adjacent to Badlingham Road (Visual Receptor Reference 21A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Worlington Road (Visual Receptor Reference 22)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Worlington Road (Visual Receptor Reference 23)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents at Queens Hill (Visual Receptor Reference 23A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Motorists on Golf Links Road (Visual Receptor Reference 24)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Golf Links Road (Visual Receptor Reference 25)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users on PRoW (footpath) W-128/002/0 (Visual Receptor Reference 26A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on La Hogue Road (Visual Receptor Reference 32)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Visitors to La Hogue Farm (Visual Receptor Reference 33)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents adjacent to Station Road (Visual Receptor Reference 36)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Newmarket Road (Visual Receptor Reference 37)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Residents adjacent to Newmarket Road (Visual Receptor Reference 37A	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users and users of the training grounds at the Limekilns (Visual Receptor Reference 38)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users PRoW (bridleway) 204/5, south-east of Snailwell (Visual Receptor Reference 41)	Major	Adverse, Significant	As above	Major adverse, Significant
Motorists on Chippenham Road (Visual Receptor Reference 42)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users on PRoW (footpath) 204/1 (Visual Receptor Reference 45)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users on PRoW (footpath) W257/003/03 (Visual Receptor Reference 20)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Residents adjacent to Badlingham Road (Visual Receptor Reference 21A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users on PRoW (footpath) 49/7 (Visual Receptor Reference 29)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents in La Hogue Farm (Visual Receptor Reference 33A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Chippenham Road (Visual Receptor Reference 42)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents in Snailwell (Visual Receptor Reference 43)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users of PRoW (footpath) 204/1 (Visual Receptor Reference 44)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents in Fordham House (Visual Receptor Reference 45)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Residents in Fordham House (Visual Receptor Reference 48)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Noise and Vibration				
No significant residual effects to receptors from noise and vibration are predicted during construction of the Scheme.				
Socioeconomics and Land Use				
Local Economy – Employment generation during the construction phase	Moderate	Beneficial, Significant	Implementation of a Skills, Supply Chain and Employment Plan to maximise the benefits of employment generation for the local economy. The approval of this Plan by the relevant planning authority and its implementation are secured by a requirement in Schedule 2 of the DCO.	Moderate beneficial, Significant
Local Economy - Gross Value Added generation during the construction phase	Moderate	Beneficial, Significant	N/A	Moderate beneficial, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Disruption to users of Public Right of Ways (PRoWs) due to temporary closures or diversion during construction	Moderate	Adverse, Significant	The temporary closures will be supported by appropriate and clearly signed alternative routes and where possible will be planned and programmed to minimise disruption to users. This will be secured in the detailed Construction Environmental Management Plan (CEMP). A Framework CEMP has been submitted with the DCO application in **Appendix 16C** of this Environmental Statement **[EN010106/APP/6.2]**. Temporary closures of each PRoW would last no longer than three weeks.	Moderate adverse, Significant
Transport and Access				
No significant residual effects on transport and access are predicted during construction of the Scheme.				
Air Quality				
No significant residual effects to air quality are predicted during construction of the Scheme.				

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Human Health				
No significant residual effects on human health and wellbeing are predicted during construction of the Scheme.				
Glint and Glare				
No significant residual effects of glint and glare are predicted during construction of the Scheme.				
Ground Conditions				
No significant residual effects on ground conditions are predicted during construction of the Scheme.				
Major Accidents and Disasters				
No significant residual effects on the environment are predicted during construction of the Scheme as a result of the vulnerability of the Scheme to risks of major accidents and disasters.				
Telecommunications, Television Reception, and Utilities				
No significant residual effects on telecommunications, television reception, and utilities are predicted during construction of the Scheme.				
Waste				
No significant residual effects on waste are predicted during construction of the Scheme.				

Table 18-2 Summary of significant residual effects during operation of the Scheme

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Climate Change				
Global Climate (reductions in greenhouse gas emissions as a result of the renewable nature of the Scheme)	Major	Beneficial, Significant	N/A	Major beneficial, significant
Cultural Heritage				
Impact on the setting of NHLE 1018097 Beacon Hill, Chalk Hill Round Barrow – scheduled monument	Moderate	Adverse, Significant	Mitigation has been integrated into the design. Archaeological mitigation areas have been set aside throughout the Scheme. These are shown in Figures 3-1 and 3-2 and the Works Plans submitted with the DCO Application. .	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Impact on the setting of NHLE1015246, HER MCB8998, MCB8999, MCB9000, MCB9001, MCB5260: Designated and non-designated Bronze Age barrows forming the western extent of the Chippenham Barrow Cemetery (MCB8995)	Moderate	Adverse, Significant	As above	Moderate adverse, significant
Impact on the setting of NHLE 1000615 Chippenham Registered Park and Garden	Moderate	Adverse, Significant	As above	Moderate adverse, significant
Ecology				
No significant residual effects to ecological receptors are predicted during operation of the Scheme.				
Water Environment				
No significant residual effects on the water environment are predicted during operation of the Scheme.				
Landscape and Visual (year 1 of operation) *Landscape Receptors - impact on the nature and integrity of the landscape features and characteristics where significant effects have been identified.*				

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Freckenham Rural 2: North	Moderate	Adverse, Significant	Mitigation has been incorporated into the design. These measures include landscape offset areas planted with native grassland, trees and hedgerows in places throughout the Sites. These areas are presented in Figures 3-1 and 3-2 and on the Works Plans submitted with the DCO Application. .	Moderate adverse, Significant
Sunnica East Site A Site Landscape Character Area	Major	Adverse, Significant	As above	Major adverse, Significant
Freckenham Rural 3: East	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
LLCA 13 Sandlands Mosaic	Major	Adverse, Significant	As above	Major adverse, Significant
Sunnica East Site B Landscape Character Area	Major	Adverse, Significant	As above	Major adverse, Significant
Lowland Estate Chalkland	Major	Adverse, Significant	As above	Major adverse, Significant
Sunnica West Site A Landscape Character Area	Major	Adverse, Significant	As above	Major adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Sunnica West Site B Landscape Character Area	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
LLCA 24 Lowland Estate Chalkland	Major	Adverse, Significant	As above	Major adverse, Significant
LT Rolling Estate Chalklands	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Burwell site character (Burwell National Grid Substation Extension Option 1 only)	Major	Adverse, Significant	As above	Major adverse, Significant
Burwell site character (Burwell National Grid Substation Extension Option 2 only)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Visual Receptors - impacts on the views into and appearance of the site from selected viewpoints where significant effects have been identified.				

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Recreational Users on the River Lark (Visual Receptor Reference 1)	Moderate	Adverse, Significant	Mitigation has been incorporated into the design. These measures include landscape offset areas planted with native grassland, trees and hedgerows in places throughout the Sites. These areas are presented in Figures 3-1 and 3-2 and on the Works Plans submitted with the DCO Application.	Moderate adverse, Significant
Residents and motorists on Ferry Lane (Visual Receptor Reference 2C)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on East Fen Road and Residents in East End (Visual Receptor Reference 3)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Visitors to the Ark Church (Visual Receptor Reference 4)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Residents in Isleham and motorists on Sheldrick's Road (Visual Receptor Reference 4A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Beck Road (Visual Receptor Reference 5)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents adjacent to the B1104 (Visual Receptor Reference 6)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users of PRoW 257/002/0 (Visual Receptor Reference 9A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users of PRoW 257/002/0 (Visual Receptor Reference 11)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents in Beck Road Property (Visual Receptor Reference 11A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Residents in Lee Farm (Visual Receptor Reference 12)	Major	Adverse, Significant	As above	Major adverse, Significant
Motorists on Ferry Lane (Visual Receptor Reference 12A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users and equestrian riders on U6006 (Visual Receptor Reference 15A)	Major	Adverse, Significant	As above	Major adverse, Significant
Recreational users and equestrian riders on U6006 (Visual Receptor Reference 15B)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users and equestrian riders on U6006 (Visual Receptor Reference 16)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Elms Road (Visual Receptor Reference 18)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Recreational users on PRoW (footpath) W257/003/0 (Visual Receptor Reference 20)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents adjacent to Badlingham Road (Visual Receptor Reference 21A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Worlington Road (Visual Receptor Reference 22)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents at Queens Hill (Visual Receptor Reference 23A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users on PRoW (footpath) W-128/002/0 (Visual Receptor Reference 26A)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on La Hogue Road (Visual Receptor Reference 32)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Visitors to La Hogue Farm (Visual Receptor Reference 33)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users and users of the training grounds at the Limekilns (Visual Receptor Reference 38)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Recreational users PRoW (bridleway) 204/5, south-east of Snailwell (Visual Receptor Reference 41)	Major	Adverse, Significant	As above	Major adverse, Significant
Motorists on Weirs Drove (Visual Receptor Reference 53)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Landscape and Visual (year 15 of operation) *Landscape Receptors - impact on the nature and integrity of the landscape features and characteristics where significant effects have been identified.*				

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Freckenham Rural 2: North	Moderate	Adverse, Significant	Mitigation has been incorporated into the design. These measures include landscape offset areas planted with native grassland, trees and hedgerows in places throughout the Sites. These areas are presented in Figures 3-1 and 3-2 and on the Works Plans submitted with the DCO Application.	Moderate adverse, Significant
Sunnica East Site A Site Landscape Character Area	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Freckenham Rural 3: East	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
LLCA 13 Sandlands Mosaic	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Sunnica East Site B Landscape Character Area	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Lowland Estate Chalklands	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Sunnica West Site A Landscape Character Area	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Burwell Site character (Burwell National Grid Substation Extension Option 1 only)	Major	Adverse, Significant	As above	Major adverse, Significant
Burwell Site character (Burwell National Grid Substation Extension Option 2 only)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Visual Receptors - impacts on the views into and appearance of the site from selected viewpoints				
Recreational users and users of the training grounds at the Limekilns (Visual Receptor Reference 38)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Noise and Vibration				
No significant residual effects to receptors from noise and vibration are predicted during operation of the Scheme.				
Socioeconomics and Land Use				
Impact on Soil Resource	Moderate	Beneficial, Significant	N/A	Moderate beneficial, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Transport and Access				
No significant residual effects on transport and access are predicted during operation of the Scheme.				
Air Quality				
No significant residual effects on air quality are predicted during operation of the Scheme.				
Human Health				
No significant residual effects on human health and wellbeing are predicted during operation of the Scheme.				
Glint and Glare				
No significant residual effects from glint and glare are predicted during operation of the Scheme.				
Ground Conditions				
No significant residual effects on ground conditions are predicted during operation of the Scheme.				
Major Accidents and Disasters				
No significant residual effects on the environment are predicted during operation of the Scheme as a result of the vulnerability of the Scheme to risks of major accidents and disasters.				
Telecommunications, Television Reception, and Utilities				

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
No significant residual effects on telecommunications, television reception, and utilities are predicted during operation of the Scheme.				
Waste				
No significant residual effects on waste are predicted during operation of the Scheme.				

Table 18-3 Summary of significant residual effects during decommissioning of the Scheme

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Climate Change				
No significant residual effects on climate change are predicted during decommissioning of the Scheme.				
Cultural Heritage				
No significant residual effects on cultural heritage are predicted during decommissioning of the Scheme.				
Ecology				
No significant residual effects to ecological receptors are predicted during decommissioning of the Scheme.				
Water Environment				
No significant residual effects on the water environment are predicted during decommissioning of the Scheme.				
Landscape and Visual *Landscape Receptors - impact on the nature and integrity of the landscape features and characteristics where significant effects have been identified.*				

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Sunnica East Site A Site Landscape Character Area	Moderate	Adverse, Significant	Mitigation has been incorporated into the design. These measures include landscape offset areas planted with native grassland, trees and hedgerows in places throughout the Sites. These areas are presented in Figures 3-1 and 3-2 and on the Works Plans submitted with the DCO Application..	Moderate adverse, Significant
LLCA 11 East Fen Chalklands	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
LLCA 13 Elms Sandlands	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Sunnica East Site B Landscape Character Area	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Sunnica West Site A Landscape Character Area	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Sunnica West Site B Landscape Character Area	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
LCT Lowland Village Chalklands	Moderate	Adverse, Significant	No additional mitigation measures are available nor practicable.	Moderate adverse, Significant
Lowland Estate Chalklands	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
LT Rolling Estate Chalklands	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Freckenham Rural 2: North	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Freckenham Rural 3: East	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Burwell Site character (Burwell National Grid Substation Extension Option 1 and 2)	Major	Adverse, Significant	As above	Major adverse, Significant
Visual Receptors - impacts on the views into and appearance of the site from selected viewpoints where significant effects have been identified.				

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
View north from The Limekilns	Moderate	Adverse, Significant	Mitigation has been incorporated into the design. These measures include landscape offset areas planted with native grassland, trees and hedgerows in places throughout the Sites. These areas are presented in Figures 3-1 and 3-2 and on the Works Plans submitted with the DCO Application..	Moderate adverse, Significant
Recreational users of PRoW 257/002/0 (Visual Receptor Reference 11)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Residents in Lee Farm (Visual Receptor Reference 12)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
View north-west from Elms Road (Visual Receptor Reference 18)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
View north-west from La Hogue Road at the junction with La Hogue Farm (Visual Receptor Reference 33)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
View north from The Limekilns (Visual Receptor Reference 38	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Motorists on Weirs Drove (Visual Receptor Reference 53)	Moderate	Adverse, Significant	As above	Moderate adverse, Significant
Noise and Vibration				
No significant residual effects to receptors from noise and vibration are predicted during decommissioning of the Scheme.				
Socioeconomics and Land Use				
Local economy - Temporary employment generation during the decommissioning phase	Moderate	Beneficial, Significant	N/A	Moderate beneficial, Significant

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Disruption to users of PRoWs, due to temporary closures or diversion during decommissioning	Moderate	Adverse, Significant	The temporary closures will be supported by appropriate and clearly signed alternative routes and where possible will be planned and programmed to minimise disruption to users. This will be secured in the detailed DEMP. Temporary closures of each PRoW would last no longer than three weeks.	Moderate adverse, Significant
Transport and Access				
No significant residual effects on transport and access are predicted during decommissioning of the Scheme.				
Air Quality				
No significant residual effects on air quality are predicted during decommissioning of the Scheme.				
Human Health				
No significant residual effects on human health and wellbeing are predicted during decommissioning of the Scheme.				
Glint and Glare				
No significant residual effects of glint and glare are predicted during decommissioning of the Scheme.				

Description of resource / receptor and effect	Significance of effect prior to additional mitigation (incorporating environmental design and management)	Initial classification of effect and statement of significance	Summary of Mitigation / Enhancement Measures	Residual effect and significance (incorporating mitigation and monitoring)
Ground Conditions				
No significant residual effects on ground conditions are predicted during decommissioning of the Scheme.				
Major Accidents and Disasters				
No significant residual effects on the environment are predicted during decommissioning of the Scheme as a result of the vulnerability of the Scheme to risks of major accidents and disasters.				
Telecommunications, Television Reception, and Utilities				
No significant residual effects on telecommunications, television reception and utilities are predicted during decommissioning of the Scheme.				
Waste				
No significant residual effects on waste are predicted during decommissioning of the Scheme.				

18.3 Likely Significant Residual Environmental Effects

18.3.1 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

18.3.2 Throughout the construction of the Scheme, several significant adverse residual effects have been identified to a number of cultural heritage receptors and 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 to be implemented by the appointed contractor during construction have been included within the Framework CEMP (**Appendix 16C** of this Environmental Statement **[EN010106/APP/6.2]**). This includes commitments and mitigation measures proposed throughout the ES across all topic areas, as set out in **Chapters 6** to **16 [EN010106/APP/6.1]**.

18.3.3 The Scheme is likely to have a significant residual effect on a number of buried archaeology receptors in the developable area during construction. A significant adverse effect on the setting of Chippenham Registered Park and Garden has been identified. The Registered Park and Garden will experience adverse effects as a result of the development of the Sunnica West Site A, albeit the construction phase is temporary.

18.3.4 The Scheme is likely to have significant landscape and visual amenity impacts on a number of residential and recreational receptors as well as landscape character during construction. The construction phase residual effects are due to the changes in surface landform, landcover, presence of construction machinery and the associated activity which is required to implement the Scheme.

18.3.5 The construction of the Scheme is anticipated to result in a significant beneficial effect on the local economy, as it will generate substantial employment during this phase of the Scheme which in turn also provides local spending.

Complete and Operational Scheme

18.3.6 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. Additionally, the setting of some heritage assets will be adversely impacted as a result of the presence of the solar infrastructure in the landscape.

18.3.7 The residual adverse effects associated with the year 15 post-opening phase reflects the continued, long-term but reversible presence of the solar panels and associated structures. The reduction in the number of significant

adverse effects (compared with operational year 1), particularly to visual receptors, is due to the establishment of the proposed Green Infrastructure.

18.3.8 The operation of the Scheme will create a significant beneficial effect on the global climate, due to the nature of the Scheme (renewable energy) displacing the need for other forms of conventional energy generation that would emit greenhouse gas emissions. The operational GHG intensity of the Scheme is considerably lower than the current grid energy mix, and remains well below the projected grid average over the lifetime of the Scheme.

18.3.9 A moderate beneficial effect (significant) on soil resource is expected during the operation of the Scheme. For the 40 year duration of the Scheme the soil resource will remain in place and benefit from an extended fallow. Permanent grassland cover and the suspension of cultivation will allow a return to a higher equilibrium for soil organic matter, conferring multiple benefits to soil health including fertility, moisture retention and structural stability. Improving the structural stability of the light textured topsoil has benefits beyond future agricultural productivity, improving rainfall infiltration, reducing wind and water erosion and cutting the discharge of sediment to surface waters where it is detrimental to both water quality and flood risk.

Decommissioning Phase

18.3.10 Similar to the construction phase, the presence of site plant and machinery during the decommissioning phase will have significant adverse effects on a number of landscape and visual receptors, albeit this phase is expected to be broadly similar if not slightly quicker than the construction phase, and therefore temporary.

18.3.11 The established Green Infrastructure would remain following the removal of the solar panels and associated structures, providing some local enhancement to the landscape character and visual setting. This is not considered a significant beneficial effect but it is considered important by the Applicant to retain given its ecological and landscape value.

18.3.12 The decommissioning of the Scheme is expected to result in a significant beneficial effect on the local economy, as it will generate a similar level of employment as expected during the construction phase.