7000Acres Comments on Responses to the ExA's Second Set of Written Questions

Deadline 5 February 2024

EXQ	Respondent	Question	Applicant's Response	7000Acres Response to the Applicant
2.1.4	Applicant/LCC	Article 38 (Felling	PINS Advice Note 15, Section 22, provides	Hedgerows
		or lopping of trees	for two ways to manage hedgerow	
		and removal of	removals, in order to remove the	The UK Centre for Ecology and Hydrology has this month, February
		hedgerows) Please	requirement to obtain a separate consent	2024, issued the UKCEH Land Cover Plus: Hedgerows 2016-2021
		provide an update	under the Hedgerow Regulations 1997.	(England). This describes the extent and height of woody linear
		on discussions	Either a schedule or plan identifying the	features, including hedgerows, tree lines and semi-natural thickets of
		regarding this	hedgerows to be removed is to be	shrubs and trees, on field boundaries in England. They have used the
		article. Where	provided; or the DCO may contain a	Environment Agency's LIDAR (Light Detection and Ranging) remote
		alternative	general power specifying that hedgerows	sensing product, captured in 2016-2021, to create a model of woody
		drafting is	can be removed, subject to the later	field boundaries classified by height.
		proposed by LCC,	consent of the local authority. The	Land Cover Plus: Hedgerows data integrates spatially with UKCEH's Land
		please provide	Applicant has adopted a hybrid approach,	Cover Map and is also compatible with the height classes used in the
		details.	as flexibility is required as it is only	Countryside Survey. The dataset is a representation of the presence and
			following the detailed design for the	height of hedgerows along the boundaries of Land Cover Map polygons
			Cable Route Corridor and the access	rather than a fully georeferenced map of the position of each hedgerow
			points that the exact location of the	on the ground, although there is generally close agreement between
			hedgerow removal works will be known.	the two.
			Article 38(4) of the draft Development	UKCEH has previously created the Woody Linear Features Framework
			Consent Order [EX4/C3.1] provides the	dataset describing the location and lengths of hedges and lines of trees
			Applicant with the power to remove part	for the whole of Great Britain. However, the opportunities presented by
			of the hedgerows listed in Schedule 13 to	the National LIDAR Programme have allowed UKCEH to create a more

the draft DCO, but only "to the extent set	accurate and detailed dataset for England incorporating the all-
out in the landscape and ecological	important attribute of shrub and tree heights.
management plan". This plan must be	The AN WITH THE
approved by the relevant planning	EXITE XEX
authority pursuant to Requirement 7 of	FF AD ER TAL
Schedule 2 to the draft DCO [EX4/C3.1].	
ES Chapter 8 Landscape and Visual	
Impact [REP2-009] includes the retention	
and enhancement of trees and	4 x 2km sample of data from Land Cover Plus Hedgerows, showing
hedgerows as embedded mitigation. C7.3	woody boundaries of land parcels/fields colour-coded by height class
Outline Landscape and Ecological	(blue or green for shorter hedges and red for taller tree lines)
Management Plan D [EX4/C7.3_E] (the	UKCEH quote the potential uses as:
'OLEMP') sets out in paragraph 1.1.5 that	
wherever feasible, the Scheme utilises	• Quantify the amount of woody field boundaries, and their type (by
existing access points to accommodate	height class) for management, planning or mitigation.
access between fields, land areas, solar	Map the extent and distribution of wildlife habitats and dispersal
panel areas, substation sites and battery	corridors.
storage areas within the Order limits. The	Aid planning in identifying where to create more hedges as
indicative extent of hedgerow removal is	corridors to better link up the hedgerow network and other
set out in Appendix C – Hedgerow	habitats, such as woodland.
Removal Plans of the OLEMP. Any minor	Estimate potential carbon storage in hedgerows and woody field
hedgerow works (pruning, lopping and	boundaries.

			minor removals) associated with the Scheme, including highways improvements and access for construction, will be clarified in the final LEMP). The Applicant therefore considers that it has complied with Advice Note 15. Where the exact details of the hedgerow works cannot yet be confirmed, any removal work will be subject to later consent through the approval of the final version of the LEMP pursuant to Requirement 7.	 Aid catchment flood modelling by representing landscape barriers and roughness. Provide a clear baseline for future monitoring of hedgerow/field boundary features on a local or national scale. Repetition every 10 to 20 years would give a good picture of national changes and whether targets for planting and management were being met. 7000 acres recommend that this data is added to the DCO as the datum against which the development and growth of new and existing hedgerows within the proposed site are measured, in order to achieve the commitments made by the applicant to screen the views of the solar panels and associated works, and achieve the BNG gains committed too.
2.1.9	Applicant	Requirement 9 (Biodiversity Net Gain) The ExA notes the Applicant's comments at ISH5 that different approaches are	The Applicant has updated Requirement 9 (biodiversity net gain) of Schedule 2 to the draft Development Consent Order [EX4/C3.1], and now reflects the approach taken in the final draft DCO submitted as part of the Mallard Pass Solar Farm examination. The revised drafting includes a minimum of 10% BNG	 The House of Commons Environmental Audit Committee Report – Environmental Change and Food Security (29 November 2023) made a number of important points: Achieving food security goes hand in hand with achieving net zero and biodiversity targets. We recommend that the Government designate food security as a public good and incorporate food security and environmental goals

being taken in	for river units; the Applicant is currently	more explicitly in the design of Environmental Land Management
other	considering the specific minimum % that	schemes.
NSIP examinations	will be required for habitat and	
(referencing the	hedgerow units to allow for sufficient	Paragraph 31 of the Report stated:
Mallard Pass and	flexibility for any future changes to the	"Every hectare of arable land that we convert to housing or something
Gate Burton	metric and the detailed design of the	then offshore the food production must be replaced by on average 2.9
projects) in	Scheme.	hectares of land overseas, which will often be in tropical countries that
relation to	The Applicant notes that this is an	will, therefore, have a much higher biodiversity impact, sometimes
Biodiversity Net	evolving area and there is currently no	three to four times higher than in the UK."
Gain (BNG). Please	standard approach. For example, the	(https://committees.parliament.uk/publications/42481/documents/211
can the Applicant	requirement in the Gate Burton Energy	<u>176/default/</u>)
confirm that the	Park draft DCO does not specify a	
approach taken	percentage and the Sunnica Energy Farm	Unless the Applicant can demonstrate that the food, crops and biofuels
for the Proposed	draft DCO (currently with the Secretary of	produced by their scheme need not be replaced, then a true
Development is	State for determination) refers to a	Biodiversity Net Gain assessment must take account of the "much
similar to those	minimum of 10%.	higher biodiversity impact, sometimes three to four times higher than in
recently closed		<i>the UK.</i> " Therefore, to achieve a true BNG gain of 10%, a local gain of
examinations or		30% must be secured, so the adverse impact of three times caused by
whether a		outsourcing food production will be taken into account. Failure to do
different approach		this will result in a local <u>Gross</u> calculation of Biodiversity Gain and not a
is being taken		true measure of Biodiversity <u>Net</u> Gain.
here.		

2.1.10	Applicant	Requirement 9	Please refer to the Applicant's response	Please refer to the 7000Acres response to 2.1.9.
		(BNG)	to 2.1.9. Minimum percentages of BNG	
		At ISH5, the	are now secured within the draft DCO,	The Applicant has not <u>secured</u> a true Biodiversity <u>Net</u> Gain, merely a
		Applicant	subject to flexibility to accommodate	gross gain for the site, without taking into account the adverse impact
		explained that the	changes to the BNG metric for the	of producing an equivalent amount of crops overseas.
		specific	Scheme and to allow for differences as a	
		percentages of	result of the detailed design.	
		BNG identified in		
		the ES were not		
		secured in the		
		dDCO and should		
		not be relied on		
		by the SoS in the		
		planning balance.		
2.1.14	Applicant	Requirement 21	The definition of "date of	7000 Acres shares WLDC's concerns over the vague trigger mechanism
		(Decommissioning	decommissioning" in the draft	currently in the dDCO.
		and Restoration)	Development Consent Order [EX4/C3.1] is	
		Please comment	"the date that that part of the authorised	
		on WLDC's	development has permanently ceased to	
		suggested trigger	generate electricity on a commercial	
		mechanisms (as	basis".	
		set out in its		

		Written Summary	Requirement 21 of the draft DCO requires	
		of Oral	the Applicant to notify the relevant	
		Submissions at	planning authority 12 months prior to the	
		ISH5 [REP3-057].	intended date of decommissioning and	
			submit the decommissioning plan for	
			approval no later than 10 weeks prior to	
			the intended date of decommissioning.	
			The decommissioning plan must be	
			complied with.	
			Failure to comply with a DCO	
			requirement, or a plan secured by a DCO	
			requirement, is an offence and	
			compliance can be enforced under the	
			Planning Act 2008.	
2.2.2	All Parties	The Revised	Footnote 62 of the NPPF states that "The	ALC results interpretation and soils scientists.
		National Planning	availability of agricultural land used for	During this and other related NSIP examinations we are frequently
		Policy Framework	food production should be considered,	advised of the significant weighting that the ALC grading of the soil
		(NPPF) was	alongside the other policies in this	holds with regard to the Secretary of States final decisions on the
		published in	Framework, when deciding what sites are	proposals.
		December 2023.	most appropriate for development".	
		Comments are	Footnote 62 of the NPPF should be read	Natural England is the body whose opinions are sought on this issue and
		invited from all	in the context of NPS EN-3 (November	they have been having discussions with all of the applicants during

parties on its	2023) which recognises that solar farms	these examinations. On a number of occasions the applicants have
implications for	may be located on agricultural land	responded to questions from the examiners and interested parties (such
the consideration	where necessary (Paragraph 2.10.29). As	as EN010133-001221-C8.1.15 1.8.7) that ' Natural England (NE) have
of the Proposed	set out in C6.3.5.1 ES Appendix 5.1 Site	specialists in ALC assessment and are the statutory consultee on
Development.	Selection Assessment [APP-067],	matters relating to the agricultural land resource. In their comments of
	selection of the Site accounted for	October 2023 [REP-098] NE noted that they are satisfied that the
	agricultural land classification. Paragraph	detailed ALC survey undertaken across the order limits is appropriate.
	3.3.22 states that the Scheme maximises	However that statement implies that NE are satisfied with the
	the utilisation of low grade, non best and	methodology that has been used not the interpretation and recording
	most versatile (BMV) agricultural land	of the ALC grade of the field auger and laboratory results.
	with 95.9% of the land being classified as	Furthermore the applicant has also advised (ref WB8.1.21 1.2.5) 'any
	non BMV land. The land required for the	variation in ALC grade will most likely to be a difference in assessment
	Scheme has been demonstrated within	between two soil scientists'. The Applicant is therefore accepting that
	C6.3.5.1 ES Appendix 5.1 Site Selection	the interpretation of the field results could be questioned by another
	Assessment [APP-067] to perform better	specialist. All we ask is that the NE soil specialist should review the ALC
	than 8 of the assessed Potential	survey data and report their own judgement on the ALC grades of the
	Development Areas (PDAs) and equal to	land, before the examiners submit their reports to the Secretary of
	the remaining one following the site	State.
	selection process. Consequently, it has	
	been concluded that there are no	This has become more relevant as a result of the High Court judgement
	obviously more suitable locations for the	by Judge Jarman KC
	Scheme within the Search Area. The	

			Applicant has no further additional comments to add regarding the National Planning Policy Framework (NPPF) December 2023 beyond what has already been stated in section 5.5 of the Planning Statement [EN010133/EX4/C7.5_C]. The Applicant considers that the changes do not change the compliance of the Scheme with the NPPF as assessed in the Planning Statement [EN010133/EX4/C7.5_C].	(Case No: AC-2023-LON-002550) ¹ who agreed with the Longfield Inspector that written Ministerial Statements, NPPF, NPS, National Spatial Guidance and Policy BNE4 are applicable and that use of BMV agricultural land need to be justified by the most <i>"compelling evidence"</i> . In this proposal the Applicant has failed to submit compelling evidence that supports the use of BMV land. Therefore we would suggest that all of the 58 hectares of BMV land should be removed from the scheme.
2.2.3	West Lindsey District Council (WLDC) /Applicant	WDLC in its response to ExQ1.2.3 [REP2076] has referred to a 'health'	The "Health Impact Assessment for Planning Applications: Guidance Note" April 2023, is primarily to support policy S54 of the Central LincoInshire Local Plan (2023) which states the requirements for a Health Impact Assessment for any development over 5 ha in area. Whilst the Applicant understands the Scheme is able	The Applicant has completely ignored the adverse impact on health in their assessment. 7000Acres notes the Applicant has now submitted their Environmental Statement ES Addendum 21.1: Human Health and Wellbeing Effects. This document has been prepared by people with no specialist medical knowledge and is merely a precis of their previous flawed case. The Applicant has engaged specialists for other topics, such as battery

¹ <u>https://www.bailii.org/ew/cases/EWHC/Admin/2024/295.html</u>

Supplementary	to beneficially contribute towards the	safety, soil health and archaeology, so why hasn't a specialist been used
Planning	general themes of health and wellbeing	to report on the health implications?
Document	the policy is written to achieve, this policy	
(SPD). Please	has not been considered by the Applicant	The NPPF identifies the need for open space and recreation as being
provide a copy of	as the policy is aimed almost entirely at	important for the well-being of communities. The cumulative impact of
this SPD and	TCPA planning applications and	the multiple NSIP solar schemes in the local area is not compatible with
identify relevant	requirements at that scale. As the	this aim.
passages. The	Scheme is an NSIP, the scoping for a HIA is	• EN-1 4.2.4 requires the Applicant:
Applicant's	to be determined by PINS. In the EIA	
comments are	Scoping Opinion [APP-064], the	"To consider the potential effects, including benefits, of a proposal for a
also sought on	Applicant's approach to assessing health	project, the applicant must set out information on the likely significant
this.	and wellbeing impacts was agreed with	environmental, social and economic effects of the development, and
	no requirement made for a separate HIA	show how any likely significant negative effects would be avoided,
	to be undertaken.	reduced, mitigated or compensated for, following the mitigation
		hierarchy. This information could include matters such as employment,
		equality, biodiversity net gain, community cohesion, health and well-
		being."
		• EN-1 Paragraph 4.3.1:
		"Energy infrastructure has the potential to impact on the health and
		well-being ("health") of the population. Access to energy is clearly
		beneficial to society and to our health as a whole. However, the

	construction of energy infrastructure and the production, distribution
	and use of energy may have negative impacts on some people's health."
	• EN-1 4.3.4:
	"As described in the relevant sections of this NPS and in the technology
	specific NPSs, where the proposed project has an effect on humans, the
	ES should assess these effects for each element of the project,
	identifying any potential adverse health impacts, and identifying
	measures to avoid, reduce or compensate for these impacts as
	appropriate."
	• EN-1 4.3.5:
	"The impacts of more than one development may affect people
	simultaneously, so the applicant should consider the cumulative impact
	on health in the ES where appropriate. "
	• EN-1 4.3.6:
	EN 14.5.0.
	"Opportunities should be taken to mitigate indirect impacts, by
	promoting local improvements to encourage health and wellbeing, this
	includes potential impacts on vulnerable groups within society, i.e. those

				 groups which may be differentially impacted by a development compared to wider society as a whole." This scheme is unprecedented in its acreage, the size of the BESS and the use of 4.5m high solar panels. In addition, it is one of 6 schemes in the locality. The individual and cumulative impact on health and wellbeing, especially mental health, is enormous. 7000Acres believes the Applicant must employ a healthcare specialist to conduct a professional assessment of the health and wellbeing impacts caused by this and the other solar NSIP schemes in the locality. In particular, this work must follow the recommendation of the 7000Acres health professional and include a Health Impact Assessment.
2.2.6	Applicant	Please explain	Please refer to C8.2.7 Review of Likely	There are 2 issues to consider, the physical life of the solar panels and
		whether the	Significant Effects at 60 Years [REP2-058]	the economic life of the solar panels.
		continuing use of	for consideration of the changes to the	
		solar panels and	findings of significant effects from	Firstly the physical life. The Applicant has claimed a solar PV panel
		batteries after	considering a potential operational	failure rate of 0.4% per annum, which means that 24% will fail and need
		their average	lifespan of the Scheme for up to 60 years.	replacing over the 60-year life of the scheme and potentially 60% of the
		lifespan of 40	The Applicant confirms that the	panels will last 100 years! The Applicant has not presented any evidence

years is likely to	assessment methodology underpinning	for this low failure rate and anticipated life of the panels, in fact they
result in an	this document is as set out in Chapter 2:	state there is no evidence. Equipment failure rates do not tend to be
increased failure	EIA Process and Methodology [APP-037]	linear but follow a "bathtub curve", with a relatively high rate at the
rate. If so, please	and, where applicable, in each chapter of	start of the project due to manufacturing faults, damage during
explain how this	the Environmental Statement.	transport and installation errors. The initial failure rate will decline for a
has been taken	There is currently no data available as to	few years and then increase again at an accelerating rate. Assuming a
into account in the	the failure rate of equivalent solar	very low and linear failure rate is not a reasonable worse case
assessments	panels after 40 years. The parameters	assumption.
presented in the	assessed in C8.2.7 Review of Likely	
ES.	Significant Effects at 60 Years [REP2-058]	Secondly the economic replacement rate. The energy generating
	assume that a 0.4% per year replacement	capability of solar PV panels typically degrade by 1% per annum, even if
	rate for panels continues between years	they don't fail physically. Taking this point into account, after 60 years
	40 and 60 and that any effects would not	the remaining panels will only be producing 40% of their initial output.
	be significant and can be adequately	Current industry evidence suggests that an economic life of a solar PV
	managed through the OEMP. In the event	panel is close to 20 years, which takes into account the failure rate,
	that a greater replacement rate was	degradation in energy generation and new technology becoming
	required due to an increased failure rate	available. Using this reasonable worst-case assumption, the solar PV
	then the Applicant would need to	panels would be replaced twice (at 20 years and 40 years) during the
	demonstrate that such a replacement	life of the scheme. The Applicant's Chapter 7 takes no account of
	rate would not give rise to any new or	replacing the solar panels, except for when they fail. The Applicant's
	materially different environmental effects	Review of Likely Significant Effects at 60 Years (EX1/WBB 2.3) states that
	compared to those assessed in the	extending the life of the scheme from 40 to 60 years will have no
		I

Environmental Statement en males en	additional impacts i.a. there is no intertion to replace the new starts
Environmental Statement or make an	additional impacts, i.e. there is no intention to replace the panels on
application to amend the DCO.	economic grounds, merely failed units.
Alternatively, the Applicant may decide	
to decommission that part of the Scheme	This assumption is repeated in the Applicant's response to the ExA's
at that point in time. The replacement	second set of questions: "Separately, panel performance across the
rate is the rate at which panels would be	Scheme would gradually degrade over a number of years, but this has
replaced should they cease to operate	been accounted for within the models of the Scheme's viability and
entirely. Separately, panel performance	production estimates and this would not be a reason in itself for large-
across the Scheme would gradually	scale panel replacement within the lifetime of the Scheme."
degrade over a number of years, but	
this has been accounted for within the	Applying a degradation rate of 1% per annum, after 60 years the
models of the Scheme's viability and	scheme will be producing 60% less energy. As the average output of
production estimates and this would not	new panels is only circa 11% of their rated power, providing an average
be a reason in itself for large-scale panel	of 66 MW of their maximum rated output of 600MW, reducing this by
replacement within the lifetime of the	60% to 26.4MW cannot be effective use of highly productive farming
Scheme.	land?
The C8.2.7 Review of Likely Significant	
Effects at 60 Years [REP2-058] concludes	Either the Applicant will replace the solar PV panels, based on their
that replacing the BESS for a second time	economic life, to maintain the energy generation of the scheme, or
between the years 40 to 60 (if required)	they will only replace panels that have failed. In the former case, the
is unlikely to give rise to likely significant	current Chapter 7 and Review of Likely Significant Effects at 60 Years are
GHG emissions	incorrect and misleading. In the latter case, the total energy generation

			The BESS will operate in line with	of the scheme over its life is much less than claimed and so the
			manufacturers guidelines and the data	Applicant's ES is incorrect and misleading.
				Applicant's ES is incorrect and misleading.
			analytics integrated into the Battery	
			Management Systems will ensure that	The Applicant's overall documentation is inconsistent and misleading;
			modules are decommissioned if	either they will maintain the generating capacity of the scheme, in
			operational performance is not within	which case their GHG and transport assessments are incorrect, or they
			recommended parameters.	will only replace failed units, in which case their electrical generating
				claims are wrong.
				This is another example of where the Applicant has not followed Advice
				Notice Nine and submitted inconsistent documentation that does not
				use reasonable worst-case assumptions.
2.2.8	Applicant	Does the	The conclusions of the Review of Likely	Please see our comments to 2.2.6.
		Applicant intend	Significant Effects at	The 60 Years [REP2-058] document is not credible. It does not take
		the Review of	60 Years [REP2-058] have been added to	account of the real failure rate and degradation rate of the solar panels
		Likely Significant	the updated Chapter 23 of the ES.	and associated equipment. Therefore, it does not consider a reasonable
		Effects at 60 Years	However, the Applicant has amended	worst case, as required by Advice Notice Nine.
		[REP2-058] to be a	Schedule 14 to the draft DCO to make it	
		certified	clear that both documents form part of	
		document – as it is	the ES and are certified documents.	
		unclear whether		

		or not it forms		
		part of the ES.		
2.2.10	Applicant	The ExA notes that	The amendments made by the Applicant	7000 Acres is concerned that the Design Parameters do not include a
		the Concept	clarified the maximum dimensions of a	sufficient water supply, either stored or from the mains supply, included
		Design Parameters	BESS enclosure (53-foot ISO container)	in the design.
		and Principles	which would be permitted for the	
		document [REP3-	scheme. This is to allow a full range of	The Island Green Power's BESS specialist, Mr Gregory, confirmed at the
		020] was updated	BESS enclosure designs to be considered	recent West Burton ISH 3 that a <i>"2.5MWh container should burn out in</i>
		at Deadline 3.	at the detailed design stage. Previous	approximately 12 hours".
		Please provide	dimensions were based upon a relatively	
		further	small-scale BESS cabinet design which	The current design only has sufficient water, and storage for polluted
		explanation on the	could be obsolete within a relatively short	fire water, for 2 hours of dousing, not 12 hours.
		amendments	, time frame.	
		made in relation	More detail was also added to fire	
		to the scale of the	suppression system design concepts after	
		Battery Energy	discussion with Lincolnshire Fire and	
		Storage System	Rescue	
		(BESS).	Service to reflect the latest BESS system	
		(2200).	fire protection designs.	
2.3.1	All interested	On 22 November	The November 2023 Energy National	Although the NPS were updated, many of the fundamental principles
2.3.1	parties	2023, the	Policy Statements (NPSs) were formally	remain unchanged. The suite of planning documents must be viewed in
	parties		, , , , ,	remain unchanged. The suite of planning documents must be viewed in
		Department for	designated on 17 January 2024. The	

Energy Security	Planning Statement	the round and a narrow focus on specific sentences must be avoided. In
and Net Zero	[EN010133/EX4/C7.5_C] has been revised	addition to the NPS, the NPPF must be taken into account.
published an	to align with the latest national policy	
updated version	position. Appendix 3 of the Planning	The NPPF identifies the need for open space and recreation as being
of the draft	Statement [EN010133/EX4/C7.5_C] sets	important for the well-being of communities. The cumulative impact of
National Policy	out the modifications to the November	the multiple NSIP solar schemes in the local area is not compatible with
Statements (NPS)	2023 NPSs and outlines the Scheme's	this aim.
for Energy (EN-1	compliance to these revisions.	
to EN-5) which	In NPS EN-1 (November 2023),	The NPPF addresses the use of farming land. Footnote 62 in the NPPF
contain some	government concludes that national	states:
changes to	energy security and net zero ambitions	
elements	will only be delivered through the	"62 Where significant development of agricultural land is demonstrated
regarding the	development of new low carbon sources	to be necessary, areas of poorer quality land should be preferred to
decision-making	of energy at speed and scale (Para 4.2.2)	those of a higher quality. The availability of agricultural land used for
process for low	and therefore that there is a critical	food production should be considered, alongside the other policies in
carbon generation	national priority (CNP) for the provision	this Framework, when deciding what sites are most appropriate for
applications in	of nationally significant low carbon	development".
general including	infrastructure (Para 4.2.4). Low carbon	This is supported by the message from the Chief Planner ² that
solar generating	electricity generation infrastructure is	accompanied the update to the NPPF in December 2023:

² <u>https://assets.publishing.service.gov.uk/media/65845c1623b70a000d234df8/11</u> Chief Planners Newsletter Dec 2023.pdf

-				
		stations and	described as <i>"all onshore and offshore</i>	
		related	generation that does not involve fossil	"A high-level description of the key changes is provided below, and was
		connections.	fuel combustion" (Para 4.2.5) and as such	set out by the Levelling Up Secretary in his speech and accompanying
		These revised	large-scale solar generation would be	WMS, but for the full detail and understanding of the policy please refer
		draft Statements	classified as CNP infrastructure under NPS	to the text of the NPPF itself. In headline terms, the new NPPF:
		have also been	EN-1 (November 2023).	
		laid before	Government expects that "For projects	• gives greater protection to agricultural land through additional
		Parliament but are	which qualify as CNP	reference to the need to address food production, maintaining the
		not yet designated	Infrastructure, it is likely that the need	emphasis on best and most versatile (BMV) land;"
		for the purposes	case will outweigh the residual effects in	
		of s104 of the	all but the most exceptional cases" (Para	In addition to the updated aims of NPPF, EN-1 4.2.4 requires the
		Planning Act	4.1.7)	Applicant:
		2008.	The designation of large-scale solar as	"To consider the potential effects, including benefits, of a proposal for a
		Do any parties	Critical National Priority infrastructure	project, the applicant must set out information on the likely significant
		have any	supports the Applicant's case for the	environmental, social and economic effects of the development, and
		comments on the	significant weight which it considers	show how any likely significant negative effects would be avoided,
		potential effect of	should be applied to the planning balance	reduced, mitigated or compensated for, following the mitigation
		changes in the	when considering the Scheme.	hierarchy. This information could include matters such as employment,
		November 2023		equality, biodiversity net gain, community cohesion, health and well-
		versions of the		being."
		revised draft		
		Energy NPS on		
L	1	l	l	

	· · · · · · · · · · · · · · · · · · ·
matters related to	EN-3 states that BMV land must not be used without justification: this
this application,	is consistent with the NPPF and longstanding Government policy. This
compared to the	principle was upheld in the recent High Court Judgement ³ where Island
March 2023	Green Power and Pinsent Mason lost an appeal against the Lullington
versions of the	solar scheme. The court upheld the point that BMV land must not be
Energy National	used unless there is "compelling evidence". Even using the Applicant's
Policy	questionable classification, there are over 58 hectares of BMV land
Statements?	which therefore must be removed from the scheme. Merely having a
	grid connection is not "compelling evidence" to use BMV land. The High
	Court also upheld the conclusion of the Lullington Inspector that 40
	years is not temporary use but "generational".
	Finally, responding to the Applicant's point on EN-3 para 4.1.7, this is
	an exceptional case as the Cottam solar industrial scheme will be:

³ https://www.bailii.org/ew/cases/EWHC/Admin/2024/295.html

I	
	The one of the largest in Europe. The current largest is the
	Francisco Pizarro in Spain, it has a peak generation of 553MW.
	Cottam will use 4.5m high sun tracking panels, which is
	unprecedented in the UK. Schemes like Sunnica and Stow Park use
	2.5m high panels.
	The dispersed nature of the scheme increases the harm as the
	effective footprint and intervisibility intensifies the regional
	impact.
	It is one of 6 solar NSIPs in the local area, bringing about a regional
	change from a farming landscape to an industrial landscape.
	The Applicant seeks a 60-year term for their project. The Inspector
	for the Lullington Solar scheme said that 40 years is not temporary
	use but "generational". 60 years goes well beyond that.
	The Applicant has not proposed any genuine mitigations.
	So, this is an exceptional case!

2.3.2	Applicant	Action Point 2 of	Please see the Applicant's response to	Please see our response to 2.2.6.
		the Written	question 2.2.6 above. The Applicant has	The applicant is only taking account of the physical life of the panels and
		Summary of the	referred to an "average lifespan of 40	not the productive life. In addition to the claimed physical failure rate of
		Applicant's Oral	years" but there is currently no data	0.4% per annum (not supported with evidence), the efficiency of solar
		Submissions and	available for panels of this type that have	PV panels degrade by circa 1% per annum. Therefore, the generating
		Responses at ISH5	been operating for more than 40 years.	capacity claimed by the Applicant will not be achieved if the solar
		[REP3-038] states	Panel performance across the Scheme	panels are not changed on a frequent basis.
		that a panel	would gradually degrade over a number	
		failure rate of	of years, but the rate of this degradation	Current evidence ⁴ shows that solar panels will be changed between 10
		0.4% has been	in 40 years' time is not known. The	and 20 years on economic grounds. Therefore, the Applicant's
		applied "in line	Applicant's position is that it should not	assessment of the GHG savings, impact on health, transport, waste and
		with industry	be required to automatically	noise are a gross underestimation. If the Applicant choses not to
		standards" to	decommission the whole of the Scheme	maintain the scheme's generating capacity by changing degrading solar
		the climate	at 40 years if it is still capable of	panels, then it will be a poor use of productive farmland.
		change	generating electricity. Any replacement of	
		assessment of	panels will need to be within the	In either scenario, the Applicant has not shown a reasonable worst case
		operational	parameters assessed in the	but presented a partial and inaccurate assessment.
		impacts from	Environmental Statement.	
		panel		

⁴ https://www.sciencedirect.com/science/article/pii/S2542435119304155

failure/replaceme	In not taking into account replacing solar panels based on degradation
nt. Table 1.1 of the	over the 60 years, either the Applicant does not understand the issue,
'Review of Likely	or the Applicant is deliberately presenting an inaccurate case.
Significant Effects	
at 60	
Years:	
Environmental	
Statement Review'	
[REP2-058] states	
that over a 60-	
year operational	
lifespan 24% of	
the panels would	
be replaced.	
However, the	
Applicant states	
[REP2-048] that	
solar panels have	
an "average	
lifespan of 40	
years" suggesting	
a 100%	

		replacement rate		
		at 40 years. Can		
		the Applicant		
		explain this		
		discrepancy?		
2.4.2	Applicant	At ISH4, the	In light of the questions raised by the	Currently the Applicant's byzantine documentation provides different
		Applicant stated	Examining Authority, the Applicant is	answers in different sections. For example, most Chapter still refer to a
		that it did not	proposing to submit a Cumulative Effects	40 year lifetime.
		intend to update	Addendum at Deadline 5 which will form	
		changes to	part of the ES and provide a more	The Applicant has chosen to apply a Rochdale Envelope. Advice Notice
		cumulative	detailed explanation of the reviews	Nine paragraph 1.4 requires "consistency across the application
		impacts in	undertaken since the submission of the	<i>documents".</i> There is a serious lack of consistency.
		individual aspect	DCO Application and any changes made	
		chapters, instead	to Chapter 23. The Cumulative Effects	The NSIP process should be front loaded, with the Applicant coming to
		preferring to	Addendum will include the information	examination with a clear and coherent plan. In this case Island Green
		update the Joint	contained in the latest version of the Joint	Power has changed major areas of the scheme post public consultation;
		Report on	Report on Interrelationships with other	these include increasing the timescale by 50% and major alterations to
		Interrelationships	NSIPs and the information in Technical	the cable routing. Therefore, the need to update the ES is self-induced.
		with other NSIPs	Note on Cumulative Effects	
		[REP3-027].	[EN010133/EX4/C8.2.12].	It is reasonable to expect the ES to contain a coherent case, where
		Please confirm	The Applicant considers that it would be	each section of the ES provides a consistent answer. Therefore,
		whether it is the	unusual and disproportionate to have to	

Applicant's	update the text in all of the ES Chapters	7000Acres requests all sections of the the ES is corrected to show
intention that the	and their associated appendices to	"consistency across the application documents".
Joint Report will	account for any changes that have taken	
be a certified	places since the DCO Application was	
document?	submitted as this would result in a	
Notwithstanding	rewrite of the entire ES.	
the above, the ExA		
considers that		
where there are		
changes to the		
conclusions		
reached in the		
individual aspect		
chapters of the ES,		
it is the ES that		
should be updated		
and not the Joint		
Report. The		
Applicant should		
ensure that,		
where necessary,		
all chapters of the		

		ES contain full and		
		up-to-date		
		information on		
		cumulative effects		
		and where		
		information is		
		contained in other		
		documents that		
		informs the		
		assessment, this		
		should be		
		appropriately		
		cross referenced		
		in the Chapter.		
2.4.4	Applicant	The ExA notes the	We are aware of the scale of challenge of	7000Acres has serious concerns over the Applicant's use of
		additional	preparing a cumulative impact	"professional judgement".
		information	assessment on climate change for all	
		provided in	proposed NSIP developments. Each	Their judgement is at variance with the two other non-Island Green
		Appendix E of the	scheme has concluded significant	Power schemes and the Councils' experts.
		Joint Report on	beneficial cumulative impacts for the	Of particular note are findings of Moderately Beneficial for year 15 for
		Interrelationships	respective scheme in isolation.	Cottam 1, 2, 3a and 3B. At paragraph 4.10 of this same review, AHH
		with other NSIPs		Planning Consultants for LCC state, 'we are not in agreement with the

		For Cotton (Mart Durton a gumulation	findings of the landscape research and do not see any many inte
	[REP3-027] in	For Cottam/West Burton, a cumulative	findings of the landscape assessment, and do not see any appropriate
	respect of the	beneficial cumulative effect has been	justification for assessing significant beneficial landscape effects on both
	professional	identified as four solar projects being	landscape character areas, or individual contributors to landscape
	judgements made	developed at the same time would result	character by the construction and operation of a large solar
	on the cumulative	in a quicker reduction in CO_2e emissions	development.'
	effect on climate	from legacy sources than a single project	Lincolnshire County Councils consultants, AHH, found (paragraph 6.5)
	change. Please	alone.	"that the cumulative change to the landscape will be considerable and
	explain why the	This approach takes into account	significant, and the combination of two or more sites has the potential
	Applicant	professional judgment and interpretation	to change the local landscape character at a scale that would be of
	considers it is	of the IEMA Guidance.	more than local significance. The cumulative impact of the four adjacent
	possible to assess	A more conservative approach has been	NSIP scale solar schemes has the potential to affect the landscape at a
	cumulative effects	taken by Gate Burton and Tillbridge and	regional scale through predominantly a change in land use: from arable
	on Climate Change	no additional cumulative beneficial	to solar, creating what may be perceived as an 'energy landscape' as
	given the national	effects have been identified as a result of	opposed to rural or agricultural one at present."
	rather than local	their interpretation of the Guidance. That	The "professional judgement" applied by the Applicant is an outlier
	scale of the	interpretation considers that 'cumulative	when compared to others and so should be disregarded.
	impact.	effects' are not possible to assess for	
		climate change given the national, rather	
		than local, scale of the impact.	
		In light of this difference in interpretation,	
		the SoS may decide to place limited	
		weight on the beneficial cumulative	
L	1		1

			effects identified by the Applicant (albeit,	
			each Scheme has identified beneficial	
			effects for each Scheme, assessed	
			individually). Discussion between the	
			different authors of the Climate Change	
2.6.2	Applicant	Further to the	The Applicant's position is that as a	The Applicant has submitted a partial and deficient ES. It does not
		Applicant's	reasonable worst-case the effects at	consider many adverse effects of this scheme, including
		response to	decommissioning would be the same as	decommissioning.
		ExQ1.6.10 [REP2-	during the construction phase. However,	
		034] in relation to	the Applicant acknowledges that it is	For example, a major issue identified by research commissioned by the
		why the	difficult to know what statutory	Welsh Government ⁵ is that farming land, especially BMV, is difficult to
		significance of	conservation legislation will be in effect at	return to its original productive state. The Applicant has ignored issues
		effects for	that point in the future and there is	such as the removal of steel piles, that frequency corrode to such a
		decommissioning	therefore the potential for the	state that they remain in the ground, contaminating the soil.
		are not listed, how	significance of effects to increase at	
		would	decommissioning beyond those identified	The Welsh Government research states
		decommissioning	at construction. For example, if more	<u>"One of the key impacts on BMV agricultural land is soil compaction,</u>
		effects then be	species become legally protected.	which can vary considerably from very minimal and short term to
		considered and		severe, which possibly cannot be rectified. Compaction in the subsoil

⁵ <u>https://www.gov.wales/sites/default/files/publications/2023-08/impact-solar-photovoltaic-sites-agricultural-soils-land-spep21-22-03-work-package-3.pdf</u>

below about 35cm is unlikely to be practicable and economic to alleviate considering the ES should assess the worst case stages of the stages of the Proposed Development. Propo		
should assess the worst case scenario for all stages of the Proposed Development.	assessed	below about 45cm is unlikely to be practicable and economic to alleviate
worst case scenario for all scenario for all stages of the Proposed Development.	considering the ES	(Batey, 2009) and is unlikely to respond quickly to natural recovery
And the secenario for allGuidelines (MAFF, 1988) through reduced permeability in the wetnessstages of theassessment and crop available water in soil droughtiness assessment.ProposedThere will be compaction at the time of construction, which may remainDevelopment.for the lifespan of the development. Further compaction may result at the decommissioning phase. The timescale for reversibility is undefined but is taken in this report as the point at which decommissioning is completed. The time taken for a soil with compaction to recover depends on the severity of the compaction and the soil type. Business Wales (2018) and Froehlich et al (1985) reported that natural recovery of a compacted soil to recover, where 'industrial' compaction extends to depths of 1m or more (Spaor, 2006). Hakansson (1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction	should assess the	through the freeze-thaw cycle. Where compaction is present at depth it
stages of the Proposed Development. Proposed Development.	worst case	is a long-term limitation and it is taken into account in the ALC
ProposedThere will be compaction at the time of construction, which may remain for the lifespan of the development. Further compaction may result at the decommissioning phase. The timescale for reversibility is undefined but is taken in this report as the point at which decommissioning is completed. The time taken for a soil with compaction to recover depends on the severity of the compaction and the soil type. Business Wales (2018) and Froehlich et al (1985) reported that natural recovery of a compacted soil is complex and a slow process. Batey (2009) refers to 30 years for a compacted soil to recover, where 'industrial' compaction extends to depths of 1m or more (Spoor, 2006). Hakansson (1988) reported that compaction is rapid and easy to create with and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction	scenario for all	Guidelines (MAFF, 1988) through reduced permeability in the wetness
Development. Development. For the lifespan of the development. Further compaction may result at the decommissioning phase. The timescale for reversibility is undefined but is taken in this report as the point at which decommissioning is completed. The time taken for a soil with compaction to recover depends on the severity of the compaction and the soil type. Business Wales (2018) and Froehlich et al (1985) reported that natural recovery of a compacted soil is complex and a slow process. Batey (2009) refers to 30 years for a compacted soil to recover, where 'industrial' compaction extends to depths of 1m or more (Spoor, 2006). Hakansson (1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction	stages of the	assessment and crop available water in soil droughtiness assessment.
the decommissioning phase. The timescale for reversibility is undefined but is taken in this report as the point at which decommissioning is completed. The time taken for a soil with compaction to recover depends on the severity of the compaction and the soil type. Business Wales (2018) and Froehlich et al (1985) reported that natural recovery of a compacted soil is complex and a slow process. Batey (2009) refers to 30 years for a compacted soil to recover, where 'industrial' compaction extends to depths of 1m or more (Spoor, 2006). Hakansson (1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction	Proposed	There will be compaction at the time of construction, which may remain
but is taken in this report as the point at which decommissioning is completed. The time taken for a soil with compaction to recover depends on the severity of the compaction and the soil type. Business Wales (2018) and Froehlich et al (1985) reported that natural recovery of a compacted soil is complex and a slow process. Batey (2009) refers to 30 years for a compacted soil to recover, where 'industrial' compaction extends to depths of 1m or more (Spoor, 2006). Hakansson (1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction	Development.	for the lifespan of the development. Further compaction may result at
completed. The time taken for a soil with compaction to recover depends on the severity of the compaction and the soil type. Business Wales (2018) and Froehlich et al (1985) reported that natural recovery of a compacted soil is complex and a slow process. Batey (2009) refers to 30 years for a compacted soil to recover, where 'industrial' compaction extends to depths of 1m or more (Spoor, 2006). Hakansson (1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction		the decommissioning phase. The timescale for reversibility is undefined
depends on the severity of the compaction and the soil type. Business Wales (2018) and Froehlich et al (1985) reported that natural recovery of a compacted soil is complex and a slow process. Batey (2009) refers to 30 years for a compacted soil to recover, where 'industrial' compaction extends to depths of 1m or more (Spoor, 2006). Hakansson (1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction		but is taken in this report as the point at which decommissioning is
Wales (2018) and Froehlich et al (1985) reported that natural recovery of a compacted soil is complex and a slow process. Batey (2009) refers to 30 years for a compacted soil to recover, where 'industrial' compaction extends to depths of 1m or more (Spoor, 2006). Hakansson (1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction		completed. The time taken for a soil with compaction to recover
of a compacted soil is complex and a slow process. Batey (2009) refers to 30 years for a compacted soil to recover, where 'industrial' compaction extends to depths of 1m or more (Spoor, 2006). Hakansson (1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction		depends on the severity of the compaction and the soil type. Business
to 30 years for a compacted soil to recover, where 'industrial' compaction extends to depths of 1m or more (Spoor, 2006). Hakansson (1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction		Wales (2018) and Froehlich et al (1985) reported that natural recovery
compaction extends to depths of 1m or more (Spoor, 2006). Hakansson (1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction		of a compacted soil is complex and a slow process. Batey (2009) refers
(1988) reported that compaction may be very persistent in the subsoil and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction		to 30 years for a compacted soil to recover, where 'industrial'
and permanent. Nawaz et al (2012) presented a review of research and concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction		compaction extends to depths of 1m or more (Spoor, 2006). Hakansson
concluded that soil compaction is rapid and easy to create with agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction		(1988) reported that compaction may be very persistent in the subsoil
agricultural machinery but it can be years before the soil is recovered. Keller at al (2017) noted that knowledge regarding soil compaction		and permanent. Nawaz et al (2012) presented a review of research and
Keller at al (2017) noted that knowledge regarding soil compaction		concluded that soil compaction is rapid and easy to create with
		agricultural machinery but it can be years before the soil is recovered.
rates is 'sketchy' with experimental evidence of recovery periods from a		Keller at al (2017) noted that knowledge regarding soil compaction
		rates is 'sketchy' with experimental evidence of recovery periods from a

				few months to years and decades. Differences in laboratory and field experiments highlight the 'partial and incomplete' knowledge of the key processes involved in soil structure recovery." The Applicant's soil specialist, Mr Baird, has stated that work will not be done on the scheme when it is wet, but this is not secured. Therefore, a reasonable worst case is that the soil will be compacted and decommissioning will result in damaged and compacted land being left on the site. This is another reason why no BMV land must be included in the scheme, as there is high likelihood it will be permanently degraded due to compaction, and so it will not be "temporary use".
2.7.8	Applicant	Further to the Applicant's response to ExQ1.7.19 [REP2- 034], if the Applicant is relying on the site owner(s) to bear responsibility for the robust	The Applicant notes that all landowners have legal riparian responsibilities for drains located on their properties. The Applicant is not suggesting that landowners need to undertake any additional works or responsibilities than they are already subject to. The Applicant will be responsible for the maintenance of any drains located within the solar arrays under the terms of the voluntary	It is highly unlikely that absentee landlords leasing their land to the Applicant will continue to maintain the land. The duty to maintain the drainage must clearly fall on the lessee, unless otherwise secured.

		maintenance of	property agreements during the	
		drainage, how will	operation of the Scheme.	
		this be secured		
		and have the		
		owners been		
		made aware of		
		these		
		responsibilities?		
2.7.9	Applicant	Paragraph 6.10.40	Paragraph 3.1.1 of the C6.3.19.2_B	Research by the Welsh Government identifies soil compaction as a
		of the revised	Outline Soil Management Plan [REP3-010]	major issue, leading to the deterioration of the soil and the inability of
		Planning	sets out general principles to be included	returning productive farming land, especially BMV, to its original state ⁶ .
		Statement [REP2-	within the soil management plan	The Welsh Government research states
		028] states in	including "use low ground pressure (LGP	<u>"One of the key impacts on BMV agricultural land is soil compaction,</u>
		relation to	models) and tracked vehicles where	which can vary considerably from very minimal and short term to
		drainage that	possible when working directly on bare or	severe, which possibly cannot be rectified. Compaction in the subsoil
		vehicles should be	vegetated soils to minimise the extent	below about 45cm is unlikely to be practicable and economic to alleviate
		fitted with low	and/or	(Batey, 2009) and is unlikely to respond quickly to natural recovery
		pressure tyres to		through the freeze-thaw cycle. Where compaction is present at depth it
		further reduce the		is a long-term limitation and it is taken into account in the ALC

⁶ <u>https://www.gov.wales/sites/default/files/publications/2023-08/impact-solar-photovoltaic-sites-agricultural-soils-land-spep21-22-03-work-package-3.pdf</u>

impact on the	Guidelines (MAFF, 1988) through reduced permeability in the wetness
underlying soil.	assessment and crop available water in soil droughtiness assessment.
	There will be compaction at the time of construction, which may remain
	for the lifespan of the development. Further compaction may result at
	the decommissioning phase. The timescale for reversibility is undefined
	but is taken in this report as the point at which decommissioning is
	completed. The time taken for a soil with compaction to recover
	depends on the severity of the compaction and the soil type. Business
	Wales (2018) and Froehlich et al (1985) reported that natural recovery
	of a compacted soil is complex and a slow process. Batey (2009) refers
	to 30 years for a compacted soil to recover, where 'industrial'
	compaction extends to depths of 1m or more (Spoor, 2006). Hakansson
	(1988) reported that compaction may be very persistent in the subsoil
	and permanent. Nawaz et al (2012) presented a review of research and
	concluded that soil compaction is rapid and easy to create with
	agricultural machinery but it can be years before the soil is recovered.
	Keller at al (2017) noted that knowledge regarding soil compaction
	rates is 'sketchy' with experimental evidence of recovery periods from a
	few months to years and decades. Differences in laboratory and field
	experiments highlight the 'partial and incomplete' knowledge of the key
	processes involved in soil structure recovery."

				Unless the use of low pressure tyres and tracks on all vehicles, and only working the land in dry conditions is secured, it should be assumed as a reasonable worst case that soil compaction will occur. The ES should take account of this reasonable worst case when assessing soil health.
2.8.1	Applicant	Has the cable	A soil survey of the Cable Route Corridor	7000Acres believes that a full survey of the cable route must be
		route corridor	(including an ALC assessment) will be	conducted before consent.
		been surveyed	undertaken post consent and prior to the	Many issues over the cable routing have been raised by IPs and so the
		since the response	commencement of construction.	Applicant must provide clear survey evidence so the ExA can make an
		to ExQ1 and when	Undertaking the survey at this time, once	informed judgement on the suitability of the scheme.
		will this	the detailed design has been confirmed,	
		information be	will allow the survey to be confined to the	
		before the	actual land to be excavated rather than	
		examination, as	the entirety of the Cable Route Corridor.	
		regards the depth		
		where the cables		
		would be found,		
		and in relation to		
		soil management		
		and field		
		drainage?		

2.8.3	Applicant	Can the Applicant	As noted at paragraph 19.3.7 of the ES	The NSIP process is designed to be front loaded, with the Applicant
		provide some	Chapter 19 Soils and Agriculture [REP-	providing a clear and coherent case ready for examination.
		details of the	010], the cable route corridor has not	In this case the Applicant has made major changes to several aspects of
		farming	been subject to soil surveys or farming	the scheme. The Applicant must present evidence why these changes
		circumstances	circumstances assessment as the narrow	are acceptable and as part of that process must provide survey data.
		along the cable	cable trench will need a specific survey	Leaving this important aspect of the scheme to post consent does not
		route corridor?	along its actual path to inform soil	allow the ExA to take full account of the adverse effects. In the opinion
			management planning of the trenching	of 7000Acres, the lack of survey data is unacceptable.
			works. Detailed ALC survey of fields	
			places sample points at 100m intervals,	
			too widely spaced to monitor soil	
			variation within the soil to be excavated	
			for the trench.	
			Farming circumstances information for	
			the Cable Route Corridor will be obtained	
			post consent. This will include greater	
			detail on current land use, for instance	
			the actual cropping of land at the time of	
			the cable trenching work rather than a	
			typical arable rotation across a farm's	
			arable land. This will enable an	
			assessment of particularly sensitive	

			periods of time for trenching work to	
			seek to avoid, for instance target harvest	
			dates.	
			Compensation will be paid to landowners	
			for any loss or damage, for example crop	
			damage, if it is not practicable to avoid	
			sensitive periods of time.	
2.8.4	Applicant	The ExA notes the	The IEMA threshold of 20ha for BMV land	Due to the compaction of soil and the difficulty in removing corroded
		Applicant's	is given on Table 19.4 and described in	solar frame piles, identified in Welsh Government Research, and
		explanation as to	paragraph 19.7.7 of ES Chapter 19 Soils	discussed in Q 2.7.9, it is highly probably that BMV land will be lost.
		why the IEMA	and Agriculture [REP-010]. This IEMA	The Applicant has claimed that land can remain in agricultural
		threshold of 20	threshold is for the permanent loss of	production, presumably by farming sheep. This is not secured, neither is
		hectares has not	20ha of BMV agricultural land. As the	sheep farming a feature of the local economy. Additionally, sheep
		been applied.	Scheme will be decommissioned no later	farming is not productive use of BMV land for 60 years.
		Please explain	that 60 years following the date of final	
		whether, and if so	commissioning and the vast majority of	
		how, the	the Site can remain in agricultural	
		application of the	production throughout the operational	
		20 hectares	period, loss of agricultural land is not	
		threshold would	permanent. There is therefore no change	
		alter the	to the assessment of environmental	
		conclusions of ES		

		Chapter 19:	effects if the IEMA 20ha threshold was	
		Agriculture and	applied.	
		Soils [REP-010] in		
		so far as it relates		
		to the loss of		
		agricultural land		
		resource.		
2.8.5	Applicant	The Review of	Agricultural productivity is often	Soil Health
		Likely Significant	described in economic terms as the value	EN010133-000869-Natural England - Written Representations and
		Effects at 60 Years	of a tonne dry matter of one crop is not	summaries
		document [REP2-	equivalent to that of another crop, or	Further advice relating to soils and Best and Most Versatile land from
		058] sets out that	even the same crop in a different year.	Natural England.
		soil resources will	The economic value of hosting Solar PV	Additional advice has been provided in relation to other large solar
		benefit from the	(i.e. the income received for the lease of	projects in the East Midlands. Natural England feel that it would be
		longer fallow	land) is anticipated to exceed that of	beneficial to share this with the applicant.
		period. Please	rotations of combinable crops such as	- The detailed ALC Survey data should be used wherever possible to
		explain how this	wheat, barley and oil seed. Any farm	inform restoration practises, i.e., to ensure the soil is restored to the
		extended time	income from grazing sheep within the	same depth and profile described during the ALC survey.
		period would	solar farm will be in addition.	- The proposals do not currently include any monitoring of soil health or
		affect agricultural		land quality during the operational phase. Issues with soil protection
		productivity given		may occur where, for example, vegetation cover fails to establish, or
		that the Applicant		areas of bare ground appear during operation. Natural England would

I		
	is not relying on	recommend ongoing monitoring to prevent any unexpected impacts to
	the land	soil health and/or land quality. It is noted that vegetation management
	remaining in	will be secured via the oLEMP, however this should be cross-referenced
	agricultural use	within the oSMP to ensure the role of this in protecting soil is apparent
	during the	during the operational period.
	operational	- Although arable reversion to grassland has been shown to benefit soil
	period?	quality (through increased Soil Organic Matter (SOM)), it is unclear what
		impact solar arrays will have on soil properties such as carbon storage,
		structure and biodiversity. For example, as a result of changes in
		shading; temperature changes; preferential flow pathways; micro-
		climate; and vegetation growth caused by the panels. Therefore, it is
		currently unknown what the overall impact of a temporary Solar
		development will have on soil health. In the absence of this information,
		we suggest that the developer could commit to a programme of soil
		health monitoring for the lifetime of the project to support development
		of the evidence base around long-term impacts to soil health from solar.
		In light of the above statements from NE, 7000 acres would recommend
		that an annual programme on soil health monitoring is added to the
		DCO and referenced in the oSMP 010133-EX3/C6.3.19.2_B 8.6.6
		Other evidence also shows that large scale solar arrays can have a
		detrimental impact on soil health and drainage.

	Evidence of the Damaging Effect of Solar Panels on Soil Health
	Research from the Welsh Government (The impact on solar
	photovoltaic (PV) sites on agricultural soils and land quality – March
	2023) states:
	"The key impact of solar PV sites on land and soil may be caused by
	compaction leading to soil structural damage. The effects of soil
	compaction on soil structure lead to reduced permeability to water and
	air as well as increased surface runoff and erosion. Compaction near the
	surface and generally above a depth of 45cm can be alleviated. However
	the alleviation of deep compaction requires equipment such as a
	bulldozer and winged tine set to a depth to 60cm. The reversibility of soil
	compaction may take many years and in some cases compaction may be
	permanent. An assessment on the effect of compaction on the Best and
	Most Versatile agricultural land (land in MAFF Agricultural Land
	Classification grades 1, 2 and 3a) shows that the loss of high quality
	agricultural land is likely to occur in wetter parts of England and Wales."
	Other research papers showing the damage that solar arrays cause to
	soil are:
	1. Solar park microclimate and vegetation management effects on
	grassland carbon cycling 2016. This paper states:

https://iopscience.iop.org/article/10.1088/1748-
<u>9326/11/7/074016/pdf</u>
"The effects of this growing land use change on plant-soil processes,
which underpin key ecosystem services, is poorly understood. In this
study we show that PV arrays can cause both seasonal and diurnal
variation in the ground-level microclimate to a magnitude known to
affect terrestrial C cycling. We also observed significant differences in
above-ground biomass, plant diversity and ecosystem CO2 fluxes which
were associated with the vegetation management and microclimate.
Solar parks contribute to climate change mitigation by providing low
carbon energy, but the wider environmental costs and benefits need to
be taken into account, to ensure they are deployed sustainably."
2. Effects of Revegetation on Soil Physical and Chemical Properties
inSolar Photovoltaic Infrastructure
https://www.frontiersin.org/articles/10.3389/fenvs.2020.00140/full
This paper states:
"We investigated critical soil physical and chemical parameters at a
revegetated photovoltaic array and an adjacent reference grassland in
Colorado, United States. Seven years after revegetation, we found that
carbon and nitrogen remained lower in the PV soil than in the reference

			soil and contained a greater fraction of coarse particles. We also found
			that the PV modules introduced heterogeneity in the soil moisture
			distribution, with precipitation accumulating along the lower edges of
			panels."
			The Applicant has made statements on soil health but has failed to
			provide clear evidence to support their claims. Unless the Applicant can
			provide clear evidence, then the detailed and peer reviewed research
			cited above should be preferred.
Applicant	The Applicant	The Applicant has provided ES Addendum	Please see the 7000Acres response to Q2.2.3.
	stated during the	21.1: Human Health	
	December	[EN010133/EX4/C8.4.21.1] in response to	The Applicant has not used a health professional to assess this
	hearings that it	the matters raised at Agenda Item 4 of	important issue. Why have they not engaged a specialist as for other
	was going to look	ISH 4. This document provides a	topics, such as soil health, archaeology, BESS safety and others.
	at the health	comprehensive collation of human health	The document produced by the Applicant is merely a precis of their
	impact matters	matters assessed throughout the ES [APP-	previously shallow and flawed assessment.
	that had been	036 to APP-058].	
	raised. Please		The Applicant has ignored EN-1 4.2.4 which requires it:
	provide an update		"To consider the potential effects, including benefits, of a proposal for a
	at Deadline 4.		project, the applicant must set out information on the likely significant
			environmental, social and economic effects of the development, and
	Applicant	stated during the December hearings that it was going to look at the health impact matters that had been raised. Please provide an update	stated during the21.1: Human HealthDecember[EN010133/EX4/C8.4.21.1] in response tohearings that itthe matters raised at Agenda Item 4 ofwas going to lookISH 4. This document provides aat the healthcomprehensive collation of human healthimpact mattersmatters assessed throughout the ES [APP-that had been036 to APP-058].raised. Pleaseprovide an update

	show how any likely significant negative effects would be avoided,
	reduced, mitigated or compensated for, following the mitigation
	hierarchy. This information could include matters such as employment,
	equality, biodiversity net gain, community cohesion, health and well-
	being."
	The impact of this unprecedented scheme, along with the multiple
	other NSIPs in the local area, will have an adverse impact on residents'
	physical health, mental health and wellbeing.
	This issue must be considered seriously by a health professional and
	not just dismissed by the Applicant's lay person.