



Longfield Solar Farm

Environmental Statement [PINS Ref: EN010118]

Volume 1

Chapter 18: Summary of Significant Environmental Effects

Document Reference: EN010118/APP/6.1

Revision Number: 1.0

February 2022

Longfield Solar Energy Farm Ltd

APFP Regulation 5(2)(a)

Planning Act 2008

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

Quality information

Prepared by	Checked by	Verified by	Approved by
RJ	PD	NT	NT
Graduate Environmental Consultant	Associate Director	Technical Director	Technical Director

Prepared for:

Longfield Solar Energy Farm Ltd

Prepared by:

AECOM Limited
Midpoint, Alencon Link
Basingstoke
Hampshire RG21 7PP
United Kingdom

T: +44(0)1256 310200
aecom.com

© AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited ("AECOM") for sole use of our client (the "Client") in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Table of Contents

18.	Summary of Significant Environmental Effects	1
18.1	Introduction	1
18.2	Summary of Significant Effects	1
18.3	Likely Significant Residual Environmental Effects	9

Tables

Table 18-1:	Summary of significant residual effects during the construction phase of the Scheme	2
Table 18-2:	Summary of significant residual effects during operation of the Scheme	4
Table 18-3:	Summary of significant residual effects during decommissioning of the Scheme	7

18. Summary of Significant Environmental Effects

18.1 Introduction

- 18.1.1 This chapter of the Environmental Statement (ES) summarises the conclusions from the assessment of the residual significant 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 of this ES (**Chapters 6 to 16 [EN010118.6.1]**).
- 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 outlined within **Chapter 5: EIA Methodology** of the ES [**EN010118/APP/6.1**], with further detail provided within the individual technical chapters. Where technical chapters have deviated from this standard methodology, this is explained in the respective chapters and justification for the reason provided (for example to align with industry-standard guidance for that discipline).
- 18.1.3 The 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 of this ES (**Chapters 6 to 16**) 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 Significant 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 operation, and **Table 18-3** for decommissioning. Negligible and minor effects (adverse and beneficial) are not included in the following tables and are more numerous.

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

Description of resource / receptor and effect	Potential effect incorporating environmental design and management	Initial classification of effect and statement of significance	Additional Mitigation	Residual effect and restatement of significance (incorporating mitigation and monitoring)
6. Climate Change - No significant residual effects on climate change are predicted during construction of the Scheme.				
7. Cultural Heritage				
Impacts on the setting of: DBH14 - Ringers Farmhouse	Moderate	Adverse, Significant	None proposed	Moderate adverse Significant
8. Ecology - No significant residual effects on ecology are predicted during construction of the Scheme.				
9. Flood Risk, Drainage and Surface Water - No significant residual effects on the water environment or flood risk are predicted during construction of the Scheme				
10. Landscape and Visual Amenity				
Changes to the character or appearance of the landscape at: LLCA 02 Western Farmland Plateau	Moderate	Adverse, Significant	As above	Moderate Adverse Significant
Changes to the character or appearance of the landscape at: LLCA 07 Toppinghoehall Woods	Moderate	Adverse, Significant	As above	Moderate Adverse Significant
Change of visual amenity at residents of: Noake's Lane (Viewpoint 8); Buftons House (Viewpoint 15). Recreational user of PRoW 213_18 (Viewpoint 57); PRoW 213_19 (Viewpoint 16); PRoW 113_25 (Viewpoint 9)	Major	Adverse, Significant	As above	Major Adverse Significant

Description of resource / receptor and effect	Potential effect incorporating environmental design and management	Initial classification of effect and statement of significance	Additional Mitigation	Residual effect and restatement of significance (incorporating mitigation and monitoring)
<p>Change of visual amenity at residents of: eastern side of Waltham Road (Viewpoint 7); western side of Terling Hall Road (Viewpoint 10); Little Weathers (Viewpoint 11a and 11b); Porridge Pot, Holts Lane (Viewpoint 13); Fuller Street (Viewpoint 46); Fairstead Lodge (Viewpoint 47);</p> <p>Change of visual amenity at recreational users of: the Essex Way (Viewpoints 45, 46); PRoW 113_11 (Viewpoint 5); PRoW 113_33 (Viewpoint 6); PRoW 113_25 (Viewpoint 56);</p>	Moderate	Adverse, Significant	As above	Moderate Adverse Significant
11. Noise and Vibration - No significant residual effects on noise and vibration are predicted during construction of the Scheme.				
12. Socioeconomics and Land Use				
Local economy: Employment generation and Gross Value Added during the construction phase	Moderate	Beneficial, Significant	N/A	Moderate Beneficial Significant
13. Transport and Access - No significant residual effects on transport and access are predicted during construction of the Scheme.				
14. Air Quality - No significant residual effects on air quality are predicted during construction of the Scheme.				
15. Health Impact Assessment - No significant residual effects on health are predicted during construction of the Scheme.				
16. Other Environmental Topics - No significant residual effects are predicted during construction of the Scheme for glint and glare, ground conditions, major accidents and disasters (including fire), telecommunications, television reception and utilities, or waste.				

Description of resource / receptor and effect	Potential effect incorporating environmental design and management	Initial classification of effect and statement of significance	Additional Mitigation	Residual effect and restatement of significance (incorporating mitigation and monitoring)
---	--	--	-----------------------	---

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

Description of resource / receptor and effect	Potential effect incorporating environmental design and management	Initial classification of effect and statement of significance	Mitigation and monitoring	Residual effect and restatement of significance (incorporating mitigation and monitoring)
6. Climate Change				
Avoidance of fossil fuel combustion and greenhouse gas emissions through the provision of renewable energy	Major	Beneficial, Significant	None	Major beneficial Significant
7. Cultural Heritage - No significant residual effects on cultural heritage are predicted during operation of the Scheme. However, the significant effects predicted during construction (Table 18-1) also consider effects from the presence of the Scheme during the operational period. Therefore, no additional significant effects are considered likely through operation over and above those already identified during construction relating to the presence of the Scheme within an asset's setting.				
8. Ecology - No significant residual effects on ecology are predicted during operation of the Scheme.				
9. Flood Risk, Drainage and Surface Water - No significant residual effects on the water environment are predicted during operation of the Scheme.				
10. Landscape and Visual Amenity				
Changes to the character or appearance of the landscape at LLCA 02 Western Farmland	Moderate – Year 1	Adverse, Significant	Available mitigation measures have been embedded into the	Moderate Adverse - Year 1 and 15

Description of resource / receptor and effect	Potential effect incorporating environmental design and management	Initial classification of effect and statement of significance	Mitigation and monitoring	Residual effect and restatement of significance (incorporating mitigation and monitoring)
Plateau; and LLCA 07 Toppinghoehall Woods			Scheme design, Outline Construction Environmental Management Plan [EN010118/APP/7.1] and Outline Landscape and Ecological Management Plan [EN010118/APP.7.13] . No additional mitigation measures are proposed.	Significant
Impacts on visual amenity in Year 1 at: Residents on the eastern side of Waltham Road; Residents on Noakes Lane (Viewpoint 8); Residents on western side of Terling Hall Road (Viewpoint 10); Residents of Buftons House (Viewpoint 15); Residents of Fuller Street (Viewpoint 46); Residents of Fuller Fairstead Lodge (Viewpoint 47); Recreational user of the Essex Way (Viewpoints 45, 46); Recreational user of PRow 113_33 (Viewpoint 6); and	Moderate – Year 1	Adverse, Significant	As above	Moderate Adverse – Year 1 Significant

Description of resource / receptor and effect	Potential effect incorporating environmental design and management	Initial classification of effect and statement of significance	Mitigation and monitoring	Residual effect and restatement of significance (incorporating mitigation and monitoring)
Residents of Porridge Pot, Holts Lane (Viewpoint 13);				
Impacts on visual amenity at Recreational user of PRow 213_19 (Viewpoint 16); Recreational user of PRow 113_25 (Viewpoint 9); Recreational user of PRow 213_18 (Viewpoint 57);	Major – Year 1 Major – Year 15	Adverse, Significant	As above	Major Adverse – Year 1 Major Adverse – Year 15 Significant
Recreational user of PRow 113_11 (Viewpoint 5); Recreational user of PRow 113_25 (Viewpoint 56);	Moderate – Year 1 Moderate – Year 15	Adverse, Significant	As above	Moderate – Year 1 Moderate – Year 15 Significant
11. Noise and Vibration - No significant residual noise and vibration effects are predicted during operation of the Scheme				
12. Socio-Economic and Land Use - No significant residual Socio-Economic and Land Use effects are predicted during operation of the Scheme.				
13. Transport and Access - No significant residual effects on transport and access are predicted during operation of the Scheme.				
14. Air Quality - No significant residual effects on air quality are predicted during operation of the Scheme.				
15. Health Impact Assessment - No significant residual effects on health are predicted during operation of the Scheme.				
16. Other Environmental Topics - No significant residual effects are predicted during operation of the Scheme for glint and glare, ground conditions, major accidents and disasters, telecommunications, television reception and utilities, or waste.				

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

Description of resource / receptor and effect	Potential effect incorporating environmental design and management	Initial classification of effect and statement of significance	Mitigation and monitoring	Residual effect and restatement of significance (incorporating mitigation and monitoring)
6. Climate Change - No significant residual effects on climate change are predicted during decommissioning of the Scheme.				
7. Cultural Heritage - No significant residual effects on cultural heritage are predicted during decommissioning of the Scheme.				
8. Ecology - No significant residual effects on ecology are predicted during decommissioning of the Scheme.				
9. Flood Risk, Drainage and Surface Water - No significant residual effects on the water environment are predicted during decommissioning of the Scheme				
10. Landscape and Visual Amenity				
Recreational user of PRoW 213_19 (Viewpoint 16);	Moderate	Adverse, Significant	As above	Major Adverse Significant
Impacts on visual amenity at Recreational user of PRoW 113_25 (Viewpoint 9) and PRoW 213_18 (Viewpoint 57)	Major	Adverse, Significant	As above	Major Adverse Significant
11. Noise and Vibration - No significant residual effects on noise and vibration are predicted during decommissioning of the Scheme.				
12. Socioeconomics and Land Use				
Local economy: Employment generation during the temporary decommissioning phase	Moderate	Beneficial, Significant	N/A	Moderate Beneficial Significant
Agricultural Land: The change in agricultural land use within the Order	Major	Beneficial, Significant	N/A	Major Beneficial

Description of resource / receptor and effect	Potential effect incorporating environmental design and management	Initial classification of effect and statement of significance	Mitigation and monitoring	Residual effect and restatement of significance (incorporating mitigation and monitoring)
---	--	--	---------------------------	---

Limits from decommissioning and any direct effects due to this

Significant

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

14. Air Quality - No significant residual effects on air quality are predicted during decommissioning of the Scheme.

15. Health Impact Assessment - No significant residual effects on health are predicted during decommissioning of the Scheme.

16. Other Environmental Topics - No significant residual effects are predicted during operation of the Scheme for glint and glare, ground conditions, major accidents and disasters, telecommunications, television reception and utilities, or waste.

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' are summarised below.

Construction Phase

18.3.2 Throughout the construction of the Scheme, there is the potential for several adverse significant residual effects to a number of landscape and visual receptors. Although significant, the majority of these impacts 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 Applicant during construction have been included within the Outline Construction Environmental Management Plan. This includes commitments and mitigation measures proposed throughout the ES across all topic areas, as set out in **Chapters 6 to 16**.

18.3.3 Additionally, there is the potential for a likely significant adverse effect to a single cultural heritage receptor as a result of construction and the presence of the Scheme.

18.3.4 In addition to adverse effects, the construction of the Scheme is anticipated to result in a significant, moderate beneficial effect for the local economy in terms of employment and Gross Value Added (GVA) generation.

Operational Scheme

18.3.5 The Scheme is likely to have some significant adverse landscape and visual amenity impacts on a number of residential and recreational receptors as well as landscape character during operation. No significant residual effects are anticipated for archaeological assets during the operation phase, however the likely significant effect identified during construction to a cultural heritage receptor will continue to be experienced due to the presence of the Scheme during the operational period. No additional significant effects on built heritage are considered likely through operation over and above those already identified relating to the presence of the Scheme within the asset's setting.

18.3.6 The year 15 post-opening phase residual adverse effects 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 reaching maturity. Advanced Mitigation Planting has been introduced to the Scheme in order to reduce the duration for which residents experience significant adverse effects.

18.3.7 The operation of the Scheme will have a significant, major beneficial effect on climate (specifically greenhouse gas emissions), 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. Total greenhouse gas emissions from the entire lifetime of the Scheme are presented in **Chapter 6: Climate Change [EN010118/APP/6.1]**. Renewable

energy generation during the first year of operation is estimated to be 356,475 MWh and a total energy generation figure of around 13,076,218 MWh over the 40-year Scheme lifetime.

- 18.3.8 The Scheme will also deliver a beneficial effect for biodiversity within the Order limits over the medium to long term, which would be considered significant.

Decommissioning Phase

- 18.3.9 Similar to the construction phase, the presence of construction plant and machinery during the decommissioning phase will have significant adverse effects on a number of landscape and visual receptors including the local landscape character and two recreational 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.
- 18.3.10 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.
- 18.3.11 The proposed green infrastructure would positively enhance the area's tree canopy cover, reinforce existing hedgerow networks and linkages between existing woodlands. These enhancements remove any county and district level effects to neutral. Any significant effects would only be seen at a local level, albeit only for a short period of time during the decommissioning.
- 18.3.12 The decommissioning of the Scheme is also expected to result in a significant beneficial effect on local employment, as it will generate a similar level of employment as expected during the construction.