



SUNNICA ENERGY FARM

EN010106

Volume 6

Environmental Statement

6.2 Appendix 17A: Effect Interactions Matrix

APFP Regulation 5(2)(a)

Planning Act 2008

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



Planning Act 2008

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

Sunnica Energy Farm

**Environmental Statement
Appendix 17A: Effect Interactions Matrix**

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1 Introduction

1.1 Purpose of this appendix

1.1.1 This appendix presents the potential interactions of residual effects on receptors identified within **Chapters 6 to 16** of the Environmental Statement [EN010106/APP/6.1]. This is intended to support the effect interactions assessment within **Chapter 17** of the Environmental Statement [EN010106/APP/6.2]. Effect interactions are where a single receptor is affected by multiple aspects of a project, potentially worsening the effect. These are also known as intra-project cumulative effects. This appendix presents the effects identified in **Chapters 6 to 16** of the Environmental Statement [EN010106/APP/6.1] for those receptors that have the potential for more than one effect of greater than negligible magnitude.

1.1.2 This appendix presents the effect interactions (or intra-project effects) only and does not provide information on cumulative effects (inter-project effects). Cumulative effects are assessed and concluded within each of **Chapters 6 to 16** and the results are summarised in **Chapter 17** of the Environmental Statement [EN010106/APP/6.1].

1.2 Effect Interactions

1.2.1 **Table 1-1, Table 1-2, and Table 1-3** below present the effect interactions for each of the receptors identified to have potential effects of minor to major magnitude in each of the chapters of the ES during construction, operation and decommissioning respectively. Only those receptors that have more than one effect greater than negligible in magnitude identified are included in the tables below.

1.2.2 The following symbols and letters are used within the tables:

- a. Not applicable: Blank cell
- b. Minor, moderate, major adverse effect: -/--/---
- c. Minor, moderate, major beneficial effect: +/++/+++
- d. Yes: Y
- e. No: N

Table 1-1 Potential effect interactions during construction

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Chapter 10 – Landscape and Visual receptors																
Residents and motorists on Ferry Lane (visual receptor 2C)					∴			-								Y
Motorists on Beck Road (visual receptor 5)					∴			-								Y
Recreational users of PROW 257/002/0 (visual receptor 9A)					∴			-				-				Y
Recreational users of PROW 257/002/0 (visual receptor 11)					∴∴			-				-				Y
Motorists on Ferry Lane (visual receptor 12A)					∴			-								Y
Motorists on Ferry Lane (visual receptor 12B)					∴			-								Y
Recreational users including equestrian riders on U6006 (visual receptor 15A)					∴∴		-	-				-				Y

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Recreational users including equestrian riders on U6006 (visual receptor 15B)					:-		-	-				-				Y
Recreational users including equestrian riders on U6006 (visual receptor 16)					:-		-	-				-				Y
Motorists on Elms Road (visual receptor 18)					-			-								Y
Recreational users on PRow (footpath) W257/003/0 (visual receptor 20)					:-		-	-				-				Y
Motorists on Golf Links Road (visual receptor 24)					-			-								Y
Recreational users PRow (bridleway) 204/5, south-east of Snailwell (visual receptor 41)					:-			-				-				Y
Recreational users on PRow (footpath) 204/1 (visual receptor 45)					:-			-				-				Y
Recreational users on ProW (footpath) 49/7 (visual receptor 29)					-			-				-				Y

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Motorists on Weirs Drove (visual receptor 53)					++			-								Y
Chapter 12 – Socioeconomic and Land Use receptors																
Local economy – Employment generation							++					+				Y
Users of public right of way W257/007/0					-		++	-				-				Y
Users of public right of way W257/002/X							++	-				-				Y
Users of public right of way U6006					+++		-	-				-				Y
Users of public right of way W257/003/0					++		-	-				-				Y
Chapter 13 – Transport and Access receptors																
Motorists in the vicinity of accesses to Sunnica East Sites A and B					++			-								Y
Non-motorised users of Elms Road					++			-								Y

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Users of PRoW 257/007/0					-		:-	-				-				Y
Users of PRoW 257/002/X							:-	-				-				Y
Users of PRoW 257/002/0					:-			-				-				Y
Users of PRoW U6006					:-		-	-				-				Y
Users of PRoW W257/003/0					:-		-	-				-				Y
Users of PRoW 204/5					:-			-				-				Y
Chapter 15 – Human Health receptors																
Users of PRoW 257/007/0					-		:-	-				-				Y
Users of PRoW 257/002/X							:-	-				-				Y
Users of PRoW 257/002/0					:-			-				-				Y

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Users of PRoW U6006							-	-				-				Y
Users of PRoW W257/003/0							-	-				-				Y
Users of PRoW 49/7								-				-				Y
Users of PRoW 204/5								-				-				Y
Users of PRoW 204/1								-				-				Y
Users of PRoW 92/19								-				-				Y
Users of PRoW 35/10								-				-				Y
Users of PRoW 35/11								-				-				Y
Users of PRoW 35/7								-				-				Y
Users of PRoW 35/6								-				-				Y

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Local economy – Employment generation							++					+				Y

Table 1-2 Potential effect interactions during operation (year 1)

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Chapter 11 – Noise and Vibration receptors																
Residential properties, Weirs Grove / Hythe Ln, Burwell, Cambridge CB25 0EH (noise receptor R1)						-						-				Y
Chapter 12 – Socioeconomic & Land Use receptors																
Users of PRoWs in vicinity of Sunnica East Site A (new permissive route on Beck Road)							+					+				Y
Users of PRoWs in vicinity of Sunnica East Site B (new permissive route to the south of Freckenham Road, intersecting the existing diagonal unclassified bridleway (U6006))							+					+				Y
Users of PRoWs in vicinity of Sunnica East Site B (new permissive route to the south of the Site on Elms Road, intersecting the existing							+					+				Y

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)	
diagonal unclassified bridleway (U6006))																	
Chapter 15 – Human Health receptors																	
Residential properties, Weirs Grove / Hythe Ln, Burwell, Cambridge CB25 0EH (noise receptor R1)						-						-					Y
Users of PRoWs in vicinity of Sunnica East Site A (new permissive route on Beck Road)							+					+					Y
Users of PRoWs in vicinity of Sunnica East Site B (new permissive route to the south of Freckenham Road, intersecting the existing diagonal unclassified bridleway (U6006))							+					+					Y
Users of PRoWs in vicinity of Sunnica East Site B (new permissive route to the south of the Site on Elms Road, intersecting the existing diagonal unclassified bridleway (U6006))							+					+					Y

Table 1-3 Potential effect interactions during decommissioning

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Chapter 10 – Landscape and Visual receptors																
Recreational users of PRoW 257/002/0 (visual receptor 9)					+		-					-				Y
Recreational users of PRoW 257/007/0 (visual receptor 11)					-		+					-				Y
Recreational users of PRoW 257/002/X (visual receptor 10)					-		+					-				Y
Recreational users of PRoW U6006 (visual receptor 15)					-		-					-				Y
Recreational users of PRoW 257/003/0 (visual receptor 20)					-		-					-				Y
Chapter 12 – Socioeconomic & Land Use receptors																
Local economy – Employment generation							++					+				Y

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Users of public right of way W-257/007/0					-		∴					-				Y
Users of public right of way W-257/002/X					-		∴					-				Y
Users of PRoW 257/002/0					∴			-				-				Y
Users of public right of way U6006					-		-					-				Y
Users of public right of way W-257/003/0					-		-					-				Y
Users of PRoWs in vicinity of Sunnica East Site B (new permissive route to the south of Freckenham Road, intersecting the existing diagonal unclassified bridleway (U6006))							-					-				Y
Users of PRoWs in vicinity of Sunnica East Site B (new permissive route to the south of the Site on Elms Road, intersecting the existing							-					-				Y

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)	
diagonal unclassified bridleway (U6006))																	
Chapter 13 – Transport and Access receptors (note: effects have been assumed to be the same as construction, which is the worst-case assumption)																	
Motorists in the vicinity of accesses to Sunnica East Sites A and B					-			-									Y
Non-motorised users of Elms Road					-			-									Y
Users of PRoW 257/007/0					-		:-	-				-					Y
Users of PRoW 257/002/X					-		:-	-				-					Y
Users of PRoW 257/002/0					-			-									Y
Users of PRoW U6006					-		-	-				-					Y
Users of PRoW W257/003/0					-		-	-				-					Y
Users of PRoW 204/5								-									Y

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Chapter 15 – Human Health receptors																
Local economy – Employment generation							++					+				Y
Users of public right of way W-257/007/0					-		:-					-				Y
Users of public right of way W-257/002/X					-		:-					-				Y
Users of PRoW 257/002/0					:-			-				-				Y
Users of public right of way U6006					-		-					-				Y
Users of public right of way W-257/003/0					-		-					-				Y
Users of PRoWs in vicinity of Sunnica East Site B (new permissive route to the south of Freckenham Road, intersecting the existing diagonal unclassified bridleway (U6006))							-					-				Y

Receptor	Climate Change	Cultural Heritage	Ecology	Water Environment	Landscape & Visual	Noise & Vibration	Socioeconomics & Land Use	Transport & Access	Air Quality	Glint & Glare	Ground Conditions	Human Health	Major Accidents & Disasters	Telecommunications	Waste	Effect Interactions (Y/N)
Users of PRowS in vicinity of Sunnica East Site B (new permissive route to the south of the Site on Elms Road, intersecting the existing diagonal unclassified bridleway (U6006))							-					-				Y