



SUNNICA ENERGY FARM

Appendix 17A: Effect Interactions Matrix

National Grid Connection

Sunnica Ltd

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Quality Information

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Key

Blank = Not applicable

-/--/--- = minor, moderate, major adverse effect

+ /++ /+++ = minor, moderate, major beneficial effect

Y = Yes

N = No

Table 17A-1: Potential effect interactions during construction

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
Chapter 6 – Climate Change receptors																
Global climate	-															N
Chapter 7 – Cultural Heritage receptors																
MSF216: Microlith found with burial at Chalk Hill Round Barrow		-														N
MSF 215, NHLE 1018097: Beacon Hill, Chalk Hill Round Barrow Scheduled Monument		-														N

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
MSF14615: Roman artefact scatter, North Street		-														N
MSF22165: North Street (track) (fieldwalked and metal detected finds of upper Palaeolithic long blades, Bronze Age worked flints and Bronze Age bronze awl.)		-														N
MSF97820: Fort William Plantation. Roman site identified through metal detecting		-														N
MSF11615: Human bones, remains of two individuals found during construction work		-														N
MSF10199: Single ring ditch (c. 30m diameter) identified from 1956 aerial photograph		--														N
NHLE 1015243, 1015244 & 1015245: Three scheduled barrows forming part of the Chippenham barrow group		-														N
MCB9033: Bronze Age material recovered including burnt flint. Some gravel, also dark area.		-														N
MCB9032: Iron Age and Roman find scatter, Snailwell		-														N
MCB8998: Iron Age and Roman pottery scatter, Snailwell Fen		--														N

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
MCB8999: Roman bead, brooch, coins and sherds, Snailwell Fen		--														N
MCB9001: Rectilinear enclosure cropmarks, Snailwell		--														N
MCB9000: Gardens and park at Fordham Abbey		-														N
MCB5260: Bronze Age barrow. Surface find. Damaged. 43.5m diameter and c. 0.9m high. Some flints but no fire-cracked material.		-														N
MCB8995: Chippenham Barrow Cemetery Scheduled Monument		--														N
MCB14706: Roman pottery spread, Chippenham		-														N
MCB12268: Furlong boundary, Chippenham		--														N
MCB12221: Furlong boundaries, Snailwell		--														N
MCB8994: Chippenham Park		-														N
MCB15150: RAF Snailwell. WW2 airfield		-														N
MCB10819: Enclosures, Snailwell		-														N

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
MCB9547: Prehistoric settlement site, Kennett		--														N
MCB23370: Sand Pit, Kennett.		-														N
NHLE1006868: Roman Villa south of Snailwell Fen		-														N
MCB9356: Bronze Age material recovered including burnt flint. Some gravel, also dark area		-														N
MCB9357: Iron Age and Roman find scatter, Snailwell		-														N
MCB9358: Iron Age and Roman pottery scatter, Snailwell Fen		-														N
MCB8981: Roman bead, brooch, coins and sherds, Snailwell Fen		-														N
MCB20063: Rectilinear enclosure cropmarks, Snailwell		-														N
MCB16946: Prehistoric and Roman remains, Fordham Bypass		-														N
MCB16948: Prehistoric remains, Fordham Bypass		-														N
MCB14997: Prehistoric features, Fordham Bypass Site 1		-														N

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
MCB16946: Roman to Medieval remains, Fordham Bypass		-														N
MCB8084: Ridge and furrow, Burwell		-														N
MCB14998: Post-medieval enclosure, Fordham Bypass Site 2		-														N
MCB13044: Boundary, Fordham		-														N
NHLE 1000615: Chippenham Registered Park and Gardens		--														N
NHLE 1126376: Triumphal arches		--														N
NHLE 1015246: Four bowl barrows north of the A11/A14 junction, part of the Chippenham barrow cemetery		---														N
<i>Chapter 9 – Water Environment receptors</i>																
River Kennett				-												N
Lee Brook				-												N
Groundwater Resource – Chalk Aquifer				-												N

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
River Lark				-												N
River Snail				-												N
Burwell Lode				-												N
<i>Chapter 10 – Landscape and Visual receptors</i>																
Sunnica East Site A Site Landscape Character Area					--											N
Recreational Users on the River Lark					--		--		-							Y
Motorists on East Fen Road and Residents in East End					--			-								Y
Visitors to the Ark Church					--			-	-							Y
Motorists on Beck Road					--			-								Y
Residents adjacent to the B1104					--			-	-							Y
Residents in Freckenham					--			-	-							Y
Recreational users of PRoW 257/002/X					--		--	-	-							Y

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
Recreational users of PRoW 257/002/0					--		--	-	-							Y
Residents in Beck Road Property					---			-	-							Y
Residents in Lee Farm					---			-	-							Y
Motorists on Ferry Lane					-			-								Y
LLCA 13 Elms Farmland					---											N
Sunnica East Site B					---											N
Residents adjacent to B1102					--			-	-							Y
Residents at Queens Hill					--			-	-							Y
Recreational users on PRoW (footpath) W-128/002/0					--		--	-	-							Y
Hundred Acre Plantation					---											N
Sunnica West Site A					---											N
Motorists on La Hogue Road					--			-								Y

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
Visitors to La Hogue Farm					--			-	-							Y
Residents at La Hogue Farm					--			-	-							Y
Residents adjacent to Station Road					--			-	-							Y
Residents adjacent to Newmarket Road					--			-	-							Y
Recreational users and users of the training grounds at the Limekilns					--			-								Y
Recreational users PRow (bridleway) 204/5, south-east of Snailwell					---	--		-	-							Y
Sunnica West Site B					---											N
Recreational users on PRow (footpath) 204/1					--	--		-	-							Y
LLCA 14 River Kennett					--											N
Cable Route A					---											N

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
Recreational users on ProW (footpath) 49/7					--		--	-	-							Y
Cable Route B					--											N
Motorists on Chippenham Road					--			-								Y
Residents in Snailwell					--			-	-							Y
Residents in Fordham House					--			-	-							Y
Lowland Village Chalklands					--											N
Rolling Estate Chalklands					--											N
Visitors to the Wild Tracks Centre					--			-	-							Y
Burwell Fen					--											N
<i>Chapter 11 – Noise and Vibration receptors</i>																
Residential properties, Weirs Grove / Hythe Ln, Burwell								-	-	-						Y
<i>Chapter 12 – Socioeconomic receptors</i>																

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
Cambridge Travel to Work Area's (TTWA's) economy							++									N
<i>Chapter 13 – Transport and Access receptors</i>																
Non-motorised user of roads								-								N
<i>Chapter 14 – Air Quality receptors</i>																
Human receptors (dust soiling and PM10)					--	-		-	-							Y
Snailwell Meadows SSSI									-							N
Chippenham Fen and Snailwell Poor's Fen (SSSI / Ramsar / SAC).									---							Y

Table 17A-2 Potential effect interactions during operation (year 1)

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
Chapter 6 – Climate Change receptors																
Global climate – operational machinery	-															N
Global Climate – effects from operation of Scheme	+++															N
Chapter 7 – Cultural Heritage receptors																
MSF215 NHLE 1018097 Beacon Hill, Chalk Hill Round Barrow – scheduled monument		-														N
NHLE 1015246: Four bowl barrows north of the A11/A14 junction, part of the Chippenham barrow cemetery		---														N
Freckenham Conservation Area		-														N
Isleham Conservation Area		-														N
NHLE 1194463 Popes Farmhouse		-														N
NHLE 1037558 Bargate Farmhouse		-														N

NHLE 1037602 Grange Farmhouse	-		N
NHLE 1037604 The Manor	-		N
NHLE 1126383 Waterhall Farmhouse	-		N
NHLE 1000615 Chippenham Registered Park and Garden	--		N
NHLE 1126376 Triumphal arches	--		N
Snailwell Conservation Area	-		N
NHLE 1162059 Park Farmhouse	-		N
NHLE 1126385 Phantom Cottage	-		N

Chapter 10 – Landscape and Visual receptors

Sunnica East Site A Site Landscape Character Area	---		N
Recreational Users on the River Lark	--		N
Motorists on East Fen Road and Residents in East End	--		N
Visitors to the Ark	--		N
Motorists on Beck Road	--		N
Residents adjacent to the B1104	--		N

Residents in Freckenham	--	N
Recreational users of PRow 257/002/X	--	N
Residents in Beck Road Property	--	N
Residents in Lee Farm	---	N
Motorists on Ferry Lane	--	N
LLCA 13 Elms Farmland	---	N
Sunnica East Site B	---	N
Residents adjacent to B1102	--	N
Recreational users and equestrian riders on U6006	---	N
Recreational users on PRow (footpath) W257/003/0	---	N
Residents at Queens Hill	--	N
Recreational users on PRow (footpath) W-128/002/0	--	N
Hundred Acre Plantation	---	N
Sunnica West Site A	---	N
Motorists on La Hogue Road	--	N

Visitors to La Hogue Farm	--		N
Residents at La Hogue Farm	--		N
Residents adjacent to Station Road	--		N
Residents adjacent to Newmarket Road	--		N
Recreational users and users of the training grounds at the Limekilns	--		N
Recreational users PRow (bridleway) 204/5, south-east of Snailwell	---		N
Sunnica West Site B	--		N
LT Rolling Estate Chalklands	--		N
<i>Chapter 11 – Noise and Vibration receptors</i>			
Residential properties, Weirs Grove / Hythe Ln, Burwell, Cambridge CB25 0EH	-		N
<i>Chapter 12 – Socioeconomic receptors</i>			
Cambridge TTWA's economy		+	N
Users of PRowS		+	N

Table 17A-3 Potential effect interactions during decommissioning

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
Chapter 6 – Climate Change receptors																
Global climate - decommissioning	-															N
Chapter 9 – Water Environment receptors																
River Kennett				-												N
Lee Brook				-												N
Groundwater Resource – Chalk Aquifer				-												N
River Lark				-												N
River Snail				-												N
Burwell Lode				-												N
Chapter 10 – Landscape and Visual receptors																
Sunnica East Site A Site Landscape Character Area					--											N

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>
LLCA 13 Elms Farmland					--											N
Sunnica East Site B					--											N
Hundred Acre Plantation					--											N
Sunnica West Site A					--											N
Sunnica West Site B					--											N
LCT Lowland Village Chalklands					--											N
LT Rolling Estate Chalklands					--											N
Recreational users of PRoW 257/002/0					--											N
Residents in Lee Farm					--											N
View north from The Limekilns					--											N
Chapter 11 – Noise and Vibration receptors																
Residential properties, Weirs Grove / Hythe Ln, Burwell,						-		-	-							Y

<i>Receptor</i>	<i>Climate Change</i>	<i>Cultural Heritage</i>	<i>Ecology</i>	<i>Water Environment</i>	<i>Landscape & Visual</i>	<i>Noise & Vibration</i>	<i>Socioeconomics</i>	<i>Transport & Access</i>	<i>Air Quality</i>	<i>Glint & Glare</i>	<i>Ground Conditions</i>	<i>Human Health</i>	<i>Major Accidents & Disasters</i>	<i>Telecommunications</i>	<i>Waste</i>	<i>Effect Interactions (Y/N)</i>	
Cambridge CB25 0EH																	
Chapter 12 – Socioeconomic receptors																	
Cambridge TTWA's economy							++										N
Chapter 14 – Air Quality Receptors																	
Human receptors (dust soiling and PM10)						-	-	-	-								Y
Ecological receptor: Snailwell Meadows SSSI									-								N
Ecological receptor: Chippenham Fen and Snailwell Poor's Fen (SSSI / Ramsar / SAC).									---								Y

